Technology in Miniature

American Textile Patent Models 1819-1840

Barbara Suit Janssen

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ABSTRACT

Janssen, Barbara Suit. Technology in Miniature: American Textile Patent Models 1819–1840. *Smithsonian Studies in History and Technology,* number 49, 147 pages, 87 numbered figures, 5 unnumbered portraits, 1 table, 1988.—To obtain a patent in the nineteenth century, an inventor had to submit a written specification, a drawing, and a model to the United States Patent Office. This catalog is concerned with the textile patent models in the collection of the Division of Textiles of the National Museum of American History, Smithsonian Institution. Forty early models and their accompanying drawings are discussed.

OFFICIAL PUBLICATION DATE is handstamped in a limited number of initial copies and is recorded in the Institution's annual report, *Smithsonian Year.* COVER DESIGN: Patent 352: Doubling and Twisting Thread machine, issued August 15, 1837. Photo by Richard Strauss.

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Contents

Foreword

The U.S. Congress decided in 1908 that the Patent Office no longer needed to keep its huge collection of patent models and initiated a process of dispersal that has continued under different auspices to the present. For close to half a century, the Patent Office had required models, preferably not more than twelve inches square, with each patent application. In 1870, the new patent law dropped the model requirement, yet the commissioner of patents continued to request models for another ten years. But these little emblems of a mechanical age would soon be made redundant by the growth of invention in electricity and chemistry, inventions that were often impossible to "model." Furthermore the Patent Office could barely contain the quarter million or so models it had collected over the years. The Smithsonian Institution, once in 1908 and again in 1926, accessioned a total of eight thousand of those it deemed the most important, that is, those that had a known impact or were the products of prominent inventors. The rest have been scattered to the winds. Some have found their way to museums; others, through auctions and sales, are now in private hands; many others have been lost, damaged, destroyed. For most curators of technology collections the fate of the patent models is nothing less than a national scandal. But why should anyone care? Why should we collect and study patent models?

In the nineteenth century such questions would never have been asked. The Patent Office displayed its models prominently, even grandly. Objects of veneration, examples of creativity, they spoke eloquently of national pride. They were never kept simply as a record of invention, nor just as a means for disclosing originality. The models were icons of American ingenuity, symbols of a smug, triumphant century. For many collectors today—museums included—the models retain such piously nationalist meanings. Throughout this century, however, our unquenchable capacity for novelty has reduced their import to the status of curios, quaint reminders of a bygone and simpler time. But just what scholarly questions do they help answer?

Historians—even those who work in museums—are not very good at posing questions about objects. We are more comfortable with words, with books, with manuscripts. Objects are more difficult to "read," they do not reveal their meanings easily. More accurately, perhaps, objects reveal their surface meanings (form, style, even use) all too easily; but it is their latent or hidden meanings, the discovery of which constitutes the most creative form of twentieth-century inquiry, that remain obscure. So it is not surprising that historians of technology have yet to make significant research use of patent models. Yet the models continue to compel and provoke scholarly interest.

Patent models comprise an unrivaled visual and tactile record of ingenuity, of obsession, of achievement, of failure. They show us how things worked in ways that cannot be as easily nor as fully grasped through drawings and descriptions. These models embody particular visions of mechanical perfectability. They offer insight into the minds of inventors which, when combined with other sources, could provide a clue to the nonverbal thinking now believed to have been central to nineteenth-century invention. And they constitute an extraordinary record of change. Taken as a collection, the patent models are evidence of technological evolution: of change and mutation, of continuity and incremental change, like so many mollusks or sea urchins—not the conceptual model of unilinear progress popular during the nineteenth century. Each model stands at a particular moment in history, expressing both change and continuity, expressing a vocabulary of technical choice—form, motion, purpose—that is as much a social construction as it is the product of individual genius. Once established, technical forms like the power loom

and the spinning frame can persist with a remarkable tenacity. Such forms both structure and confine change, and the formal properties of a technology are best studied in the machines and models themselves.

Catalogs like the following will assist further research on patent models. Barbara Suit Janssen has assembled detailed information on the forty earliest patent models in the Division of Textiles collection, while also providing a full listing of the Division's patent-model holdings. With over 4000 models, the Division's collection is probably the largest in the country devoted to a single industry. Those doing research on nineteenth-century textile technology will find this an indispensable resource and, I trust, a spur to developing research questions.

Gary Kulik, Chairman
Department of Social and Cultural History
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Technology in Miniature

American Textile Patent Models 1819–1840

Barbara Suit Janssen

Introduction

Historical Background

The USNM collection of patent models at the National Museum of American History's Division of Textiles numbers over 4000. This catalog presents a sampling of nineteenth-century technology by illustrating the earliest models in the Division's collection. The 40 models included in this catalog may be viewed as a microcosm in which the inventions range from obscure and impractical to famous and innovative. They represent the period 1819–1840. This catalog begins the systematic documentation of the Division's patent models. The group of forty was chosen for its manageable size (considering the amount of conversation, photography, and research required) within the given time and money constraints. The main focus of this catalog is descriptive; no extensive evaluation of the devices has been attempted. Further scholarship is necessary to determine the impact, or lack thereof, of these inventions on the technology or environment (social and/or economic) for which they were intended.

The issuance of a patent is no guarantee that an invention will ever be commercially marketed, and it is likely that the majority of this collection was never manufactured. There were many obstacles to prevent a patented idea from becoming a commercially successful product. Primary among these was that many of the patented inventions were either impractical, overly complex, or made obsolete by a better idea. Nevertheless, the fame and success of inventions like Eli Whitney's cotton gin and Elias Howe's sewing machine spurred Americans on to patent almost everything imaginable. This mania for patenting is illustrated, in the textile patent model collection, by its diversity and number of models. The USNM collection, which dates into the early twentieth century, includes commonplace items, such as clothespins (40 models) and baskets (50 models); complex machines, like looms (450 models) and sewing machines (750 models); and fabrics (135 design or construction patents represented). The abundance of patent models testifies to the enthusiasm of Americans to embrace a new idea, build a new machine, and mechanize America from the factory to the home (Table 1).

Fifty patent models in the Division of Textile's collection were acquired in 1908 from the Patent Office. However, the main body of the Division's patent models were chosen by Dr. Frederick Lewton, curator of the unit then called Crafts and Industries. This selection took place in 1926 after Congress had decided to dispense with the Patent Office's museum of patent models. Dr. Lewton was one of two curators of the Smithsonian to select the most important patent models for the U.S. National Museum. He examined the 150,000 models and chose approximately 15,000 for the Smithsonian. Although he selected a broad range of models, his area of specialty was textile machinery and, in particular, sewing machines. Thus his selection of models relating to this area of invention was particularly thorough. The remaining models were sold to private individuals.

By the time the Smithsonian acquired its model collection, the models had endured two major fires at the Patent Office. One fire in 1836 destroyed all the models (7000) that had been submitted up to that date. A second fire in 1877 destroyed 87,000 models out of a collection of 200,000. Of those destroyed, 12,000 were models of inventions that were denied

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TABLE 1.—Numbers of patents granted annually by the U.S. Patent Office from 1790 to 1840 (from P.J. Frederico, editor, *Journal of the Patent Office Society*,18(July 1936):230–231).

Year	No. of Patents	Year	No. of Patents	Year	No. of Patents
1790	3	1807	99	1824	228
1791	33	1808	158	1825	304
1792	11	1809	203	1826	323
1793	20	1810	223	1827	331
1794	22	1811	215	1828	368
1795	12	1812	238	1829	447
1796	44	1813	181	1830	544
1798	28	1815	173	1832	474
1799	44	1816	206	1833	586
1800	41	1817	174	1835	630
1801	44	1818	222	1835	752
1802	65	1819	156	1836	708
1803	97	1820	155	1837	436
1804	84	1821	168	1838	515
1805	57	1822	200	1839	404
1806	63	1823	173	1840	458

patents and thus not considered important. The 1836 fire was by far the more catastrophic since not only were all the models lost, but 9000 patent drawings and all the records of patent applications and grants were also destroyed. These records were irreplaceable, and Congress considered the loss so great that $100,000 was appropriated to restore the drawings and the most important models. The Patent Office conferred with inventors when and where possible to ensure an accurate reproduction of each invention. This restoration program continued until 1849, at which time several thousand drawings and models had been restored. The restored patents were given a series of numbers called the x-series; they had not been numbered previously.

There are six models from the x-series in this catalog that were restored by the Patent Office. Although Eli Whitney's reconstructed model of the cotton gin is in the collection of the Division of Textiles, it was incorrectly reconstructed by the Patent Office and the restored drawings repeat the same mechanical defect. For these reasons, this model is not germane to this study and is not discussed in this catalog.

The other models, patents 162 to 1902, fall in the regular consecutive numbering system adopted in July 1836. They are the actual models that the inventor submitted along with drawings and written specifications.

Inventors placed great importance on their models and viewed a well-executed model as the key element in obtaining a patent. Therefore, many times the inventor would hire a professional modelmaker to turn a 2-dimensional paper drawing into a 3-dimensional miniature machine. The inventor could also turn to other skilled craftsmen, such as blacksmiths, watchmakers, or cabinetmakers to fabricate models. However, depending on the ability of the inventor, who was often a mechanic, the model would often be homemade.

How a model was constructed depended mostly on what the patented feature was. The inventor had a choice of showing the complete machine or only his patented device. For instance, Charles R. Harvey's loom for weaving haircloth (490) is a complete miniature of a full-sized loom; whereas, the check and plaid loom (5193x) of Burt, Boyd, and Boyd shows the patented feature, the shuttle boxes, set in the bare framework of a loom. Other models could be the regular size of their commercial counterparts, such as James Baldwin's loom shuttle (1485); or, in the case of sewing machines, a commercial machine was often submitted as the model with the inventor merely adding his patented feature. It was not essential that the model work; however, many of them did. An example of this is Hiram Wheeler's spinning wheel (patent 710). In general, the models tended to adhere to requirements of the Patent Office that they not exceed a foot in any dimension.

After 1880, the Patent Office dropped the requirement for submitting a model, except in unusual circumstances. This action was taken primarily because the Patent Office had run out of space in which to store or display the models. It was also true that inventions were becoming more complex and less amenable to representation by models. Once the requirement for submission of a model was rescinded, the decline of a large number of professional modelmakers was assured.

COMPILING THE CATALOG

For the purpose of producing this catalog, several steps were undertaken. The first step was physically dealing with the models: selecting, locating, conserving, and photographing. The next step involved researching the inventor and invention. This step required accessing materials from a variety of sources. A logical starting point was the National Archives' collection of patent drawings and files of patent applications. Currently, the patent drawings are stored in Washington, D.C., and the patent application files are stored in Suitland, Maryland. Since the location of these records may change, the National Archives suggests that researchers always check for current locations, and that specific references beyond that of acknowledging the National Archives not be made. Another resource for researching patent specifications for the years 1790–1906 is available on microfilm from Research Publications, Inc., New Haven, Connecticut, under the title "United States Patents."

The patent drawings that are included in this catalog are divided into two basic groups: the x-series and the utility series. The x-series are the drawings and models that were restored by the Patent Office after the 1836 fire. The utility series consists of the original drawings and models that are consecutively numbered patents beginning in July 1836 and continuing to the present. In both sets, the drawings not only illustrate the invention in detail, but sometimes offer a vignette of the period complete with people in the process of using the invention.

There are two guides available from the National Archives that can be used to identify particular x-series patent drawings: The "Name and Date List" records the x-series numbers consecutively and includes the inventor's name and date of patent. The other guide, "Inventors of Restored Patents List," arranges the inventors alphabetically with the x-series number following each name. However, neither list provides a name or description of the invention. Thus, if one wished to study drawings of a particular type of invention, these lists would not be helpful.

Two other publications are useful if one approaches patents from the subject matter standpoint. The first was compiled by Edmund Burke, *List of Patents for Inventions and Designs Issued by the United States, from 1790 to 1847.* This book classifies patents by subject (according to class) and includes a separate list of patentees. The second publication is an index and guide to the microfilm edition of *Early Unnumbered United States Patents 1790-1836.* This guide indexes the patents alphabetically by class, by subject, by patentee, and by date. Although both of these publications are helpful in leading one to patent information, neither includes the x-series of patent numbers.

In comparison to the situation of incomplete classification, the patent listings after 1836 are well indexed. Various publications are available that provide this information, the most useful of which are probably the numerous volumes of the *Annual Report of the Commissioner of Patents* and the *Subject-Matter Index of Patents for Inventions Issued by the United States Patent Office from 1790 to 1873, Inclusive* (three volumes). The *Annual Reports,* starting in 1841, contain a patent listing arranged by either subject (class), patentee's name and/or patent number. The latter publication condenses the patent lists from 1790 to 1873 in an alphabetical form according to the subject of invention.

A shortcut to requesting copies of patent specifications from the Patent Office and a major timesaver can be provided by a library that has a microfilm series of the patent specifications. The National Museum of American History has such a set, which dates from 1790 to 1906. The post-1836 patent specifications are easy to locate by patent numbers. The pre-1836 patents can be located by using the guide *Early Unnumbered United States Patents 1790-1836.*

The patent application files in the National Archives are another source of information dealing with patents dating after the 1836 fire. Unfortunately, information for patents (1837-1840) in this catalog is, in general, disappointing. A patent application file typically contains a handwritten specification signed by the inventor and the official printed specification and drawing. The original specification usually varies from the final printed specification. If the patent examiner rejected certain claims by the inventor, the file often contains letters from the patentee's attorney or the patentee explaining or amending the patent claim. The name of the patent examiner is usually written on the patent application jacket. For the patents discussed in this catalog, the examiner was either Charles M. Keller or Thomas P. Jones.

It is the prospect of finding unexpected information that leads one to investigate these files. For instance, interesting details include a petition by Erastus Bigelow to Henry Ellsworth, Patent Commissioner, concerning his loom patent (546):

> ...paid his Treasury fee and made application for a patent for the above invention somewhere about the first of November 1836 and his papers and model were destroyed by the conflagration of the Patent Office in December...he therefore prays that due notice will be taken on the reception of these his second set of papers and model and his patent be issued forthwith.

and Alden Sibley's remarks as to the advantages (both economic and mechanical) of using his calico printing machine (patent 823).

One area in which there is room for more research is the study of local histories and genealogies found in the Library of Congress. They merit attention for the sketches about individuals and industries of various towns and cities in the United States. In summary, this catalog presents details of 40 early American textile inventions that were granted patents. These details generally include photographs of the models and drawings with a short narrative, as well as occasional photographs of inventors. The Appendices include basic information on additional models.

ACKNOWLEDGMENTS

I wish to express my appreciation to various staff members of the Smithsonian Institution and others. I particularly would like to thank Rita Adrosko, Curator of the Division of Textiles, Gary Kulik, Chairman of the Department of Social and Cultural History, Douglas Evelyn, Deputy Director, and Kendall J. Dood, U.S. Patent Office, for their encouragement and advice. Joan Horn, Smithsonian Institution Press, furnished excellent editorial assistance, which helped create a more accurate and consistent catalog. Robert L. Klinger and Donald W. Holst provided expert craftsmanship in restoring the patent models. Much appreciated typing assistance was provided by Linda MacLaughlin, Alice McKinney, Mary Jane Young, and Margaret McComb. I am indebted to my husband, Theodore Jon Janssen, whose logic and computer expertise were matched by his understanding and patience, and without whom this catalog might not have been realized. Special thanks are in order to The Ruth and Vernon Taylor Foundation, which provided funding for the Patent Model Data Base Project upon which this catalog is based.

RESTORED PATENT 5193x: Check and Plaid Power Loom

Issued August 19, 1828

Enoch Burt, Oliver D. Boyd, and
Amos H. Boyd
Manchester, Hartford Co., Connecticut

In their patent, Burt and the Boyds claimed the shifting and alternating of shuttles without stopping the motion of the power loom. The number of shuttle boxes corresponded to the number of colors in the check or plaid to be woven. They also patented a stop motion which halted weaving by the action of a lever if the weft thread broke or the shuttle bobbin ran out of thread.

Scientific American credits "Rev. Enoch Burt, a man of splendid genius," with having taken out the first patent (5193x)

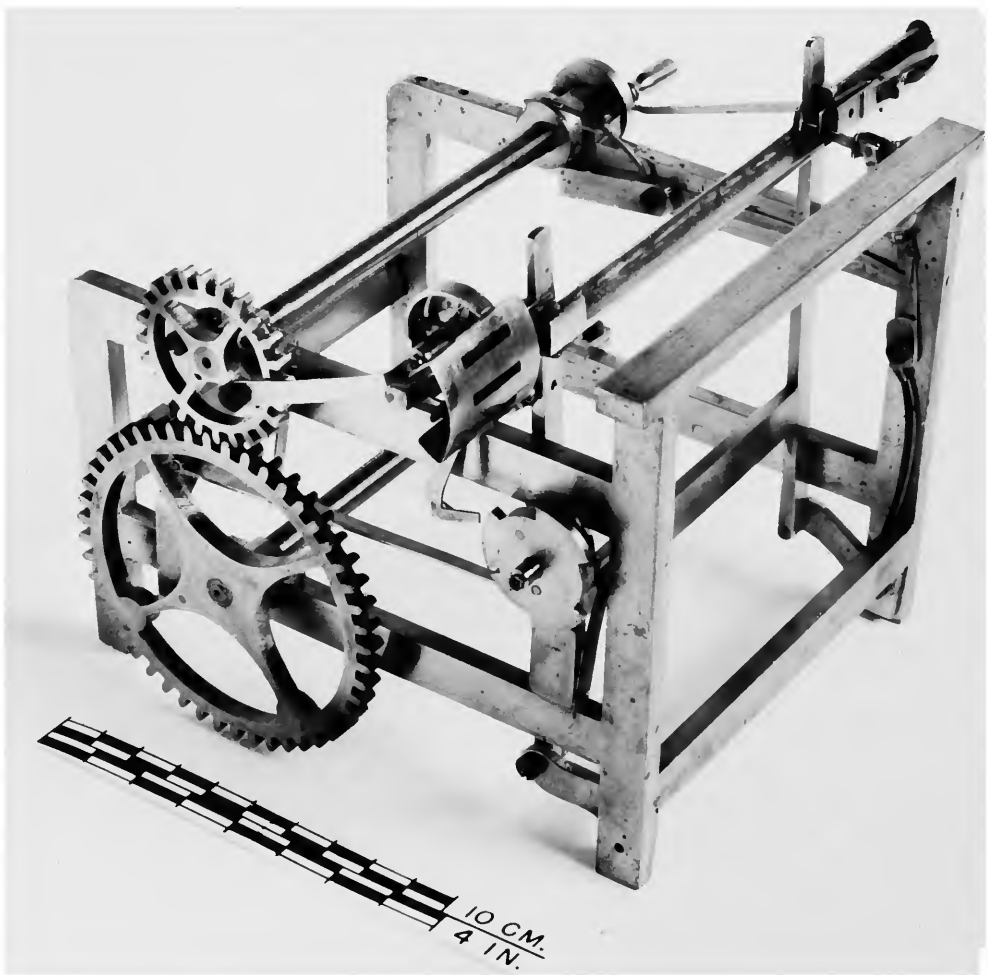


FIGURE 1.—Restored patent model 5193x. (S.I. neg. 80-12387)

for a gingham loom in 1828.[1] Burt also patented a cloth shearing machine in 1807, a check power loom in 1837, a rag dusting machine in 1838, a stop motion in 1845, and fancy check power looms in 1851 and 1854.[2]

Further notice was given to Burt and the Boyds for their 1828 patent in Gilroy's book, *The Art of Weaving*, published in 1844. In the book, he devoted two pages to describing the mechanics of their loom, but did not comment on the significance of their invention.[3]

[1]*Scientific American*, 4(1849):165.
[2]Ibid., 3(1848):149.
[3]Gilroy, *The Art of Weaving*, pages 402–403.

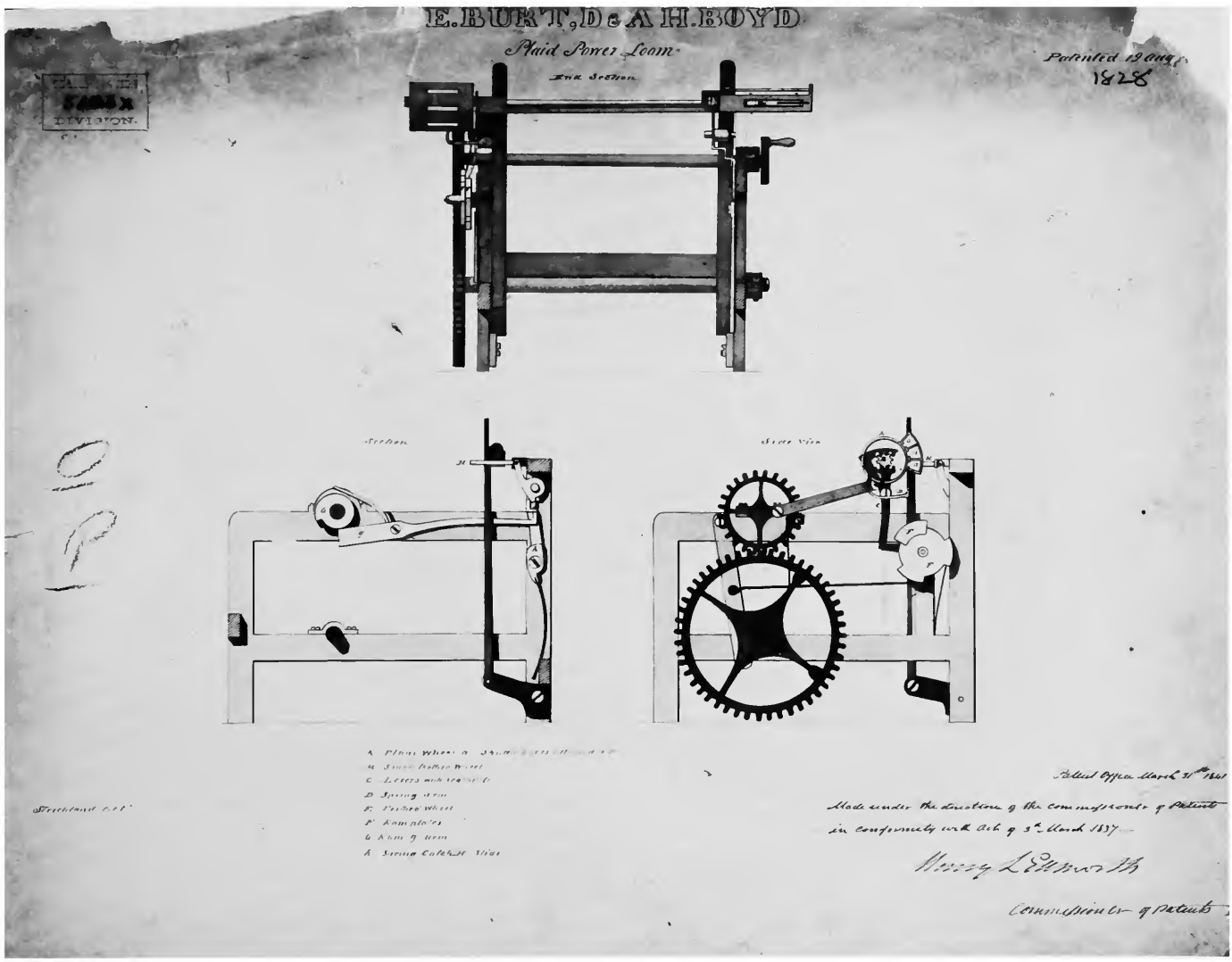


FIGURE 2.—Restored patent drawing 5193x. (U.S. National Archives)

RESTORED PATENT 8191x: Cloth Shearing Machine

Issued May 13, 1834

Reuben Daniels
Woodstock, Windsor Co., Vermont

In this patent, Daniels claimed the hollow construction of the cylinder to which the twisted shearing blades were soldered. He also claimed a method of fabricating the ledger blade and the cylinder with the shearing blades, which resulted in their being suitably still enough to be sharpened by using emery and oil. He explains.

> The method of grinding the ledger blade, and those on the revolving cylinder, is this: after making them as true as possible in any of the ordinary

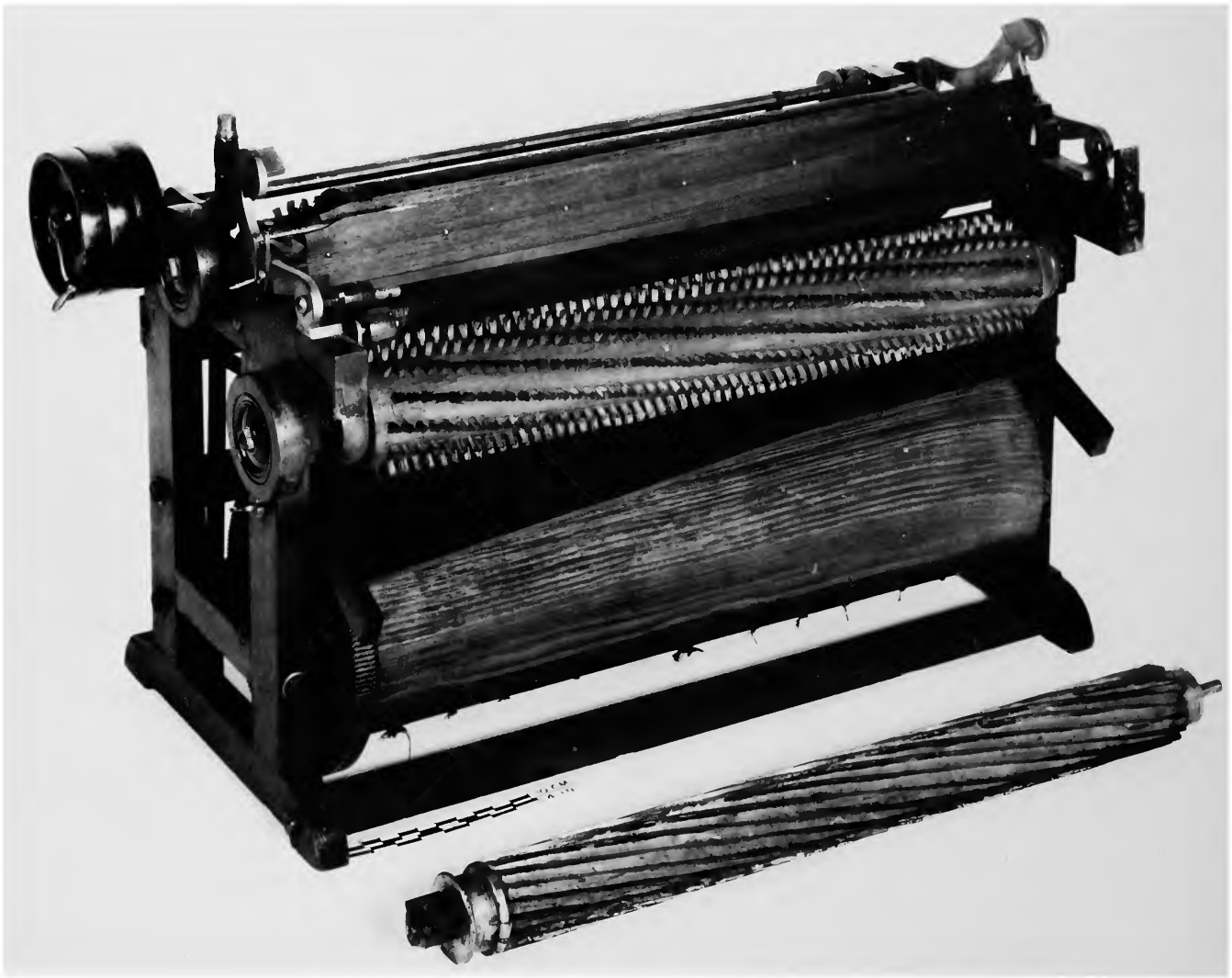


FIGURE 3.—Restored patent model 8191x; note the shearing cylinder in front of the model. (S.I. neg. 82-2563)

ways of grinding, they are to be put into their places in the machine, with adjusting screws to bring the ledger blade against the cylinder; a rapid motion is then to be given to the latter, which motion must be continued until they are perfectly fitted into each other; emery, or other suitable substance, being used in the grinding.[1]

The editor of the *Journal of the Franklin Institute* commented:

Whether the foregoing modes of procedure are perfectly new, or to what extent they are so, we leave to the experience of those in the habit of using, and keeping in order, the kind of shearing machine to which they refer.[2]

Evidently the sharpening procedure was neither new nor successful. In Daniels' amended patent, reissued on August 22, 1834, he added a new sliding rest that saved the selvages from the wearing action of the blades and he reiterated the construction features; he did not include the technique of sharpening the blades.[3]

In 1831, Daniels, in partnership with others, formed a machine shop under the name of R. Daniels and Co. Power for the shop machinery was furnished by water from a canal. The firm was successful in manufacturing carding machines, spinners, shearing machines, pickers, and other similar machines. They employed some fifty men. In 1836, The Burlington Mill Company bought $24,000 worth of machinery from the firm. The R. Daniels and Co. partnership dissolved in 1842 due to unfavorable economic conditions. However, the shop continued under the management of others and kept producing Daniels' patented machines.[4]

[1]*Journal of the Franklin Institute,* new series, 14(1834):394.

[2]Ibid., new series, 15(1835):202.

[3]Henry S. Dana, *History of Woodstock, Vermont* (Boston and New York: Mifflin Co., 1889), pages 314–315.

[4]Calvert, "The Technology of the Woolen Cloth Finishing Industries," pages 57–59.

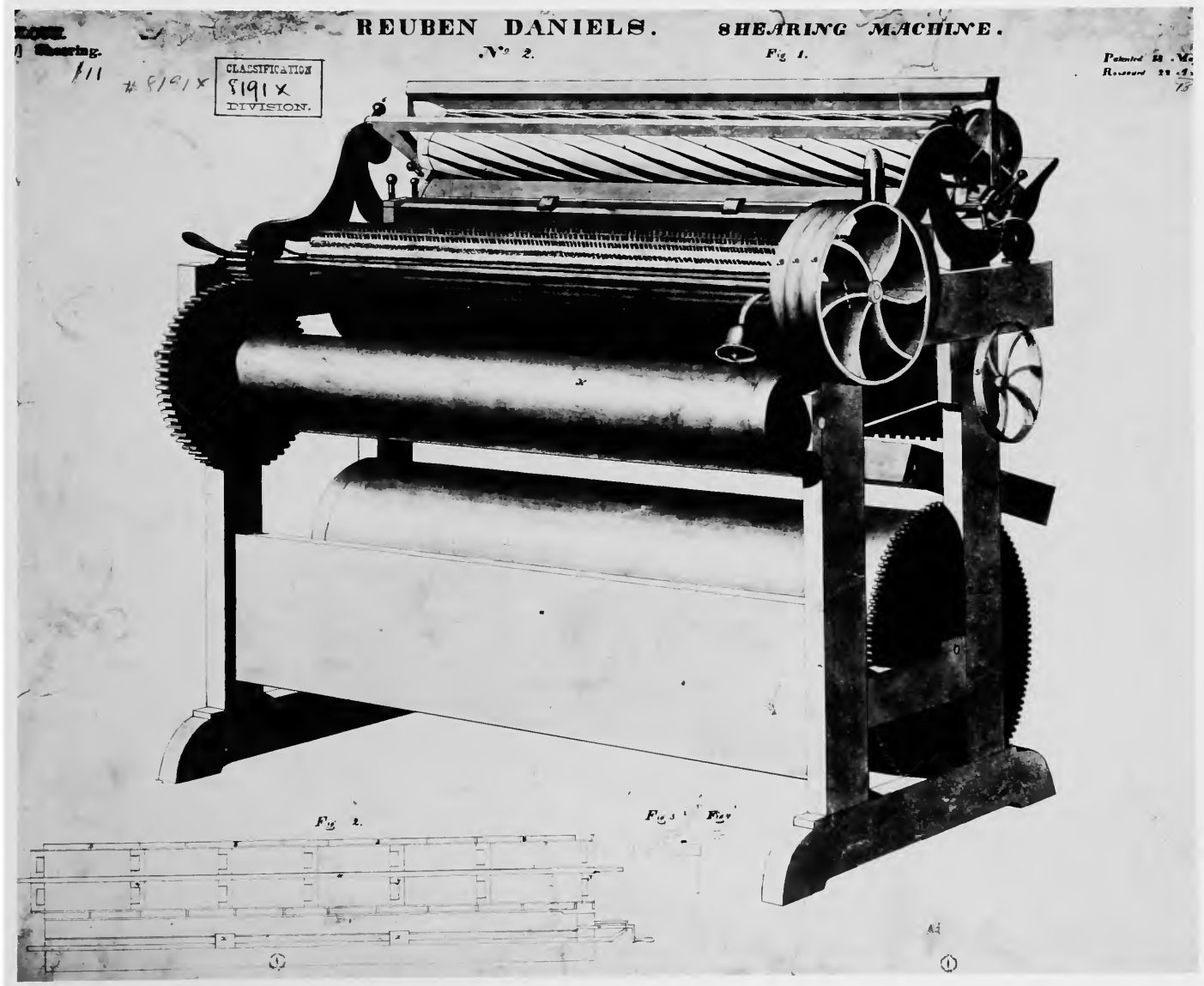


FIGURE 4.—Restored patent drawing 8191x. (U.S. National Archives)

RESTORED PATENT 8952½X: Wool Combing Machine

Issued July 7, 1835

Samuel Couillard, Jr.
Boston, Suffolk Co., Massachusetts

Couillard's machine separated the different lengths of wool fibers and brought them together after separation. This was done by the use of a revolving tooth belt in combination with a card or tooth cylinder. These features comprised his patent claims.[1]

In 1835, the year of Couillard's invention, combing was

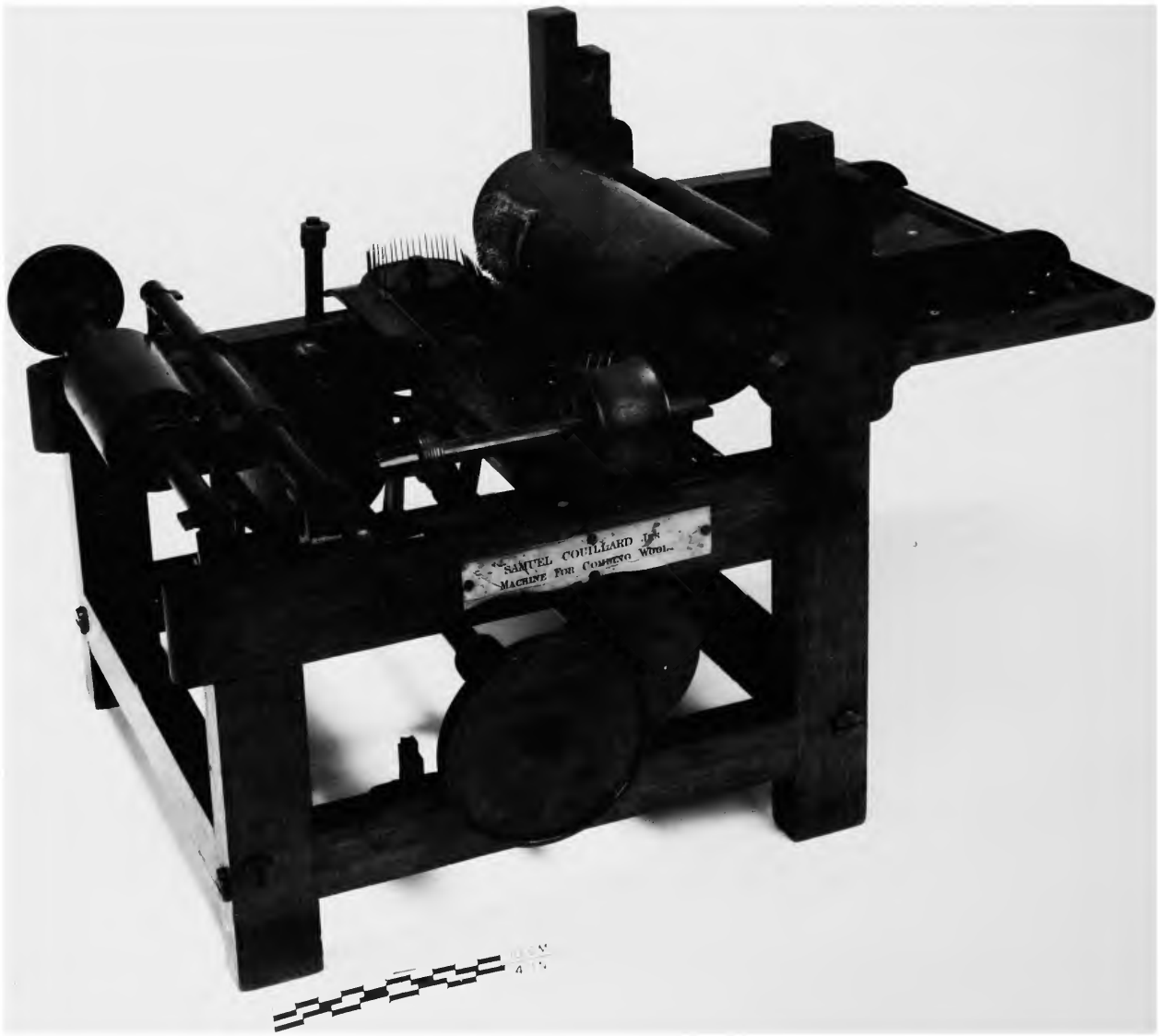


FIGURE 5.—Restored patent model 8952 1/2x. (S.I. neg. 81-4415)

commonly done by hand. His invention was thought to be responsible for introducing worsted manufacture in the United States. Michael H. Simpson of Boston made use of Couillard's machine in 1835. In 1854 and 1857, Simpson patented improvements to Couillard's comber, which increased its production by more than five-fold. This improved comber was widely used in the United States for preparing wool for carpets. John Hayes declared it was the best combing machine for the type of wool called "carpet-wools."[2]

Couillard's patent of July 7, 1835 was reissued several times: June 16, 1836 and on July 6, 1839 (as No. 9). From the issuance of the first patent forward, the New England Worsted Company is listed as the assignee. It can be assumed that this company was using his machine and probably employed Couillard while he was developing the inventions.[3]

[1]*Journal of the Franklin Institute*, new series, 17(1836):121.
[2]Hayes, *American Textile Machinery*, page 54.
[3]*Subject-Matter Index of Patents*, 3:1857.

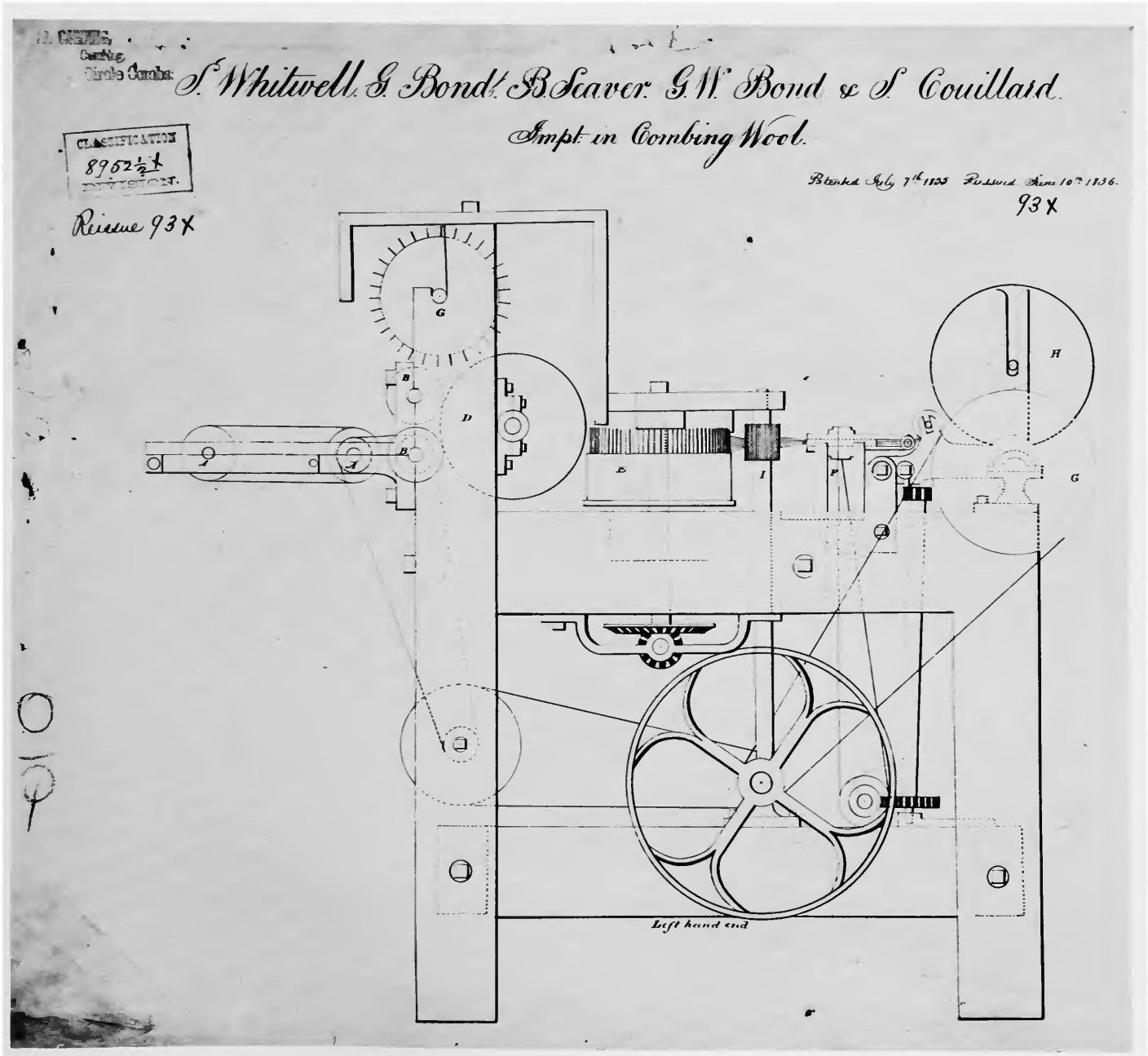


FIGURE 6.—Restored patent drawing 8952 1/2x. (U.S. National Archives)

RESTORED PATENT 9098x: Wool and Flax Combing Machine

Issued September 18, 1835

William W. Calvert
Lowell, Middlesex Co., Massachusetts

William W. Calvert, a machinist, accomplished the separation of short and long fibers by the combination of a bristle or wire brush, which brushed the wool into teeth set on a cylinder, and the prong of a "universal swiper," which caught the long fibers and drew them out to be carried on a friction belt into a drawing can. The long fibers were then in the form of continuous roping and were ready for spinning.

It was noted with approval in the *Journal of the Franklin Institute,* 1836:

> We think that much ingenuity and skill are manifested in the mode adopted for carrying out the conceptions of the patentee, but we are unable to offer any opinion of the probable success of the plan, as it is, in the present instance especially, a question of experience.[1]

In an account of the Patent Office fire of 1836, Calvert is mentioned as one of six American inventors (including Thorp and Couillard), whose patents pertained

> to the spinning of cotton and wool and the manufacture of fabrics [which] reduced so much the expense of manufacture, that the British manufacturers

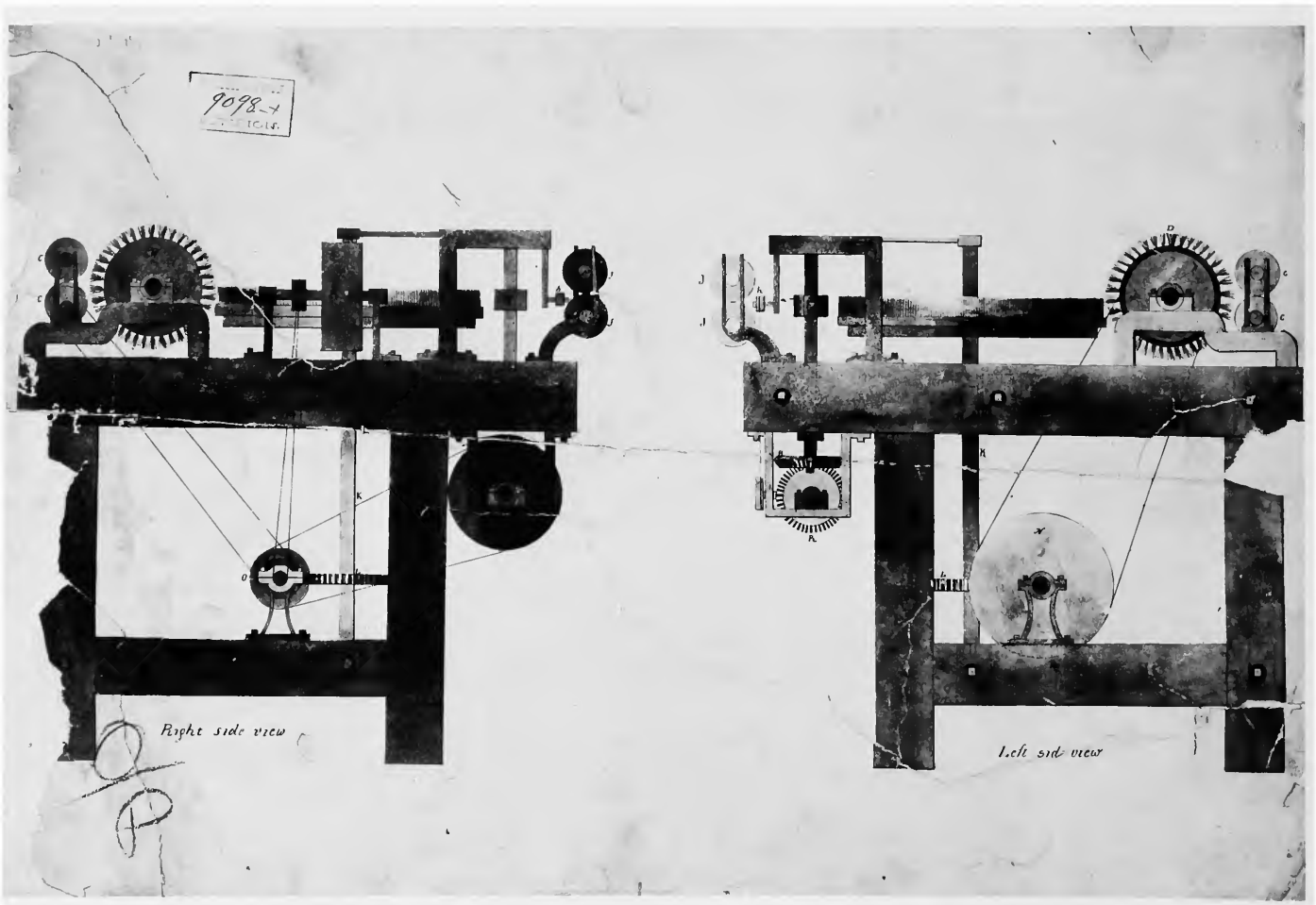


FIGURE 7.—Restored patent drawing 9098x. (U.S. National Archives)

were reluctantly obliged, at the expense of no little national pride, to lay aside their own machinery and adopt our improvements, to prevent our underselling them even in their own home market.[2]

George W. Lyman of Boston, Massachusetts, was the assignee.

[1]*Journal of the Franklin Institute,* new series, 17(1836):261.
[2]U.S. Patent Office, *An Account of the Destruction by Fire,* pages 15–16.

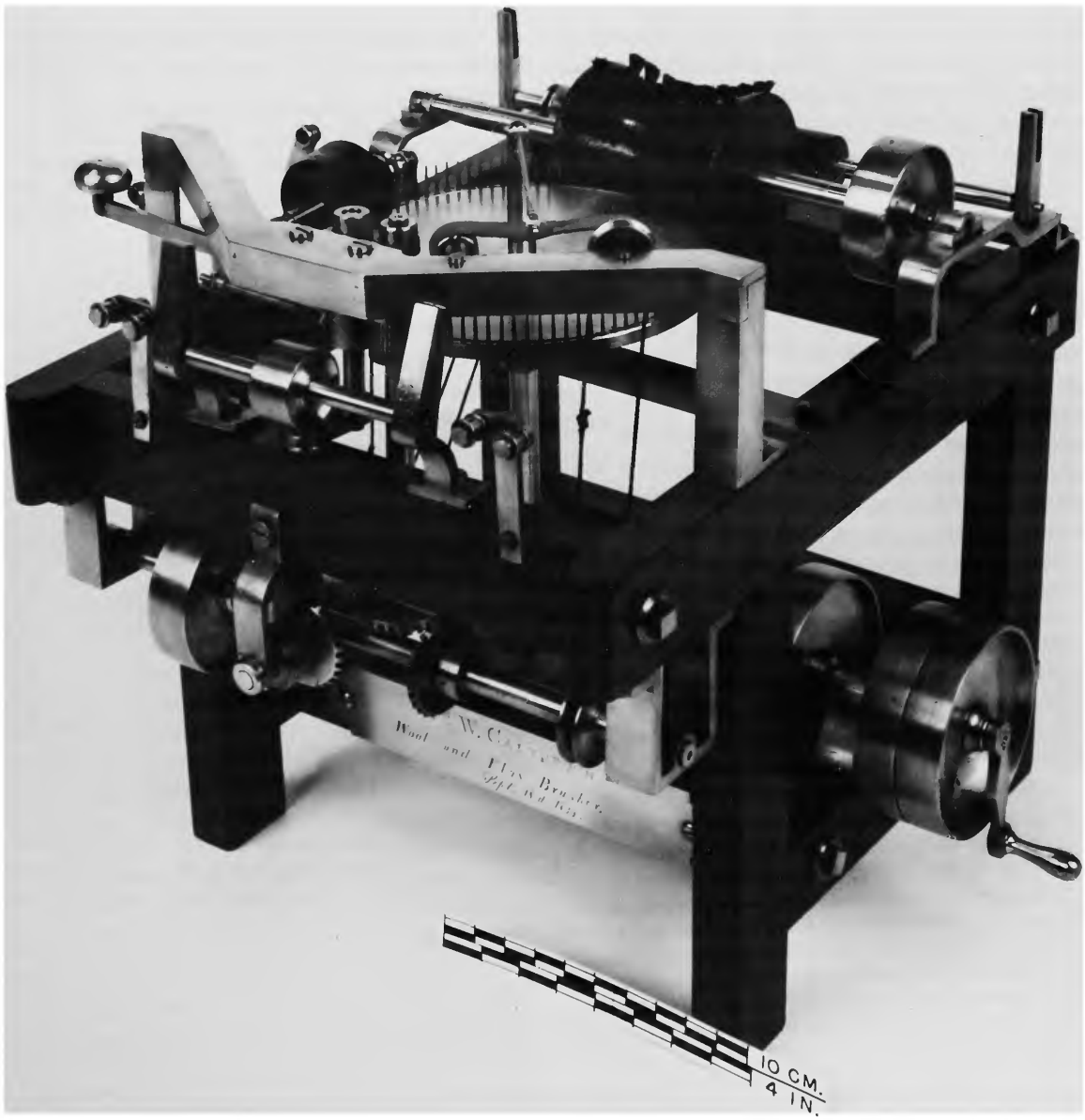


FIGURE 8.—Restored patent model 9098x. (S.I. neg. 81-4413)

RESTORED PATENT 9743x: Reeling, Spinning, and Twisting Silk Machine

Issued June 20, 1836

Adam Brooks
Scituate, Plymouth Co., Massachusetts

Brooks' machine was an improvement on an earlier patent of June 29, 1833 (7619x) for which the American Institute awarded him a gold medal at their tenth Annual Fair.[1] He was also awarded a diploma for his improvements at their twelfth Annual Fair in 1839.[2]

The machine drew silk from cocoons that were lying in a pan of hot water. The heat of the water caused the threads of the cocoons to unwind. Once the threads of the cocoons were loose, they were drawn through guiding wires, between rollers, over spindles, through rings, and then fastened to spools. Following this, the silk was reeled, spun, and twisted into sewing thread. John Thorp's patented ring spinner of 1828 (5280x) had replaced the flyers.[3] Note that the stylized drawing (Figure 11) shows flyers, whereas the model (Figure 10) and the patent drawing (not illustrated) show Thorp's ring spinner.

Two members of the Committee on Science and the Arts of the Franklin Institute examined Brooks' patent. They found it "merely a combination in a compact and convenient form of several contrivances already known and in use."[4] However, after they watched it work and examined the sewing thread that it produced, they were favorably impressed. Their opinion was that

> its simplicity of form and efficiency of action adapt it in an especial manner for use in small establishments and families: enabling them by a moderate expenditure and with a degree of skill easily acquired to convert their raw material into a form suitable for domestic use or convenient for carriage to a market.[5]

The *Journal of the American Institute* also reported on Brooks' patent.

> ... It is not only a most ingenious invention, but, in their judgment, cannot fail of becoming eminently useful. It seems to solve the problem, which has induced great doubt, whether the culture of silk in the United States would be profitably prosecuted, from the difficulty of good reeling of silk from cocoons, without very considerable manual instruction. The committee is satisfied, that an ingenious female can almost immediately learn to reel on Mr. Brooks' machine, in a perfect manner.[6]

Silver medals were awarded to three women who used Brooks' patented machine. At the eighth Annual Fair of the American Institute, Harriet and Charlotte Stark, of Dunbarton, New Hampshire, won a medal for silk sewing thread.[7] Brooks' wife was awarded a medal at the twelfth Annual Fair for a pair of silk stockings and a printed silk handkerchief made "from a piece 40 yards, grown, spun and wove by herself."[8]

[1] *Journal of the American Institute*, 3(1838):33.
[2] Ibid., 4(1840):671.
[3] A. Michal McMahon, editor, Records of the Committee on Science and the Arts of the Franklin Institute (Wilmington: Scholarly Resources, Inc., and The Franklin Institute, 1977), microfilm, reel 2, file number 163.
[4] Ibid.
[5] Ibid.
[6] *Journal of the American Institute*, 2(1837):344–345.
[7] Ibid., 1(1836):78.
[8] Ibid., 4(1840):672.

FIGURE 9.—Harriet and Charlotte Stark proud of their prize winning skein of silk twist, which they had produced on Brooks' machine, displayed the silk skein and silver medal framed together. (S.I. neg. 80-20146)

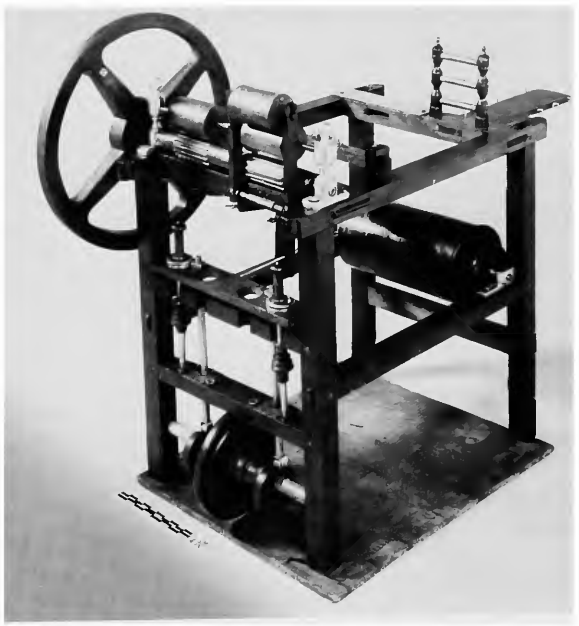


FIGURE 10.—Restored patent model 9743x. (S.I. neg. 80-16792)

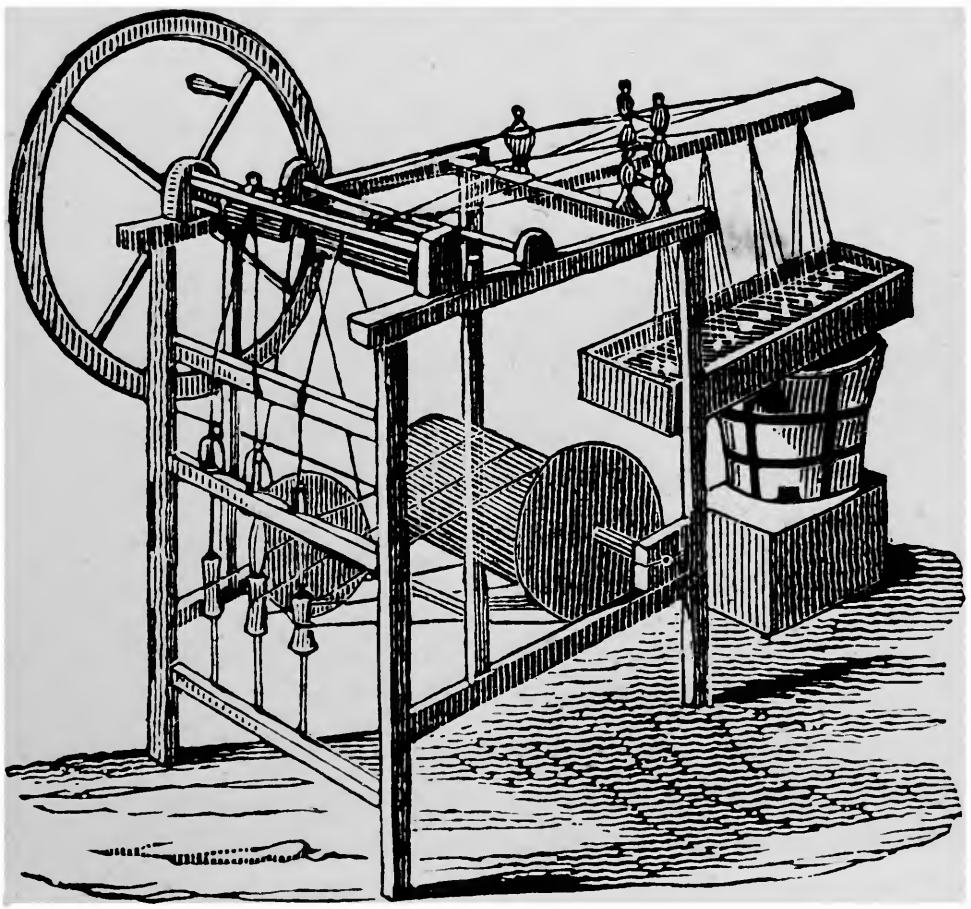


FIGURE 11.—This illustration of Brooks' patent accompanied an article in the *American Institute Journal*, 1838, which described how the machine worked.

PATENT 162: Loom Shuttle-Tongue

Issued April 17, 1837

Comfort B. Thorp

Smithfield, Providence Co., Rhode Island

Comfort Thorp was the younger brother of John Thorp, an important textile machinery inventor. Comfort worked for Thomas and William Fletcher in their mill near North Providence.[1] His patent improved the method of securing and holding the cop on the common power loom shuttle, preventing slips that would waste yarn and cause imperfections in the cloth. The patent model submitted by Thorp contained two types of tongues. One used a common round tongue with wire spiraled around it. The other consisted of a tongue with ridges or notches similar to the teeth of a saw blade.

[1]Clark, "John Thorp," 124/125(1928):89.

FIGURE 12.—Patent model 162. The two loom shuttle-tongues were exhibited in a box, probably to keep them from being lost at the Patent Office. (S.I. neg. 80-12384)

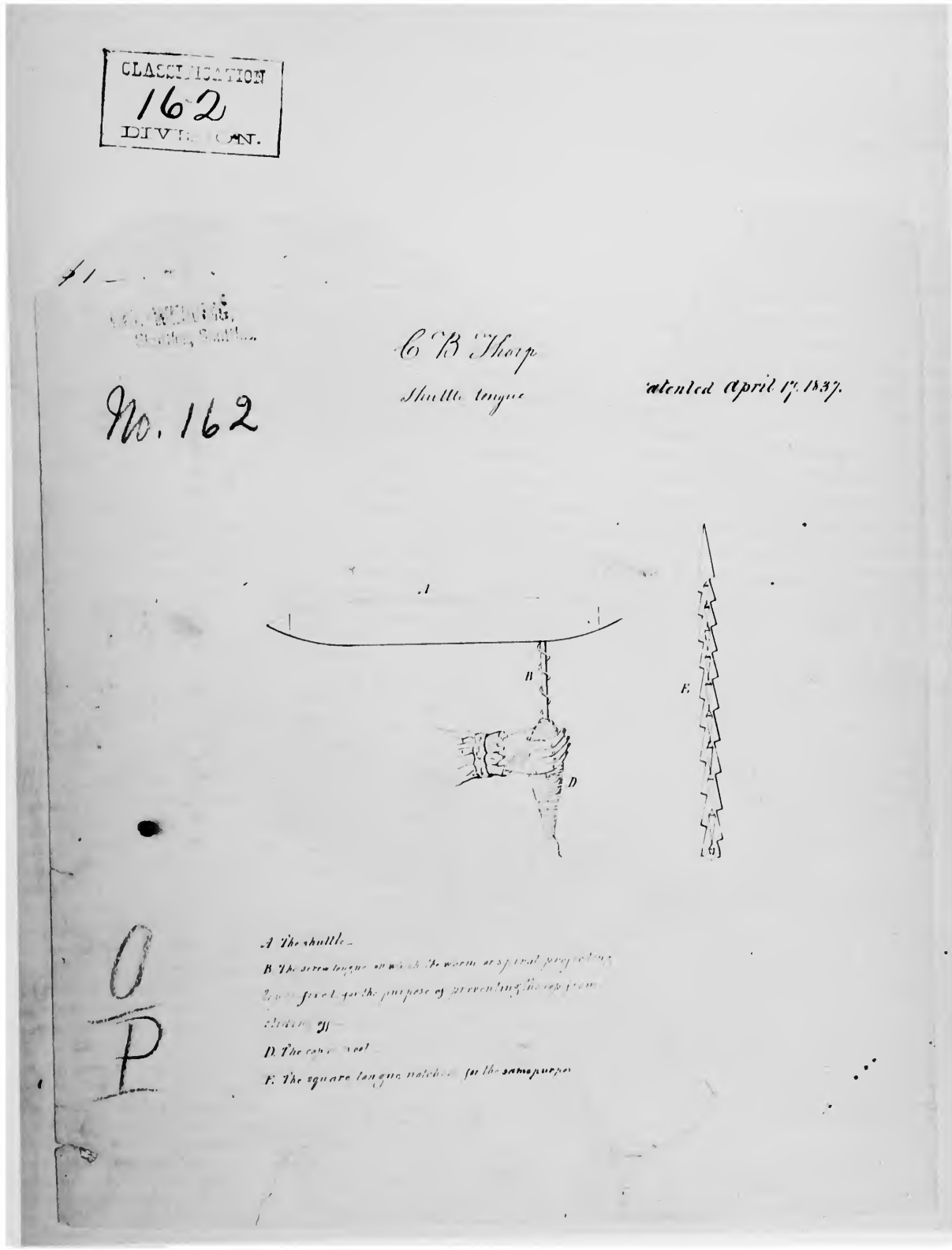


FIGURE 13.—Patent drawing 162. (U.S. National Archives)

PATENT 291: Self-adjusting Loom Temple

Issued July 22, 1837

Samuel P. Mason
Newport, Newport Co., Rhode Island

Temples are attachments on looms designed to keep the cloth at a uniform width during weaving. Self-acting temples required no adjustment as the cloth was woven, i.e., they automatically adjusted their position. The greater speed obtained with power-weaving made the use of self-acting temples a necessity.[1]

The basic construction of Mason's temples was similar to other temples of the period. The patented feature of his temple concerned the arrangement of the parts by which the jaws or forceps were forced open and released their hold on the cloth.[2]

Mason patented other useful textile machinery. Perhaps the most notable were a speeder for roving cotton in 1830 and a cotton whipper in 1834, which James Montgomery, in 1840, considered the best, cheapest, and simplest whipper that he had seen in factory use over a span of thirty years. There is no evidence that Samuel Mason was related to William Mason, who also invented a speeder for roving cotton in 1838 (see patent 724).[3]

[1]Alfred Barlow, *The History and Principles of Weaving by Hand and by Power*, 2nd edition (London: Sampson Low, Marston, Searle, and Rivington, 1879), pages 88, 305–306.

[2]*Journal of the Franklin Institute*, new series, 21(1838):272.

[3]Lozier, "Taunton and Mason," pages 98, 100, 118, 232. Montgomery, *A Practical Detail of the Cotton Manufacture*, pages 26–28.

FIGURE 14.—Patent model 291. (S.I. neg. 80-15214)

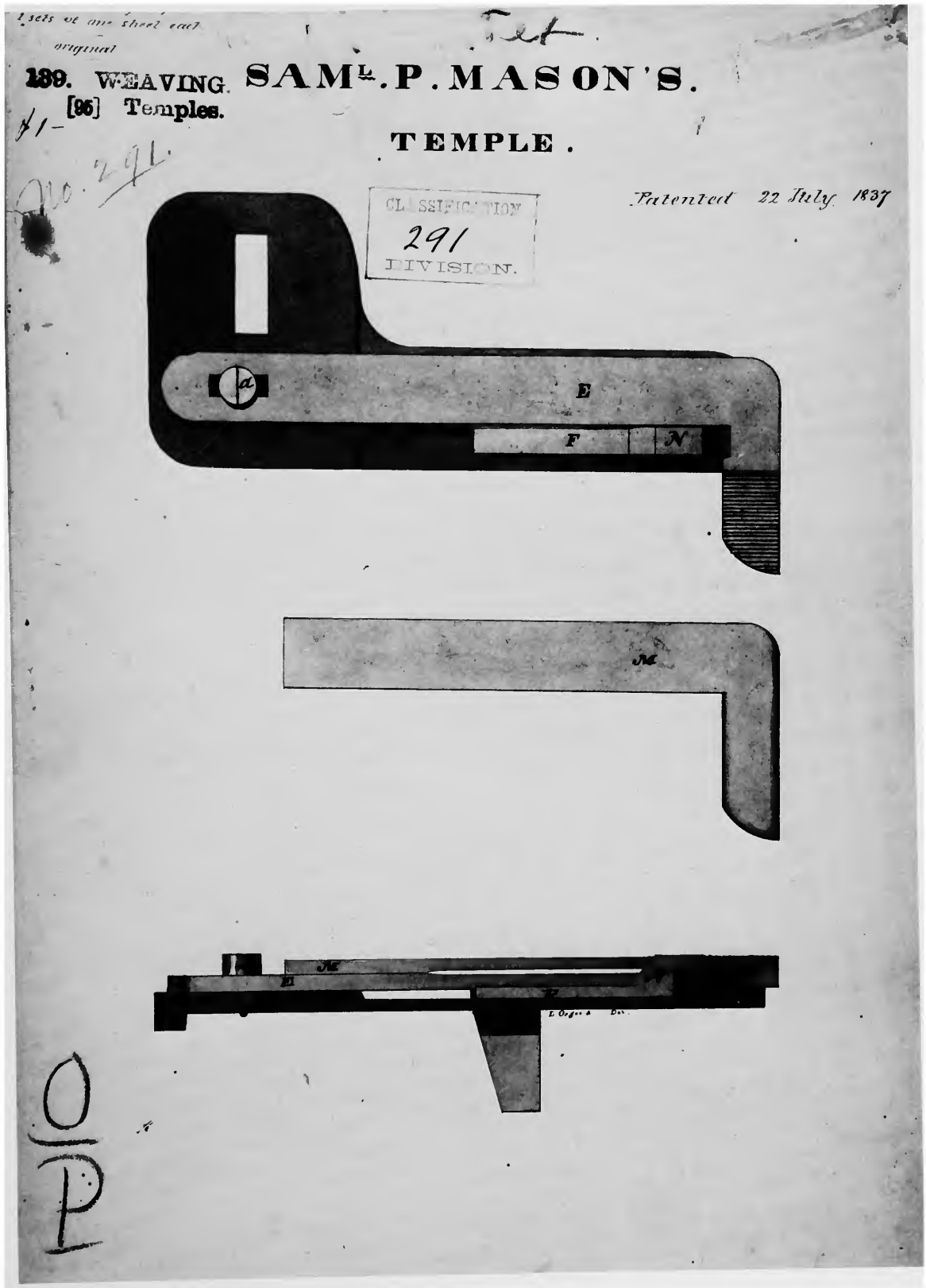


FIGURE 15.—Patent drawing 291. (U.S. National Archives)

PATENT 350: Cloth Napping Machine

Issued August 8, 1837

Benjamin Swasey

Mount Vernon, Kennebec Co., Maine

Swasey's patent concerned the setting of teazles in the wires of the large napping cylinder. He also claimed certain springs and levers that shifted the cloth rollers in and out of gear. This shifting of the cloth rollers caused the cloth to come in contact with the teazles as the cloth was wound forward and then disengaged the cloth from the teazles as the cloth rewound. In this way, the cloth could roll from one cylinder to another as long as necessary to ensure a well-napped surface. An additional benefit was that the shifting of gears was accomplished without the "aid of a person to match and unmatch the gear work."[1] Tension on the cloth was kept even by friction bands on the ends of the cloth rollers together with hanging weights.

[1]National Archives Record Group 241: Patent Application Files, patent 350.

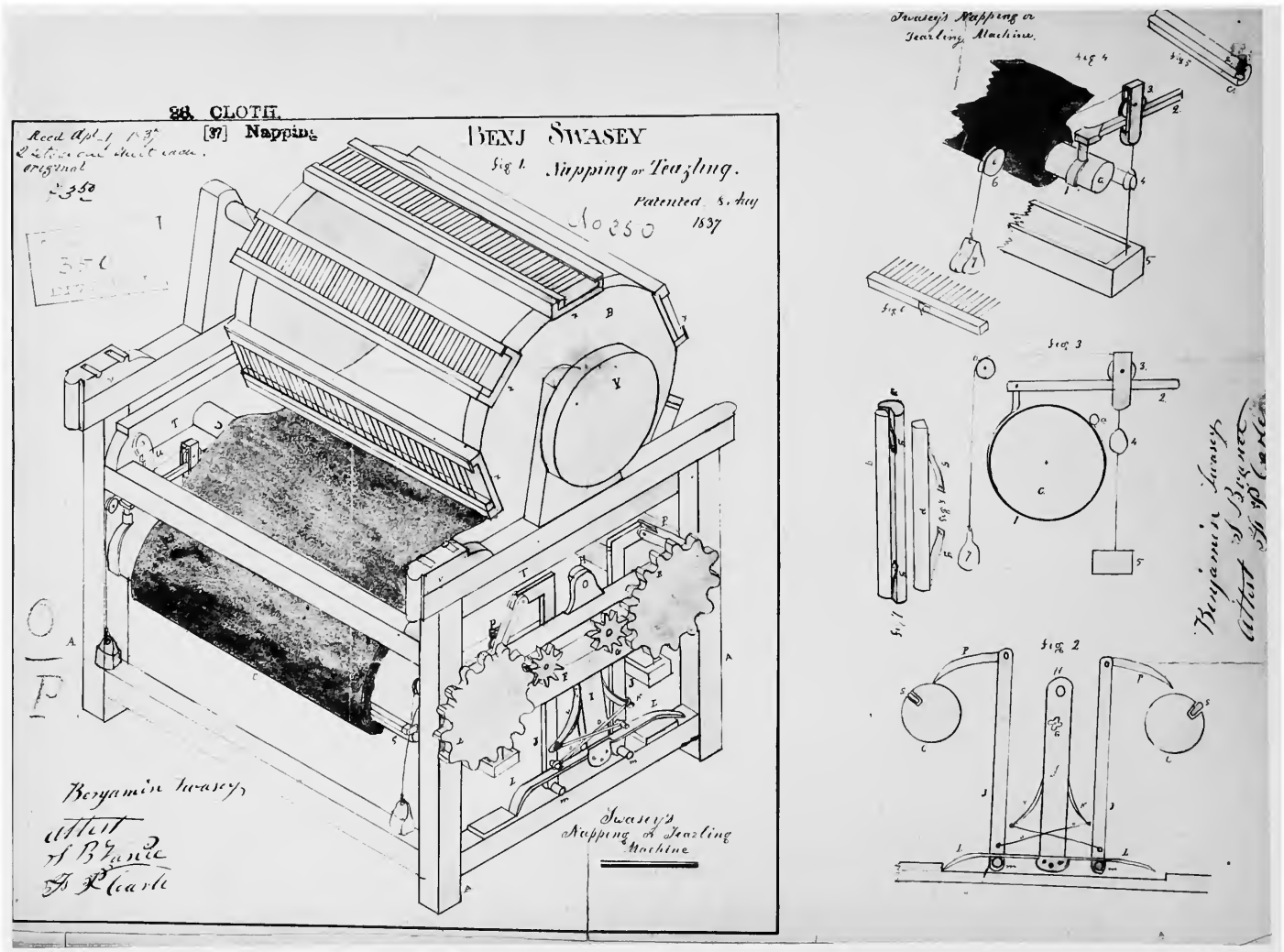


FIGURE 16.—Patent drawing 350. (U.S. National Archives)

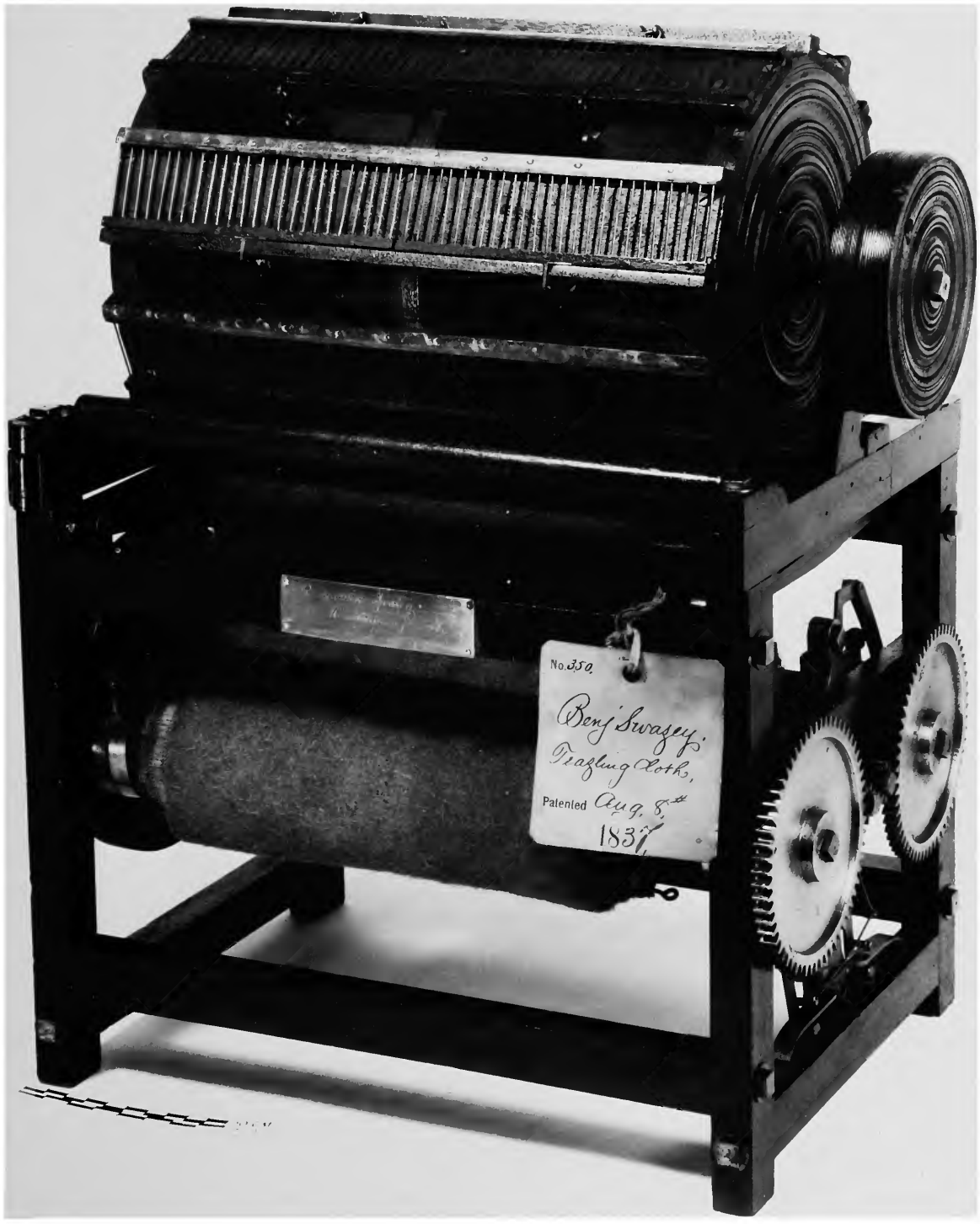


FIGURE 17.—Patent model 350. (S.I. neg. 81-13338)

PATENT 352: Doubling and Twisting Thread Machine

Issued August 15, 1837

John Golding

Dedham, Norfolk Co., Massachusetts

Golding specified that the frame of the doubling and twisting machine was to be constructed like any of the "modern" frames with gears and an eccentric or heart motion to guide the thread on the spool. His patent claim concerned the arrangement of the machinery that prevented wasting the thread if it broke. This was accomplished by stopping the spindle and throwing up the feeding-down roller.

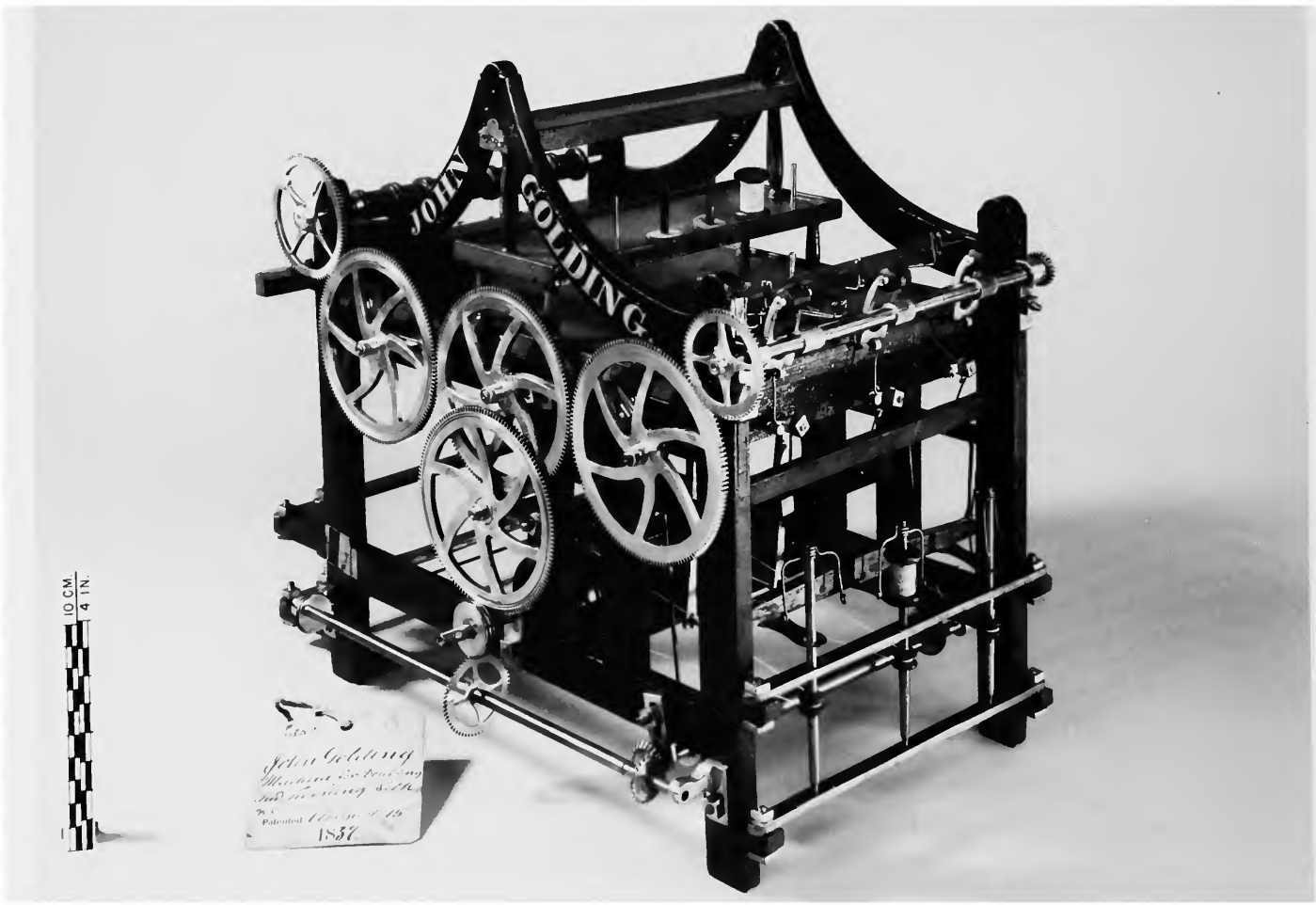


FIGURE 18.—Patent model 352. (S.I. neg. 80-15215)

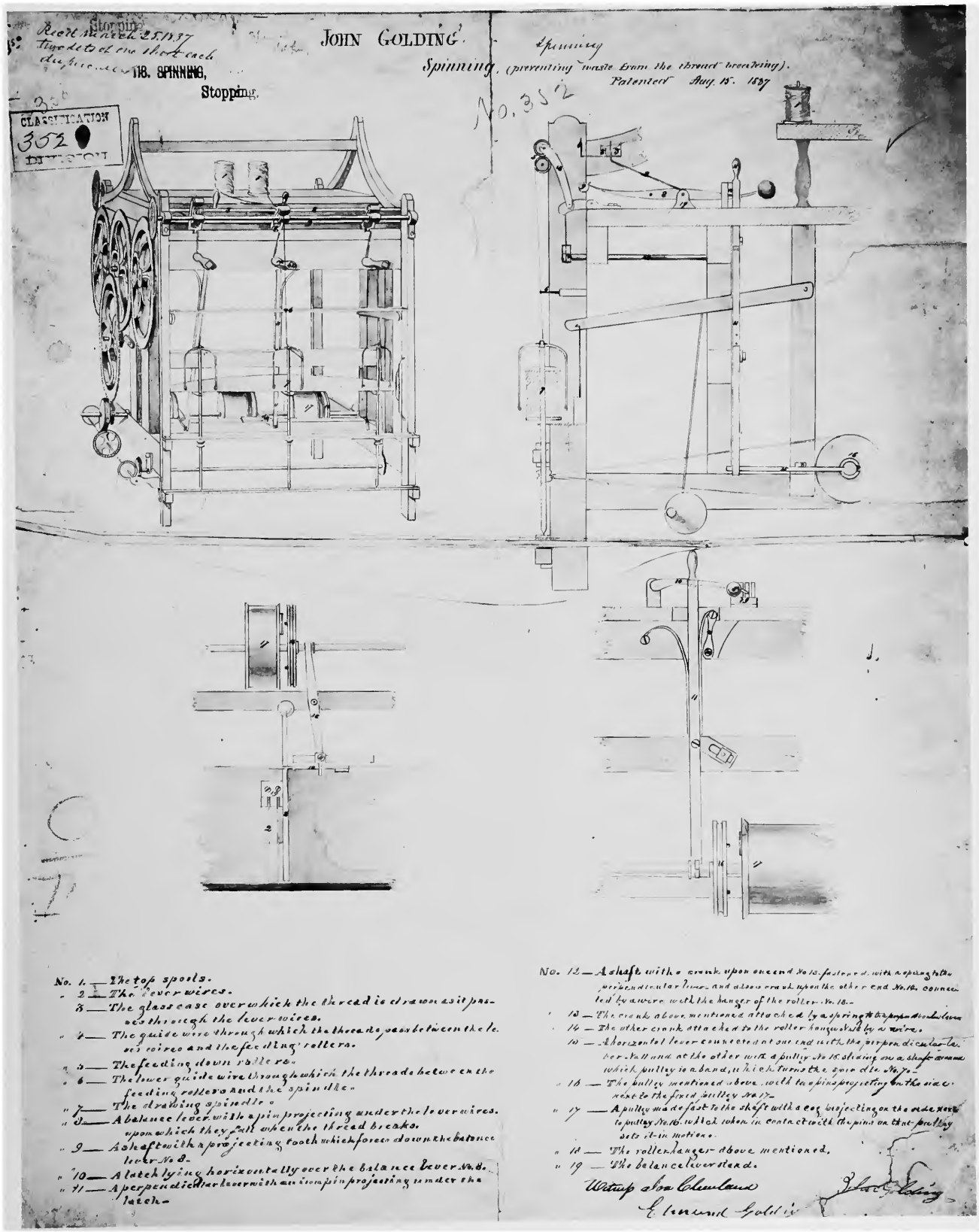


FIGURE 19.—Patent drawing 352. (U.S. National Archives)

PATENT 490: Hair Cloth Loom

Issued November 25, 1837

Charles R. Harvey
Poughkeepsie, Dutchess Co., New York

Weaving with horsehair was difficult and slow because the weaver had to select an individual horsehair for each weft and insert it into the warp. Harvey's loom was a step toward mechanizing this process. However, he only dealt with changing from a hand loom to a power loom, not with the problem of weaving with horsehair. Even in his patent specification, he mentioned that the "hook" (a simple wooden rod with a hook at one end by which the horsehair was drawn in to be woven) is "made in the usual way." Harvey detailed his improvements as the application of power to both the movement of the hook and the operation of the loom overall.

At the tenth Annual Fair of the American Institute, in 1837, Harvey was awarded a gold medal for his "hair seating loom." *The Journal of the American Institute,* published in 1838, remarked that "this is the first application of power to weaving hair cloth; and concerning the extent of the article (hair cloth) now used for furniture, we think the loom is entitled to the highest consideration."[1]

[1]*Journal of the American Institute,* 3(1838):138.

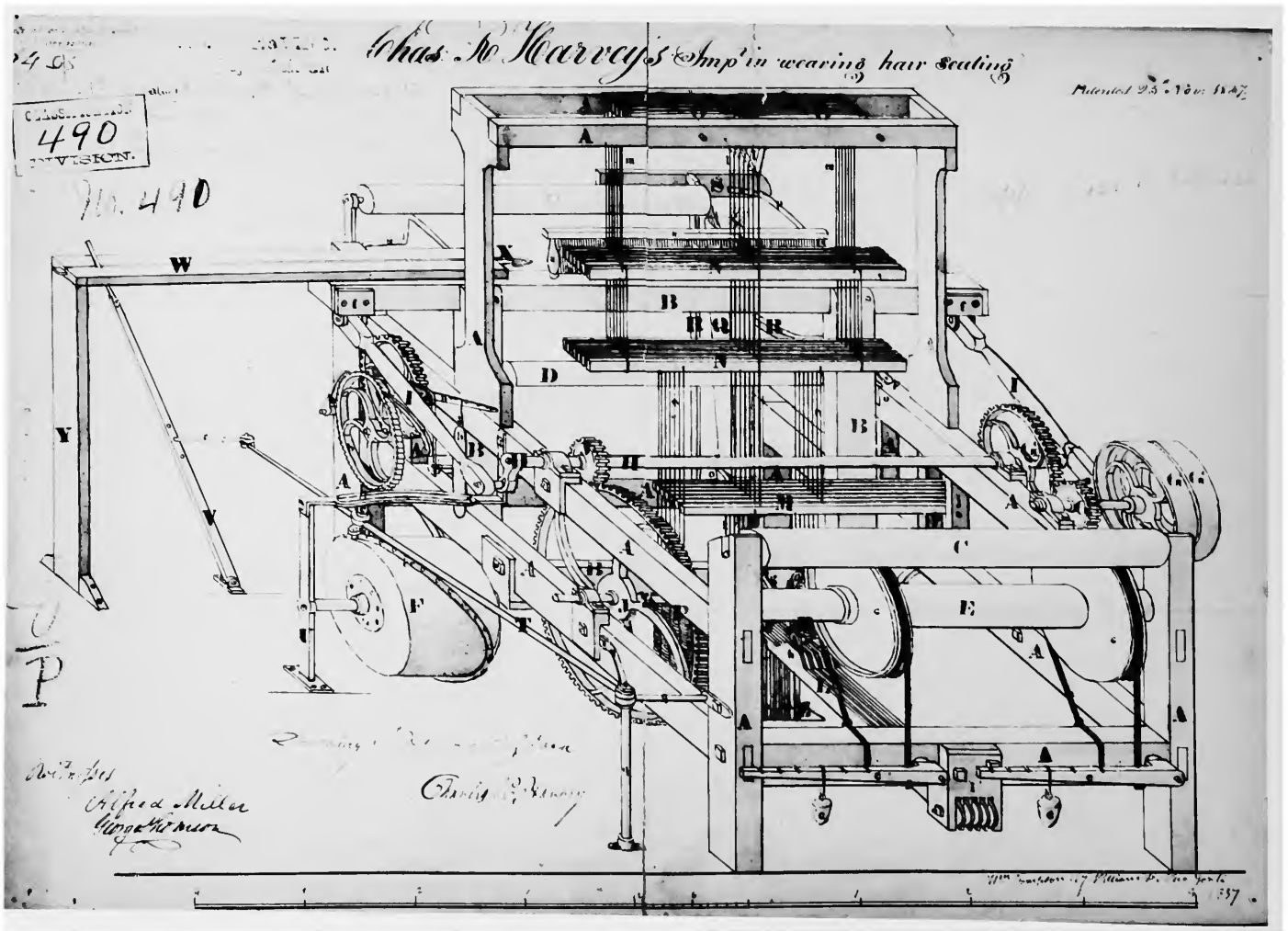


FIGURE 20.—Patent drawing 490. (U.S. National Archives)

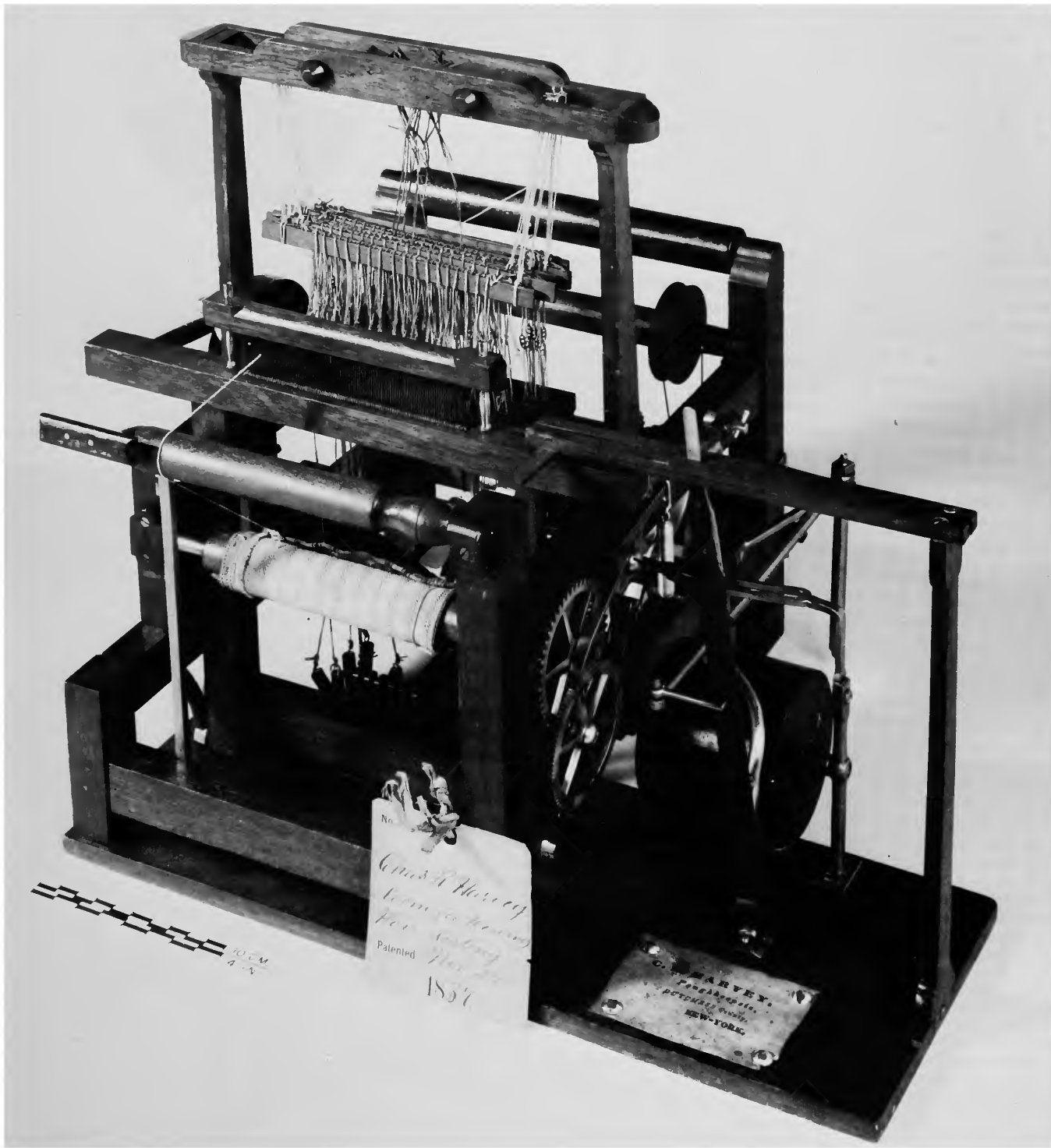


FIGURE 21.—Patent model 490. (S.I. neg. 80-16793)

PATENT 491: Fancy Power Loom

Issued November 25, 1837

William Crompton

Taunton, Bristol Co., Massachusetts

Before William Crompton's patent was adopted, the harnesses of power looms were controlled by cams. This arrangement limited the number of harnesses that could be utilized, which in turn limited the complexity of patterns that could be woven. In order to vary the pattern the cams had to be laboriously changed. Crompton's invention solved both of these problems. In his patent, an endless pattern chain was used, upon which rollers or pins could be variously placed to engage the harness levers (as had the cams) but which allowed any number of harnesses to be used and eaily permitted the changing of patterns. Thus more elaborate designs could be easily woven on power looms.[1]

William Crompton, an Englishman,[2] had only been in the United States a year, when he designed this loom. He was employed by Crocker and Richmond, a textile mill in Taunton, Massachusetts, which failed that same year. Crompton went back to England where he entered into the cotton manufacture with John Rostran, in whose name he took out a British patent for his loom. Later in 1839 Crompton returned to the United States to promote his looms. He met with success when the Middlesex Mills in Lowell, Massachusetts, invited him to alter his fancy cotton loom for the weaving of woolen fabrics. This he accomplished in 1840 and it was considered an important landmark for the woolen industry.[3] Hayes quotes the Committee on Patents of the United States House of Representatives, 1878, that "upon the Crompton loom or looms based upon it, are woven every yard of fancy cloth in the world."[4]

In 1849, Crompton became incapacitated for work, but his son, George, carried on the business. After 1859, the Crompton Loom Work became one of the two largest fancy loom manufacturers in the United States.[5]

[1]Cole, *The American Wool Manufacture,* 1:306–309. *Dictionary of American Biography* 4(1930):561–562.

[2]Photograph of William Crompton supplied courtesy of Crompton and Knowles Loom Works.

[3]Rita Adrosko, "The Cromptons." (In Peter C. Marzio, editor, *A Nation of Nations,* pages 203–207. New York: Harper and Row, 1976), pages 203–204.

[4]Hayes, *American Textile Machinery,* pages 50–51.

[5]Lozier, "Taunton and Mason," pages 172–177.

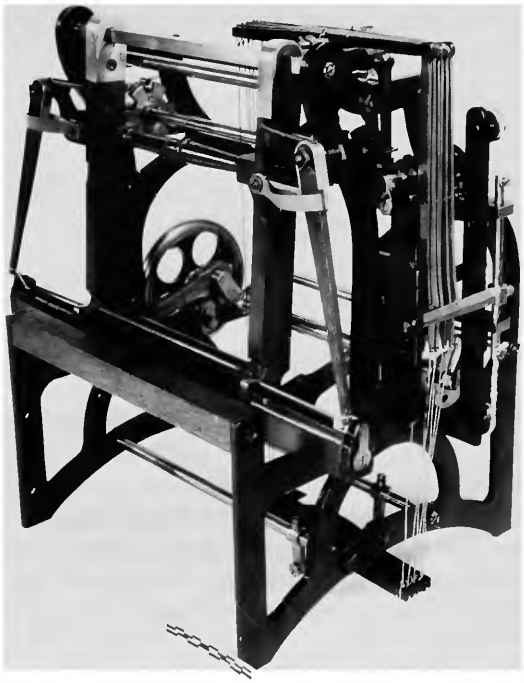
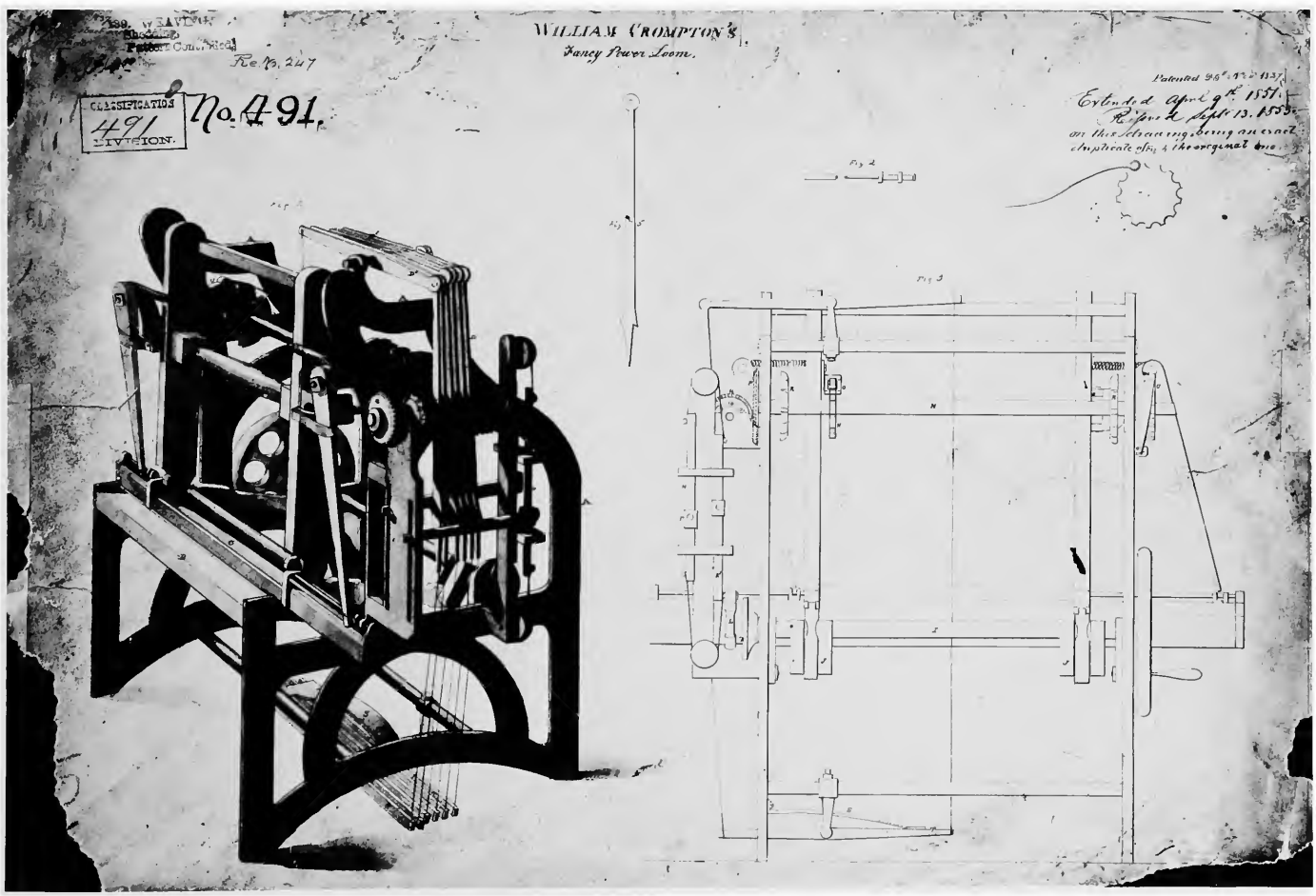


FIGURE 22.—Patent model 491. (S.I. neg. 81-5253)

FIGURE 23.—Patent drawing 491. (U.S. National Archives)



PATENT 544: Loom Heddles and Harness

Issued December 29, 1837

Benjamin Hartford and William B. Tilton

Enfield, Grafton Co., New Hampshire

Hartford and Tilton improved upon the construction of heddles by using strips of rolled flat metal with an eye punched through the middle of each strip to allow for the passage of warp yarns. Heddles were commonly constructed of cord. The replacement of metal for cord produced a more durable heddle. These one-piece metallic strips and the construction of the heddle frame were the basis of their patent. The heddles slid on two rods and were attached to clasps that could be adjusted permitting the heddles to correspond to the part of the reed that was in operation.

The editor of the *Journal of the Franklin Institute* noted that "instead of the cord usually employed in making the harness, it is to be composed of strips of metal...."[1]

[1] *Journal of the Franklin Institute,* new series, 22(1838):244.

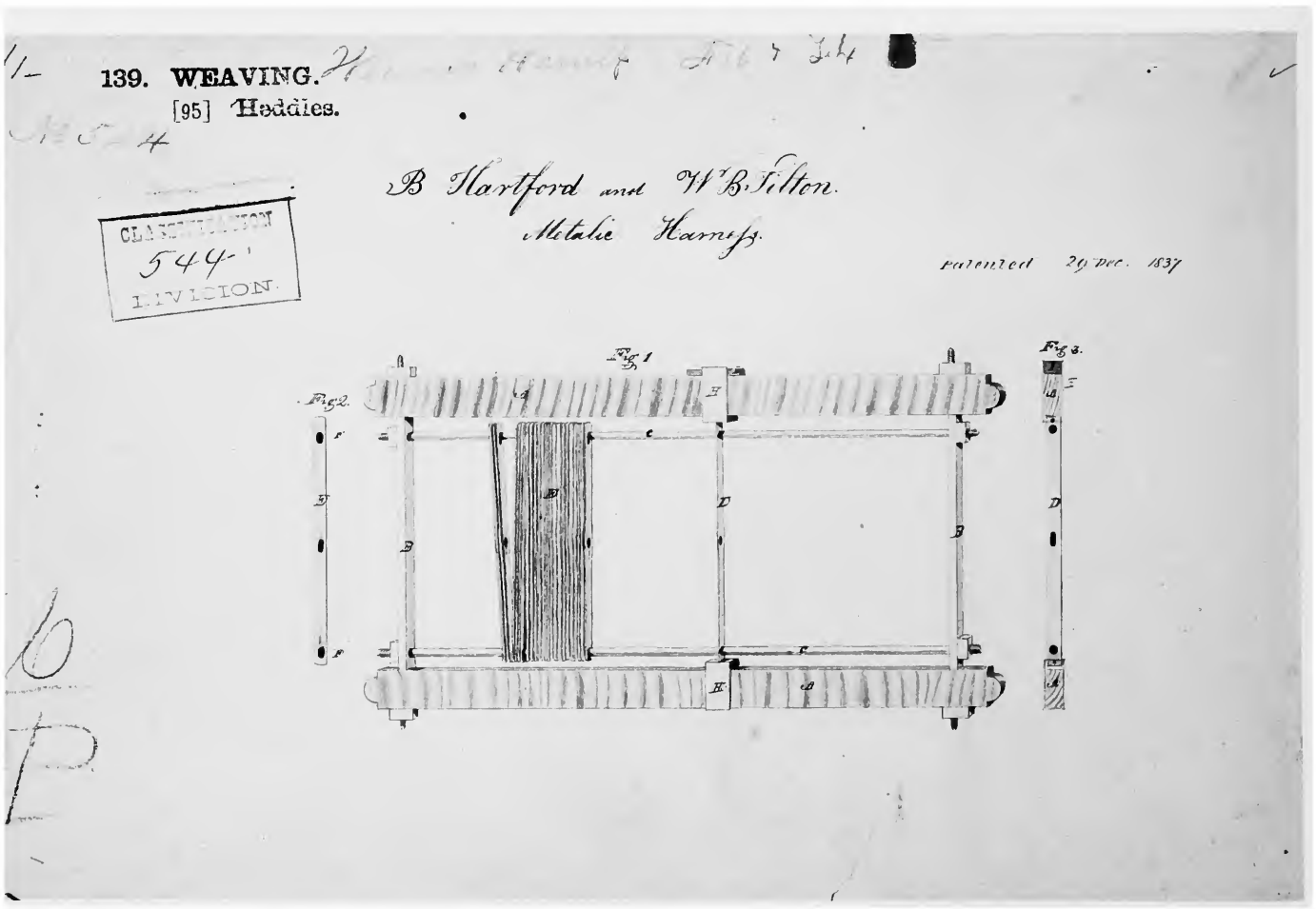


FIGURE 24.—Patent drawing 544. (U.S. National Archives)

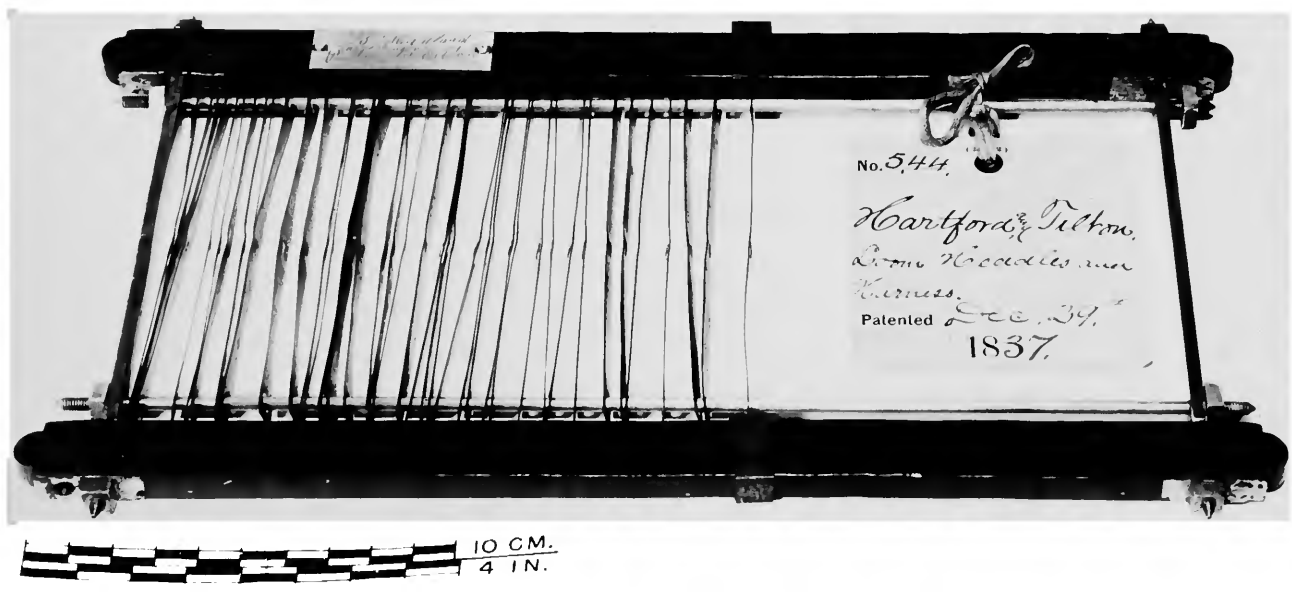


FIGURE 25.—Patent model 544. (S.I. neg. 82-2564)

PATENT 546: Loom for Weaving Knotted Counterpanes

Issued January 6, 1838

Erastus B. Bigelow

West Boylston, Worcester Co., Massachusetts

Erastus B. Bigelow[1] primarily claimed the mechanism that raised the knots which formed the figures or patterns on the counterpane. His patent specification was lengthy, consisting of five pages of drawings and nine pages of written specifications.

The editor of the *Journal of the Franklin Institute* remarked in an article that

> the goods produced in this loom are of a quality very superior to such as are produced in the hand loom; at all events we have not met with any thing of the kind in the shops that will compare with them for texture, and for beauty and

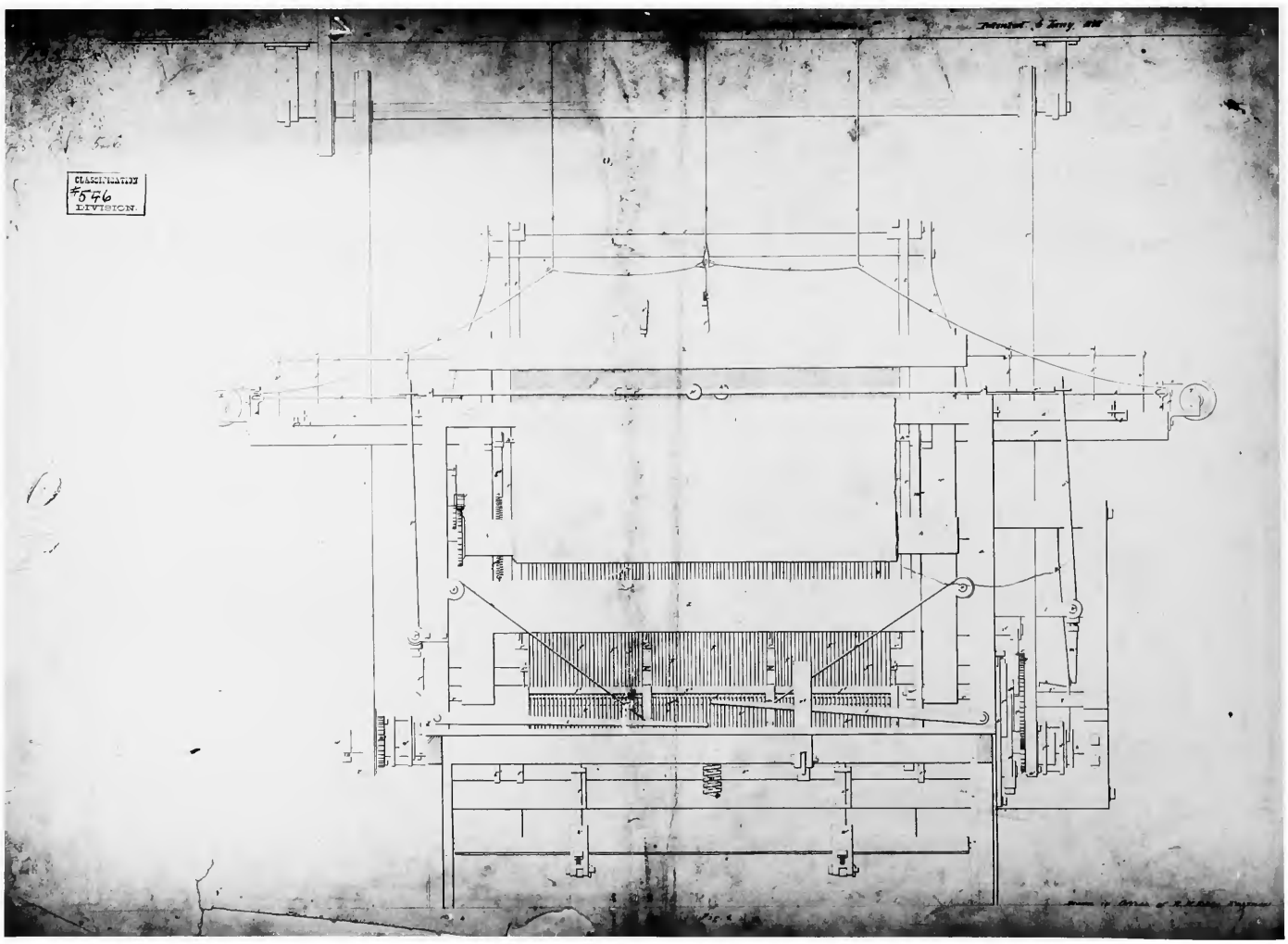


FIGURE 26.—Patent drawing 546. (U.S. National Archives)

regularity of pattern. We speak advisedly on this point, having two of them in use, that have been examined by persons who are good judges in such matters. Of their durability there cannot be any doubt, and the friends of domestic industry will be glad to learn that the manufacture is so much facilitated by the invention of Mr. Bigelow as to cause them to be afforded at a price considerably below that at which those of an inferior quality can be imported, and yet to give a satisfactory remuneration to the manufacturer ....

We anticipate that at a very early day, American counterpanes will become as general as berths on board steamboats, and as beds at hotels. The articles are for sale in all our large cities, and as soon as there is a sufficient supply, will make their way into every part of the Union.[2]

Bigelow was a prolific inventor, including the patenting of at least 33 looms. In 1842 he revolutionized carpet manufacture by a series of inventions that made the carpet loom automatic. The automatic features enabled the manufacturers to replace male weavers with less costly female weavers or boys. His inventions for the power weaving of Ingrain, Brussels, Jacquard, and Wilton carpets were quite successful. Before the middle of the nineteenth century, the importance of these inventions was recognized, not only in the United States but also in Europe.[3]

The 1950 issue of *The Bigelow Magazine,* published by the Bigelow-Sanford Carpet Company for their 125th anniversary, included an article on Bigelow in which he was headlined as the "Father of the modern carpet industry."[4]

[1]The detail of Christian Schussele's painting, *Men of Progress: American Inventors,* shows Bigelow (standing) with one of his loom drawings attached to the wall behind him. (National Portrait Gallery, S.I.)

[2]*Journal of the Franklin Institute,* new series, 26(1840):173–174.

[3]Hayes, *American Textile Machinery,* pages 51–52.

[4]Jay Bradley, editor, "Erastus Bigelow," *The Bigelow Magazine,* 2(5)(September-October 1950):6–9, 38–39.

FIGURE 27.—Patent model 546. (S.I. neg. 81-4414)

PATENT 595: Power Loom

Issued February 6, 1838

Elijah Fairman
Stafford, Tolland Co., Connecticut

Fairman's improvements, consisting of an additional cam and set of treadles, were additions to power looms in common use. His improvements allowed the harnesses to operate more smoothly and the warp to open, through which the shuttle passed more easily. The end result was that the loom was better suited to weaving either light or heavy fabrics.

Six pages and three illustrations in Gilroy's book, *The Art of Weaving,* are spent in describing Fairman's patent. Gilroy

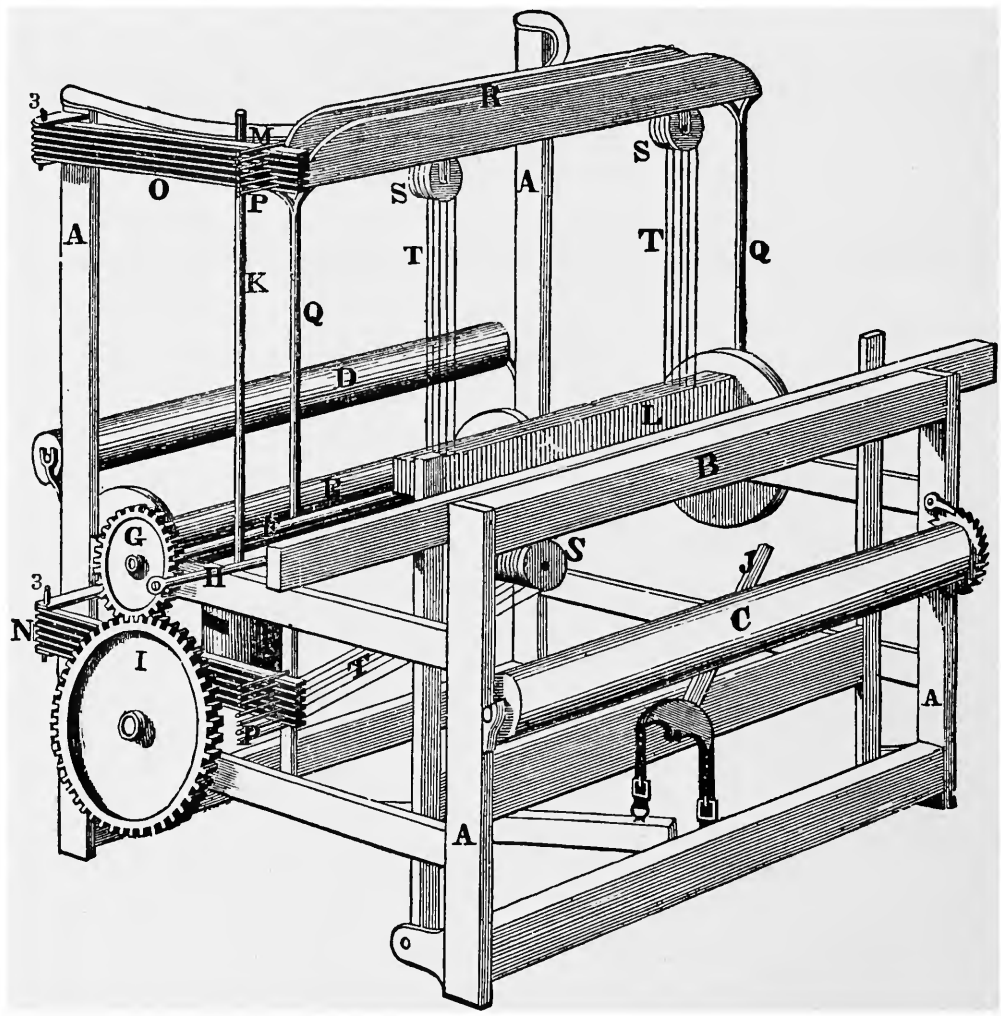


FIGURE 28.—This illustration of Fairman's loom accompanied an article in *Scientific American,* 1845, which described his improvement to the satinet loom. (S.I. neg. 82-2780)

commented that Fairman's loom would probably work fine for simple weaves, but for fancy patterned work, one requiring 10-100 heddle frame, it would be totally impractical.[1]

Scientific American published an excerpt from Gilroy's remarks on Fairman's loom and included one engraving. At the end of the article there was advertized for sale an "invaluable work entitled *The Art of Weaving,* by Gilroy, which included a series of descriptions, with illustrations, of many different inventions."[2]

[1]Gilroy, *The Art of Weaving,* pages 374–379.
[2]*Scientific American,* 1(1846):111.

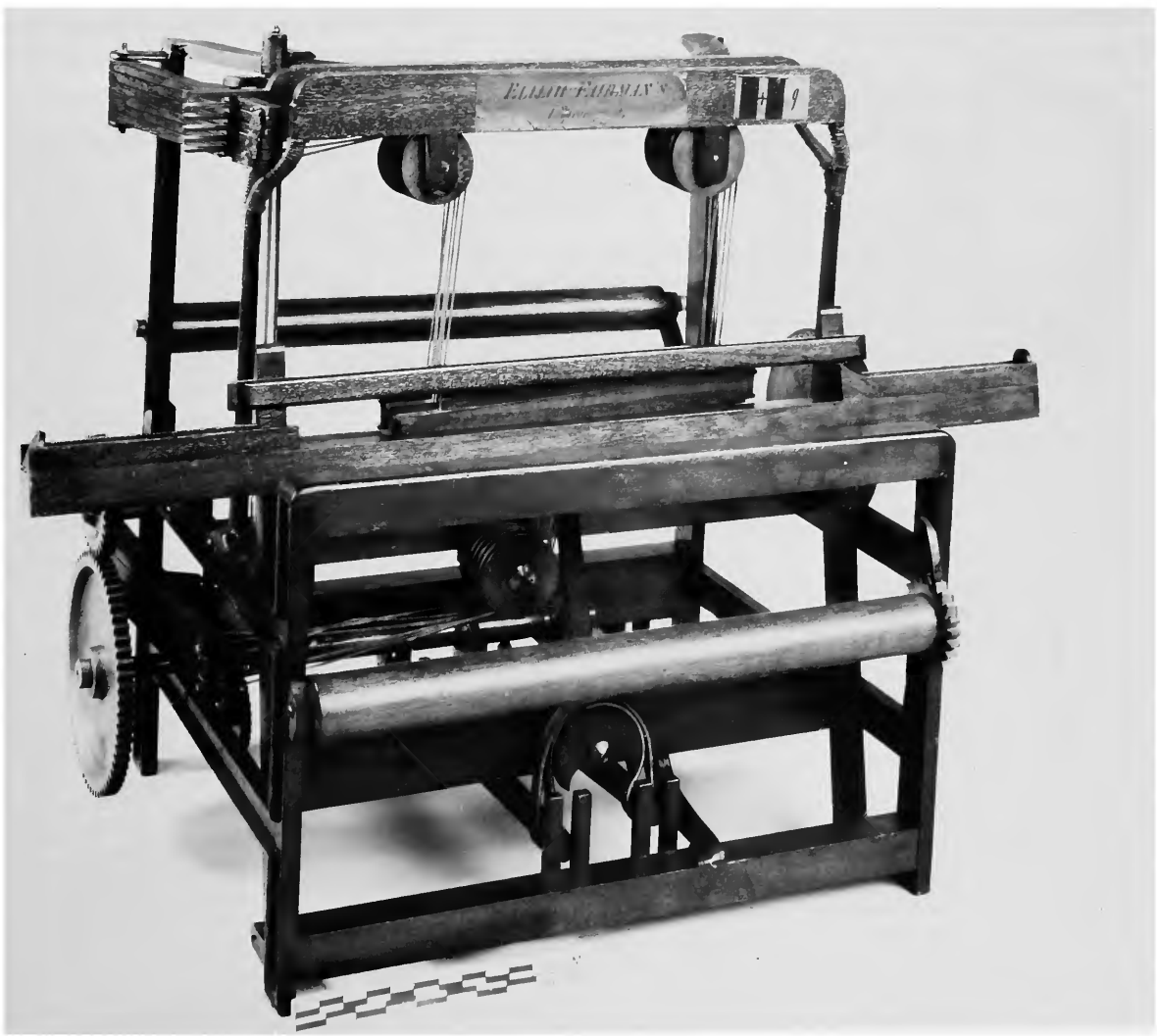


FIGURE 29.—Patent model 595. (S.I. neg. 80-20144)

PATENT 596: Cordage Machine

Issued February 7, 1838

Moses Day

Roxbury, Norfolk Co., Massachusetts

This patent was an improvement on Day's earlier patent (9692x) of June 2, 1836, which was destroyed in the 1836 fire and reconstructed by the Patent Office for the Columbian Exposition of 1893. The difference between the two patents is the addition of a gauge-plate to the end of the machine by which it became a strandmaker. In Figure 32, the perforated gauge-plate on the end of the twisting machine is in the shape of a circle with ears. The toothed bench with flax laying on it in the restored drawing of patent 9692x was replaced in patent drawing 596 with a bobbin frame, which fed the cordage machine with the desired number of strands to be twisted into cord. Day stated that his method of making cordage had two advantages over those in common use. First, the twist given to the strand was uniform throughout its length. Second, as the cord was made, it was wound on a bobbin, thereby eliminating the need for long rope walks and large buildings. Thus, the whole process could be done in a room that was only slightly larger than the cordage machine and the bobbin frame.

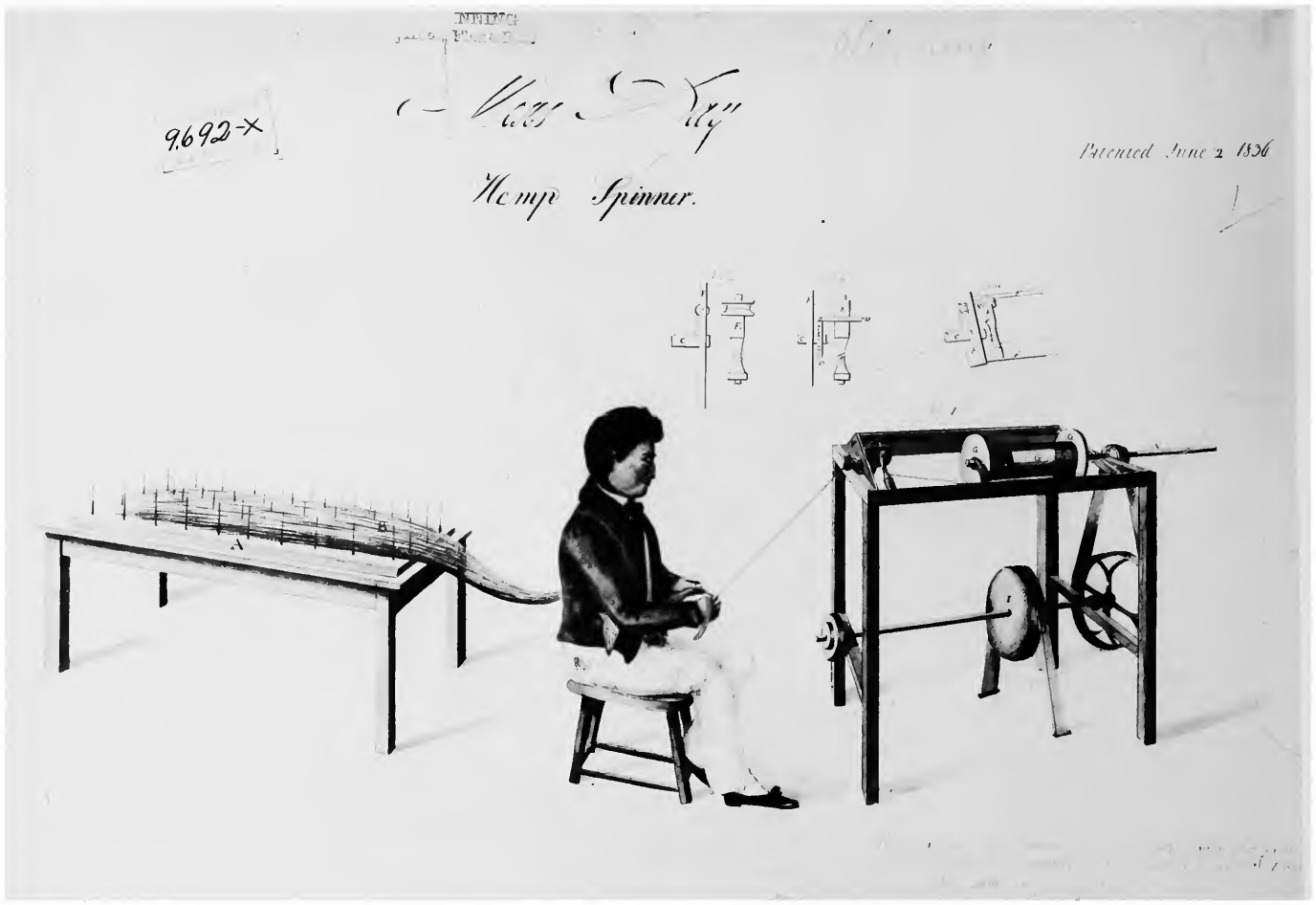
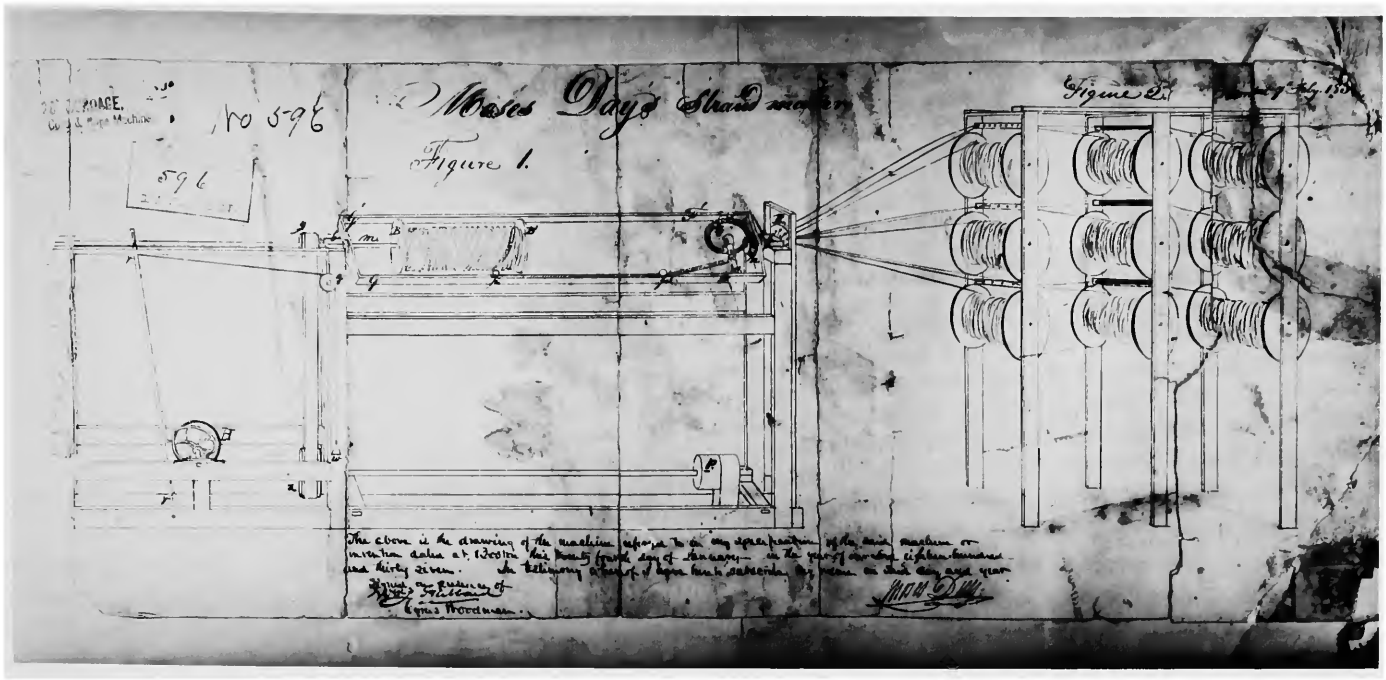
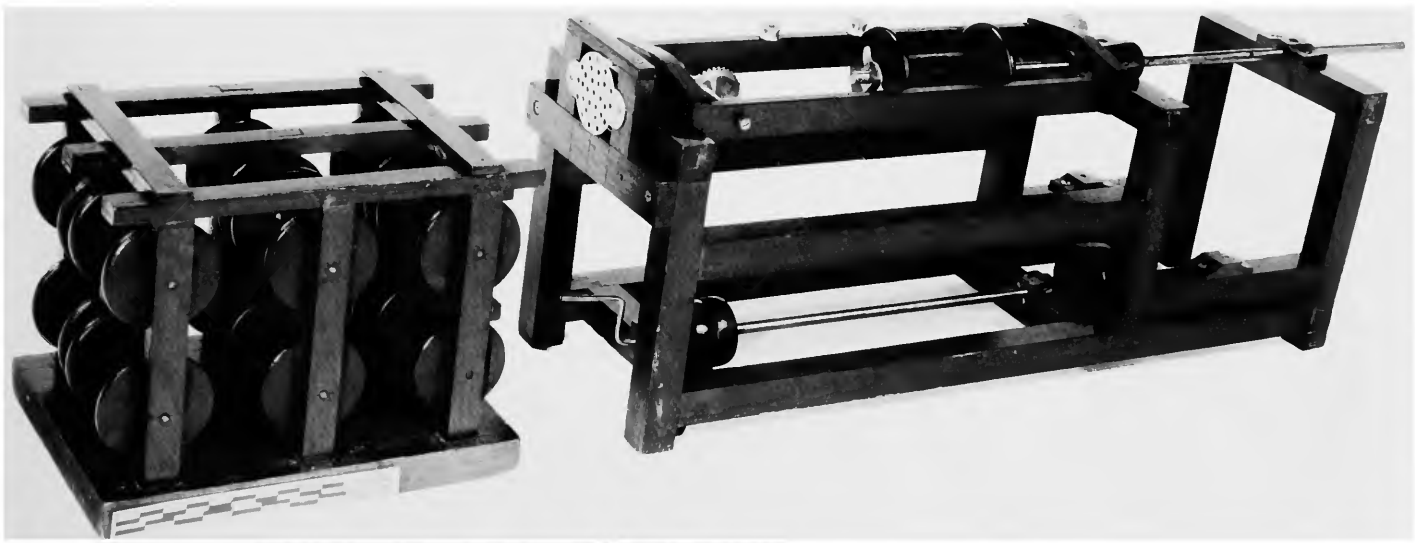


FIGURE 30.—Restored patent drawing 9692x. (U.S. National Archives)





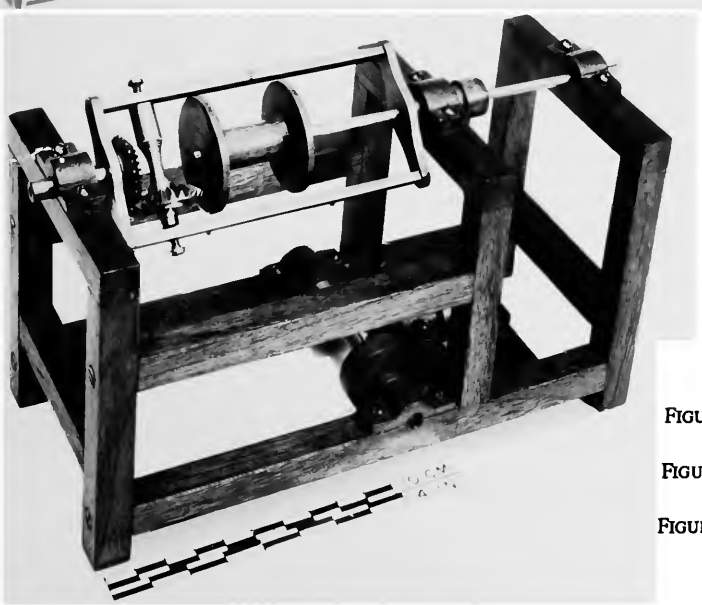


FIGURE 31.—Patent drawing 596. (U.S. National Archives)

FIGURE 32.—Patent model 596. (S.I. neg. 81-5252)

FIGURE 33.—Restored patent model 9692x. (S.I. neg. 82-3601)

PATENT 710: Domestic Spinning Wheel

Issued April 25, 1838

Hiram F. Wheeler
Springville, Susquehanna Co., Pennsylvania

Hiram Wheeler's domestic wheel was intended to spin wool and tow. He titled his invention "inclined spinner," referring to the fact that the operator would sit at the machine as opposed to standing and walking when using the typical wool wheel. When the treadle was forced down with the foot, a cord ran out the carriage and the spinning wheel head. A weight brought them back toward the spinner. This movement of the carriage was equivalent to the spinner walking forward to the spindle tip for the draw out and then back to the wheel. Wheeler specifically claimed as his invention this sliding action of the wheel head.

The editor of the 1839 *Journal of the Franklin Institute* remarked of the wheel that "there is little probability that our readers will ever see [the wheel], unless it be in the form of a model, at the Patent Office."[1] This prediction seems to have been valid, because there are no other known existing spinning wheels bearing his patent.

[1] *Journal of the Franklin Institute,* new series, 23(1839):184.

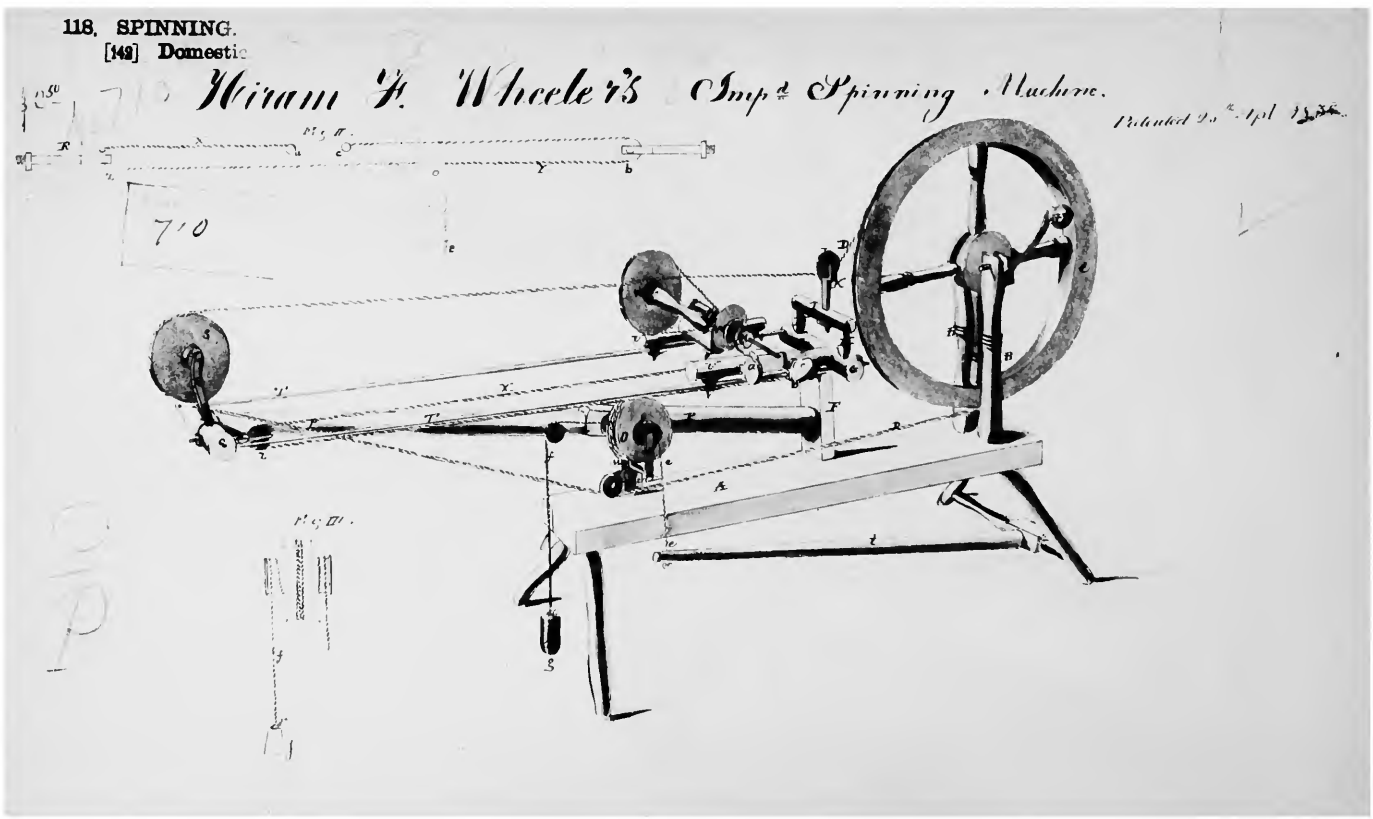


FIGURE 34.—Patent drawing 710. (U.S. National Archives)

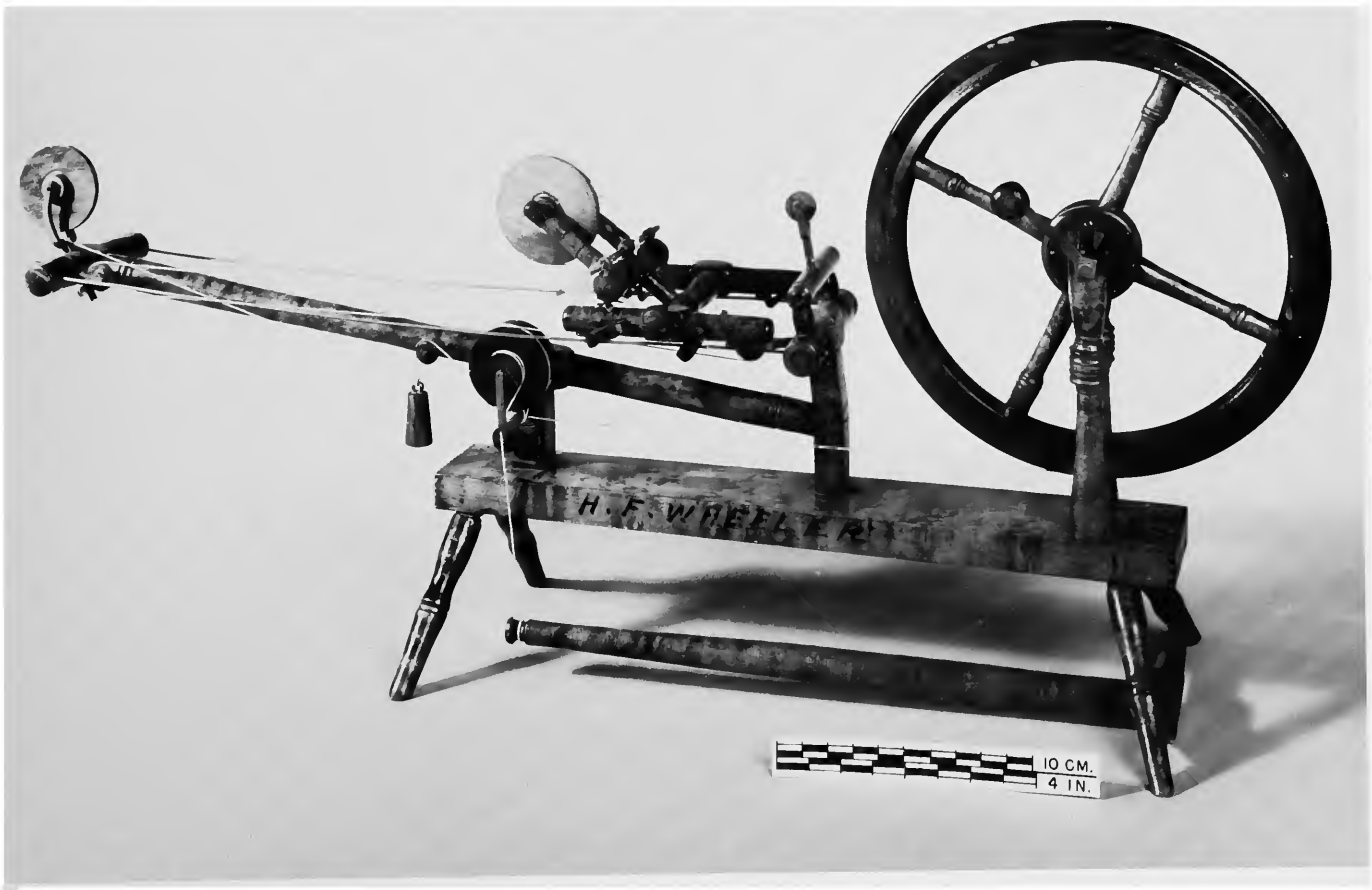


FIGURE 35.—Patent model 710. (S.I. neg. 80-20145)

PATENT 724: Speeder for Roving Cotton

Issued May 4, 1838

William Mason

Taunton, Bristol Co., Massachusetts

In 1837, William Mason,[1] who was employed by Crocker and Richmond, developed a speeder to replace the Taunton speeder that had been invented by George Danforth in 1824.

Mason's patent consisted of two parts: the mode of withdrawing the spindle for the doffing and the centrifugal levers. The editor of the *Journal of the Franklin Institute* stated of the first part that the mode was "ingenious, and manifestly good." Of the second part he explained that " by their weight, at their outer ends, these levers expand by the centrifugal force, with a power proportioned to their velocity, causing their inner ends to press upon the spools, and laying the yard hard and compact upon them; and consequently, admitting of a very high degree of speed."[2]

Although Mason was successful in improving the speeder

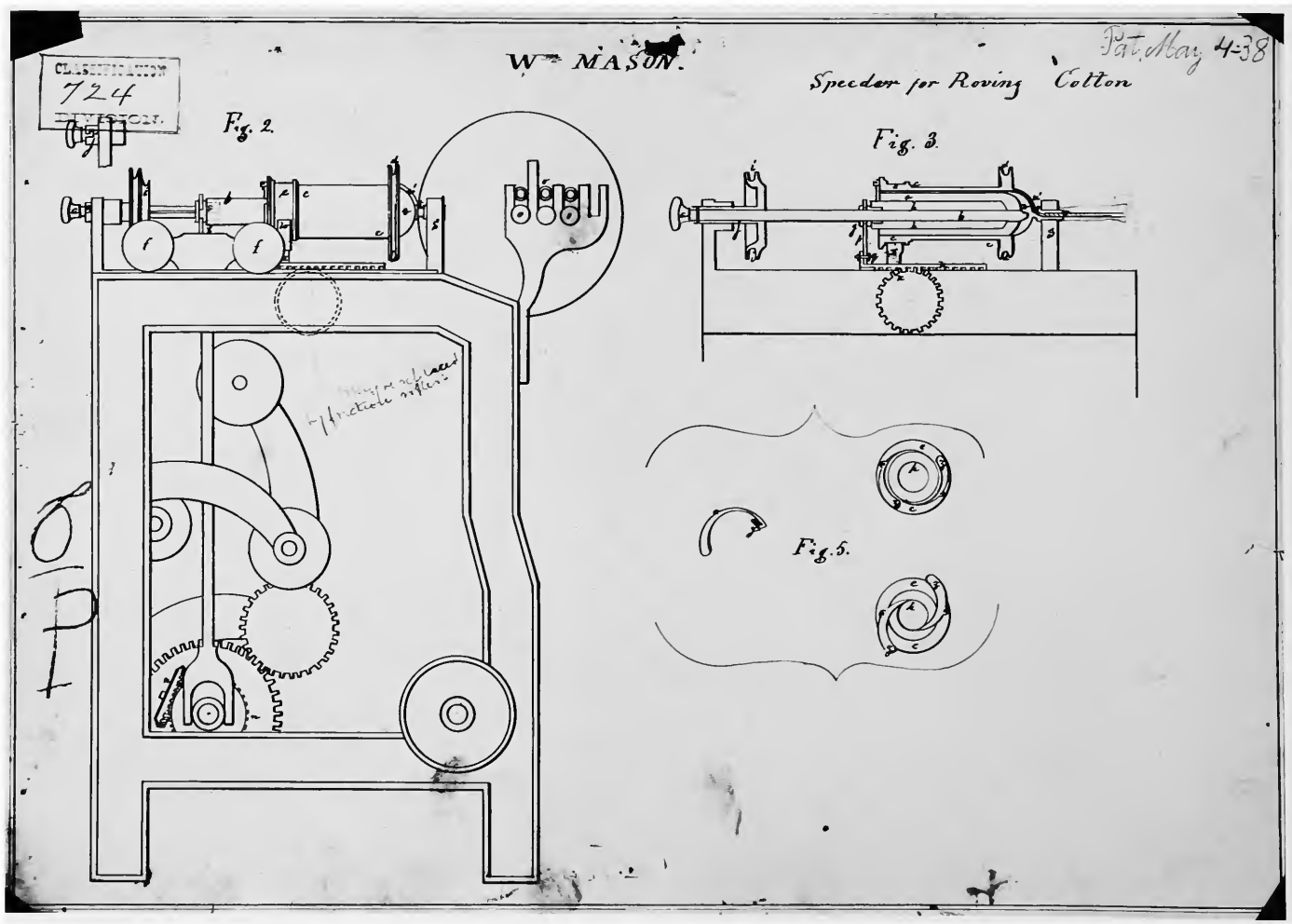


FIGURE 36.—Patent drawing 724; the centrifugal levers are depicted "Fig. 5." (U.S National Archives)

(for which he was awarded patent 724) it was difficult to thread and to remove the bobbins. In addition, the speeder created coarse rovings at a time in the late 1830s when finer materials were becoming popular. The speeder later proved inferior to an improved English fly frame and disappeared from use in the 1840s and 1850s.[3]

Earlier in his career, Mason had devised a loom for weaving diaper cloth and another loom for weaving damask tablecloths. In 1833, he succeeded in perfecting John Thorp's ring frame (patent 5280x; see Figure 63) to the point where it was later used extensively in the textile industry. He also invented a self-acting mule for spinning cotton (patent 1801, issued October 8, 1840), which for that period was a successful alternative to the contemporary ring spinning machine.[4]

In 1842, Mason, with the financial backing of James Kellog Mills, a Boston merchant, established a machine shop called William Mason and Company. Business prospered and in 1845 new buildings were constructed. At that time, Mason's Taunton shop was considered the largest machine shop in the United States. The shop was particularly successful in manufacturing cotton machinery, as well as machine tools, cupola furnaces, blowers, rifles, Campbell printing presses, gears, and shafts. Mason found new fame in 1852 when he began building locomotives, the first of which was finished in 1853. His locomotives found wide acceptance for their beauty of design and technical excellence.[5] Mason was a pioneer inventor and manufacturer whose ideas, manufacturing methods, and products had a profound influence on American technology.

[1]The engraving of William Mason (above) is from the 1883 issue of *American Journal of Fabrics* (S.I. neg. 81-873).

[2]Jones, *Journal of the Franklin Institute*, new series, 23(1839):232.

[3]Lozier, "Taunton and Mason," pages 169–171.

[4]*Dictionary of American Biography*, 12(1933):377–378. Navin, *The Whitin Machine Works Since 1831*, pages 34–35.

[5]*Dictionary*, loc. cit. Bishop, *American Manufacturers*, 3(1868):319–323. Lozier, "Taunton and Mason," pages 282–287.

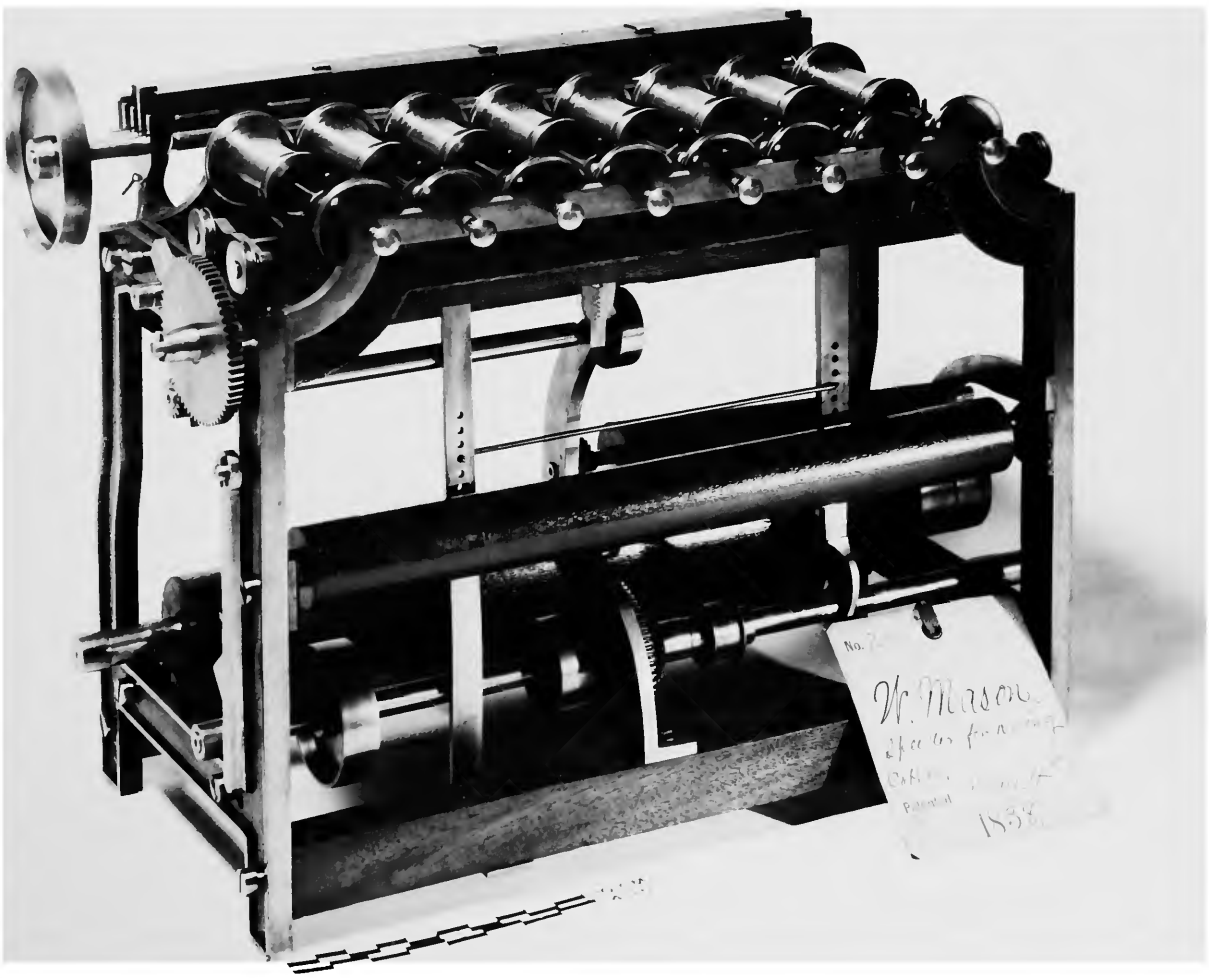


FIGURE 37.—Patent model 724. (S.I. neg. 82-2562)

PATENT 758: Take-up and Let-off for Power Looms

Issued May 30, 1838

Stephen Kimball
Putney, Windham Co., Vermont

Kimball's patent refers to the application of friction to the yarn beam of a power loom. This was accomplished by using a belt, made of steel or iron, which formed nearly a circle around the warp beam. Friction was created by adjusting a screw that caused the circular belt to contract or expand and, in turn, to increase or decrease the drag on the beam. An elliptical spring eased the movement of the beam within the belt and helped maintain the evenness of the cloth.

FIGURE 38.—Patent model 758. (S.I. neg. 80-15212)

(Model.)

S. KIMBALL.

FRICTION LET-OFF MOTION FOR LOOMS.

No. 758. Patented May 30, 1838.

758

FIGURE 39.—Patent drawing 758. (U.S. National Archives)

PATENT 781: Spindle and Flyer

Issued June 12, 1838

Richard E. Yerkes
Philadelphia, Pennsylvania

According to his patent specification, Yerkes patented "the revolving arrangement and combination of the sliding shaft, with the broach, or with the spool, for the purpose of removing and renewing the latter ...." The action of the sliding shaft enabled the operator to remove and change the spool when the spring was pressed down. In addition, he patented the ring in combination with the flyers that distributed the yarn on the spool. Yerkes intended his improvements to be used on machines for spinning cotton and other fibers.

FIGURE 40.—Patent model 781. (S.I. neg. 81-9859)

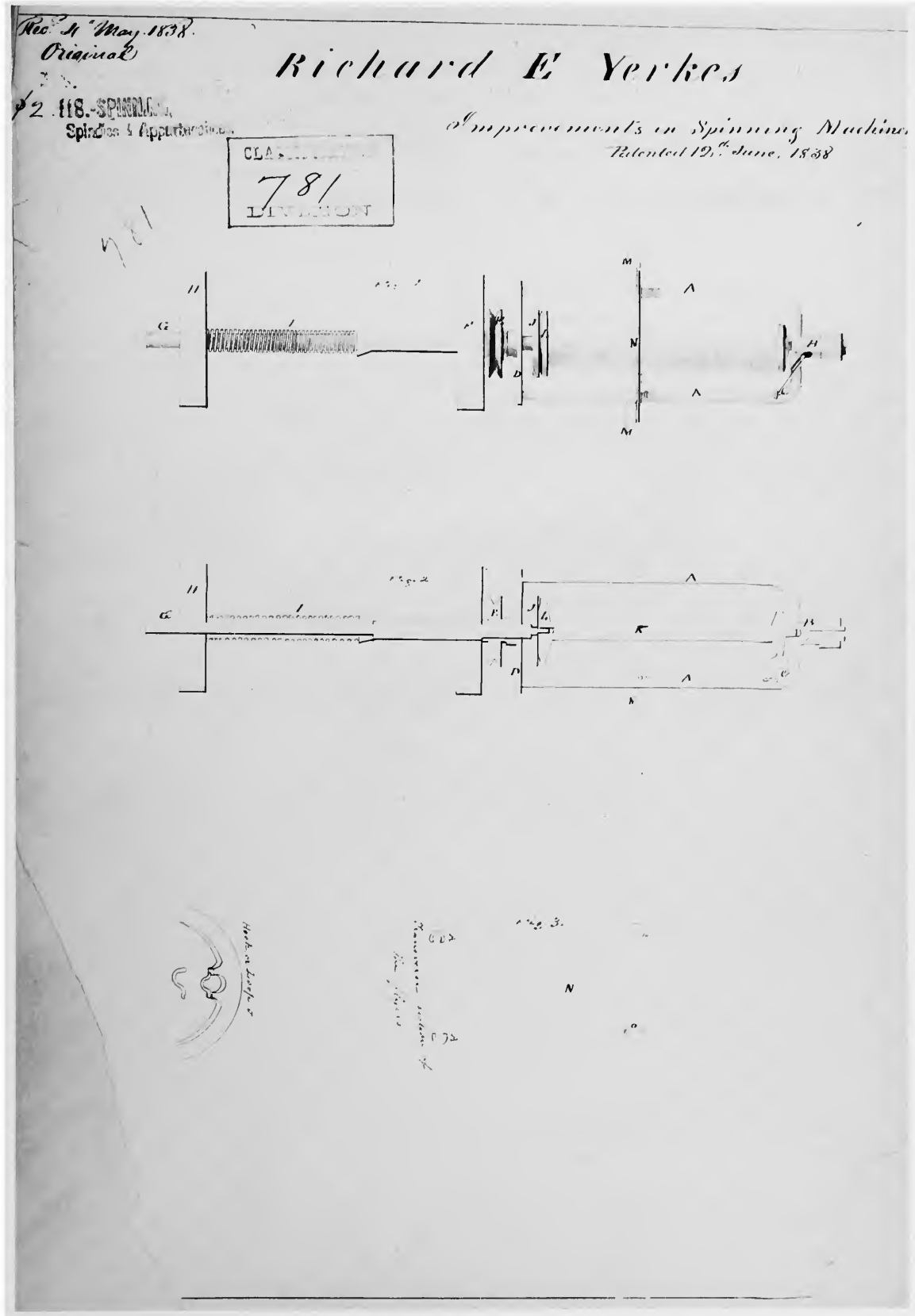


FIGURE 41.—Patent drawing 781. (U.S. National Archives)

PATENT 823: Calico Printing Machine

Issued July 9, 1838

Alden Sibley
Pawtucket, Bristol Co., Massachusetts

Sibley's improvement concerned the arrangement of the color box, which held the coloring matter used in printing; the furnishing roll, which supplied the coloring matter to the printing roll; and the doctor, which acted as a scraper to remove any superfluous color from the cylinder. Sibley stated that the advantage of his machine was

being able to work as heavy an Engraving, last as first, or second, and by which means you can place the Light, delicate colors, first and Black or Chocolate last or as you please.[1]

His patent model shows only one engraved copper roller, although the machine was designed to do 3- or 4-color work with multiple rollers.

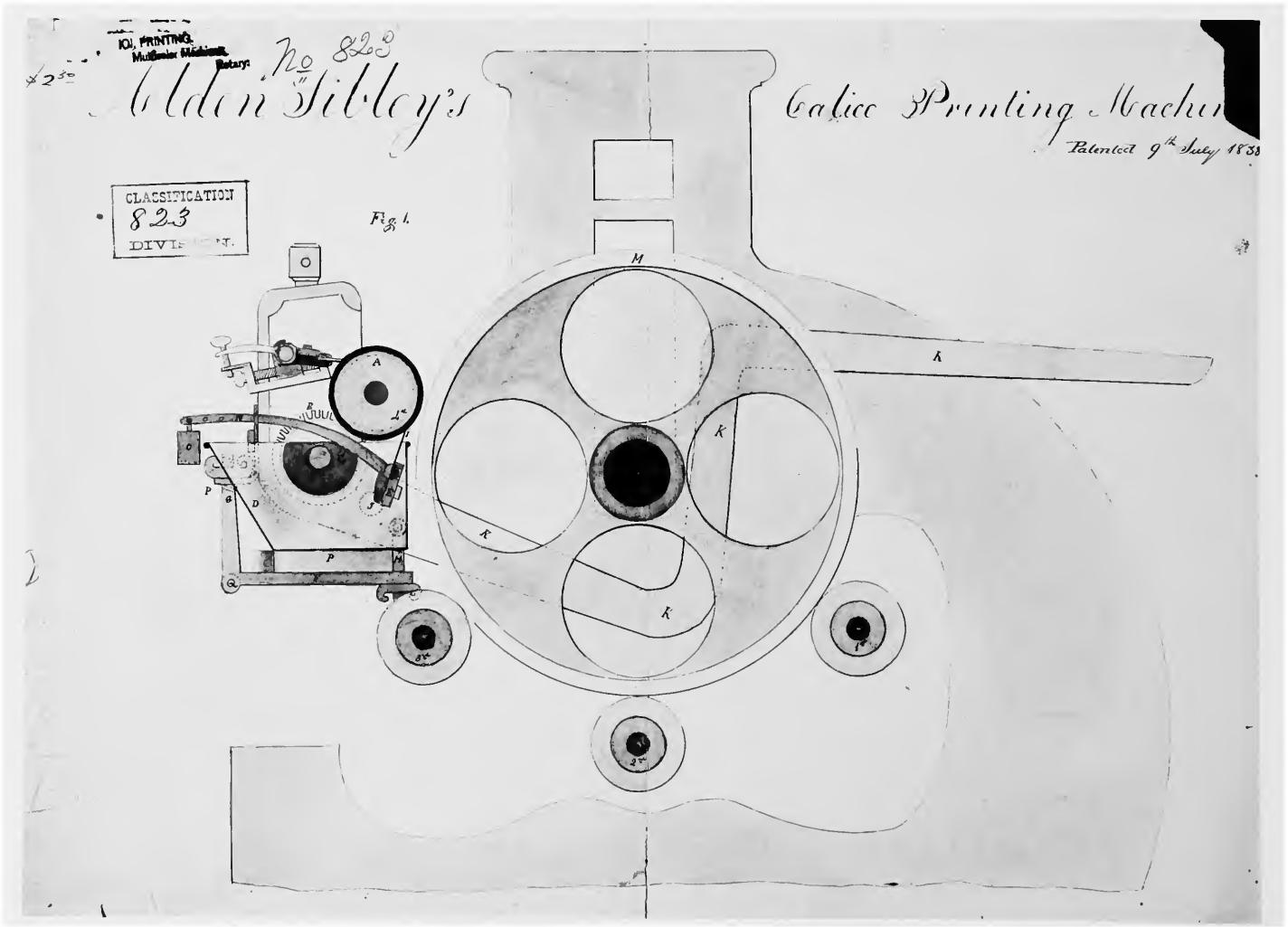


FIGURE 42.—Patent drawing 823. (U.S. National Archives)

Sibley recommended using flour instead of gum to thicken the coloring matter. He calculated that to print 175 pieces it was necessary to use 42 pounds of gum sengal, at 22 cents a pound, which added up to $9.24; whereas, 42 pounds of flour cost only 5 cents a pound, for a sum of $2.10. That totaled up to a savings of $7.14 if the flour was used.[2] Whether or not the use of flour was ever adopted is not known.

By 1836, textile mills in the United States had printed 120 million yards of calicoes. Calico printing was popular among manufacturers largely due to the fact that the printing only added a step to the finishing process and did not affect or complicate the weaving process.[3]

[1]National Archives Record Group 241: Patent Application Files, patent 823.
[2]Ibid.
[3]Bishop, *American Manufacturers*, 2(1868):404.

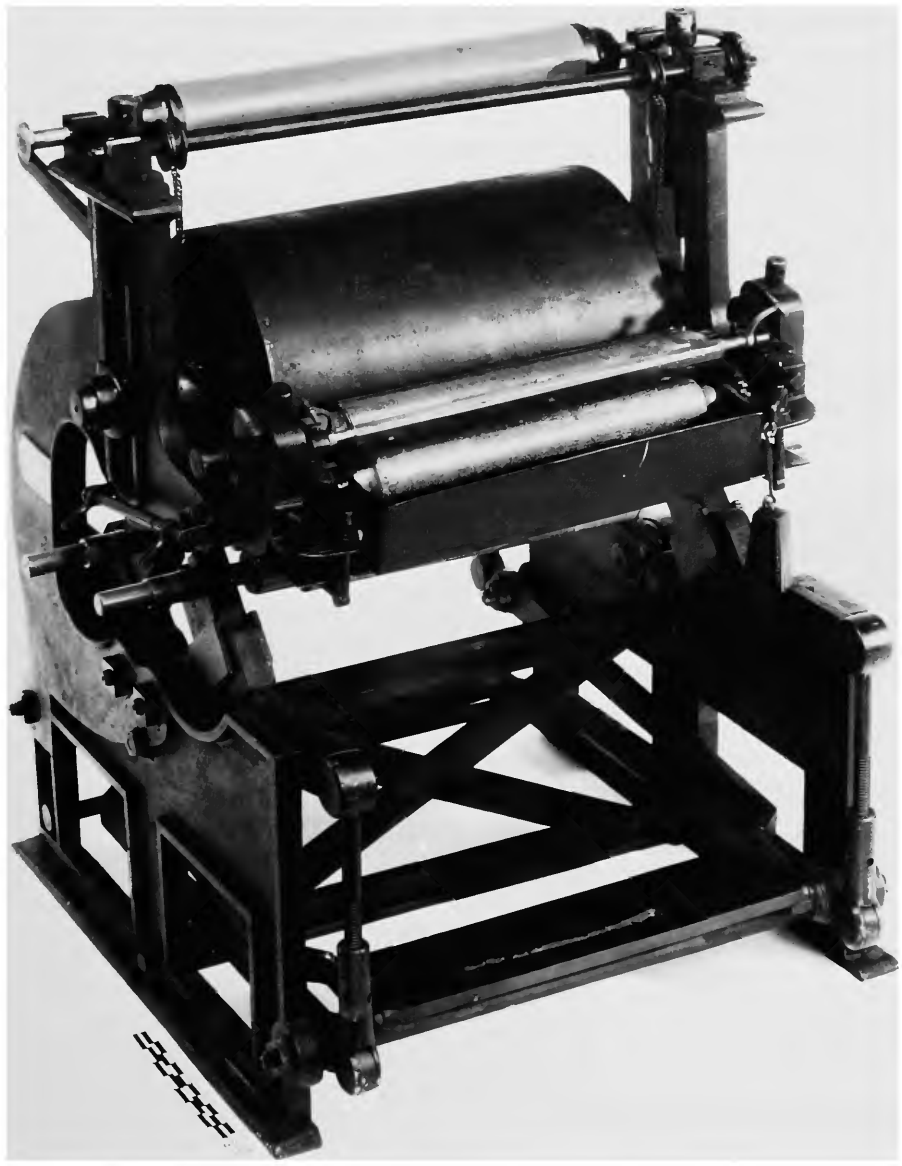


FIGURE 43.—Patent model 823. (S.I. neg. 81-13337)

PATENT 863: Hand Card

Issued August 1, 1838

George Faber

Canton, Stark Co., Ohio

Faber's patent related to the construction of the common hand card used for carding cotton or wool prior to the spinning process. He specifically patented using wood veneer, instead of leather, for the foundation that contained the card's wire teeth. The wood was cut from 1/8 to 3/16 of an inch in thickness, 4 inches in width, and 4 to 8 inches in length. The wood was then steeped in water to soften it so that when placed in a card machine, it could be pricked and the teeth inserted. The veneer was nailed to another piece of wood and a handle inserted to form the hand card.

Although Faber did not claim credit for inventing the card machine, in his patent specification he did mention that he had made improvements on it.

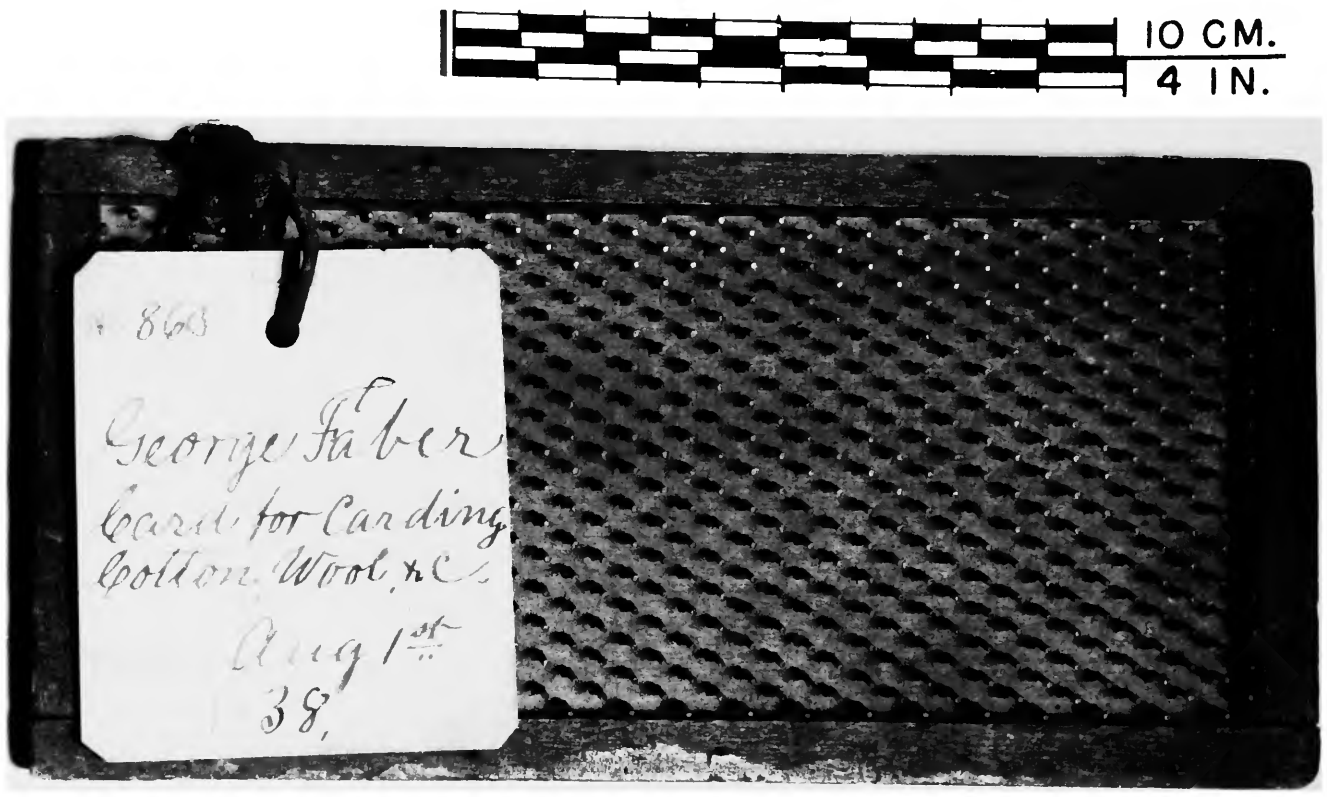


FIGURE 44.—Patent model 863. (S.I. neg. 80-12386)

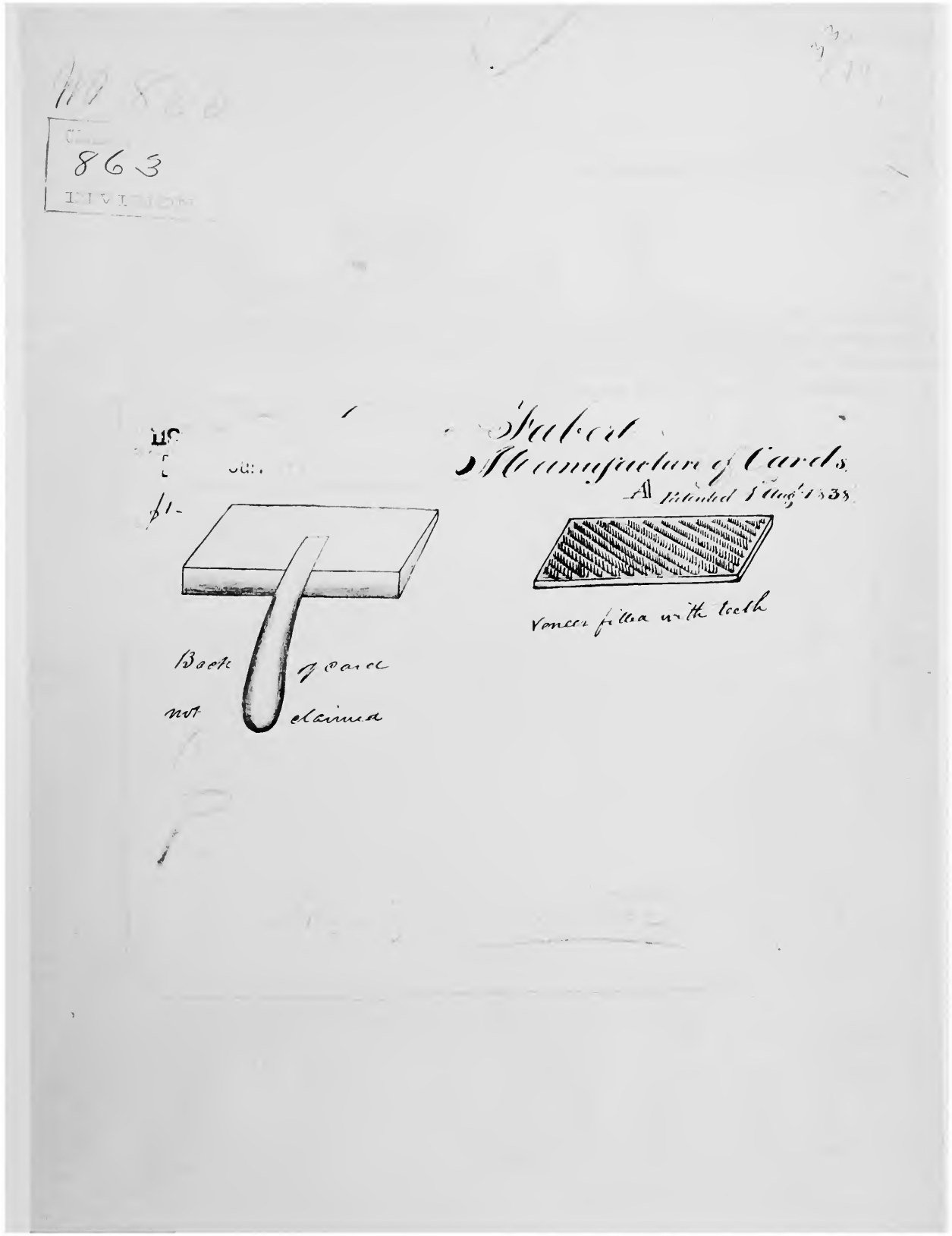


FIGURE 45.—Patent drawing 863. (U.S. National Archives)

PATENT 977: Spinning, Doubling, and Twisting Silk Machine

Issued October 10, 1838

Harrison Holland

Northampton, Hampshire Co., Massachusetts

The central part of Holland's patent concerned the stop motion mechanism on a silk threadmaking machine. If a thread broke, a small rod, connected to each of the threads by bent wires, would drop. A lever, to which the rod was attached, would come in contact with the drum and then stop the machine by throwing it out of gear. Also included in the patent was a method to change the twist of the silk thread by using a short cylinder.

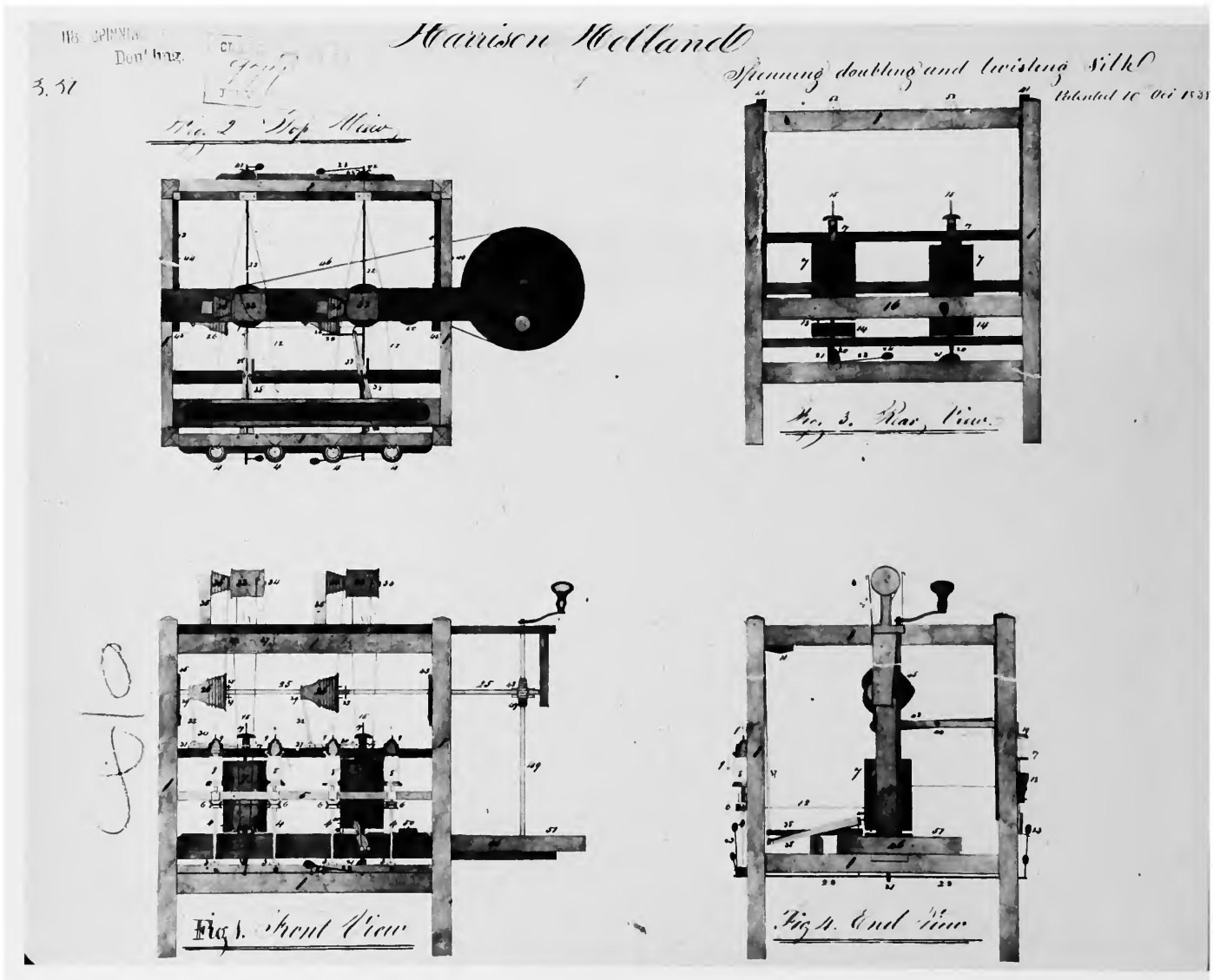


FIGURE 46.—Patent drawing 977. (U.S. National Archives)

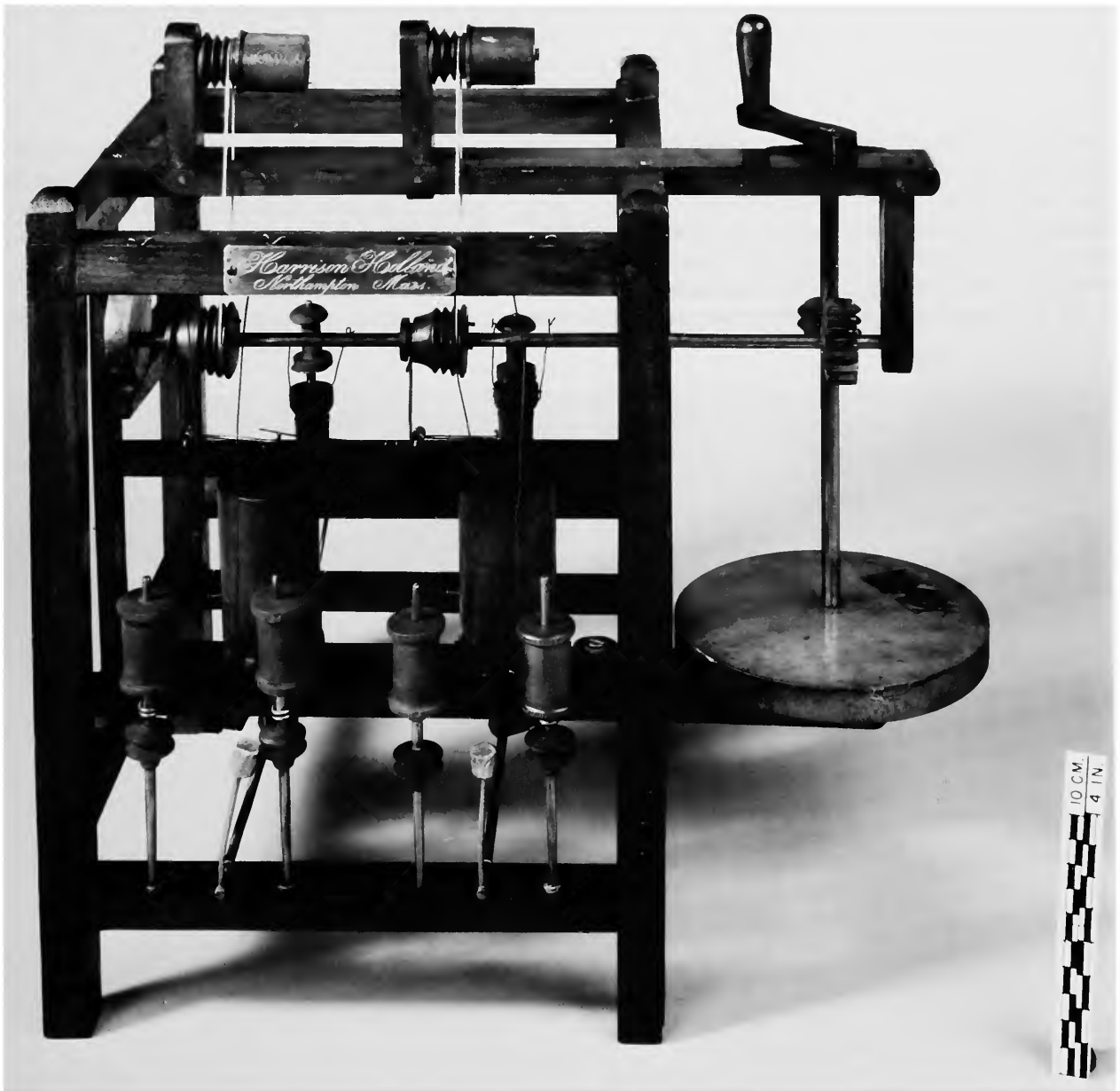


FIGURE 47.—Patent model 977. (S.I. neg. 80-15210)

PATENT 987: Loom Temple

Issued October 19, 1838

Emory A. Angell

Killingly, Windham Co., Connecticut

In his patent specification, Angell stated that "this temple is of the kind which holds the selvage of the cloth between jaws, which are opened by the beat of the lathe, and is in many respects similar to such as have been long in use." He claimed as his invention, the way in which the upper and lower jaws were connected by pins to form the hinge-joints.

On the original wrapper containing the patent application papers is a faint handwritten note, "see Saml P. Mason's Temple July 1837."[1] In the process of checking Angell's patent, Charles M. Keller, the patent examiner, probably wrote that notation but found no conflict with Mason's patent 291 and thus granted Angell his patent.

[1]National Archives Record Group 241: Patent Application Files, patent 987.

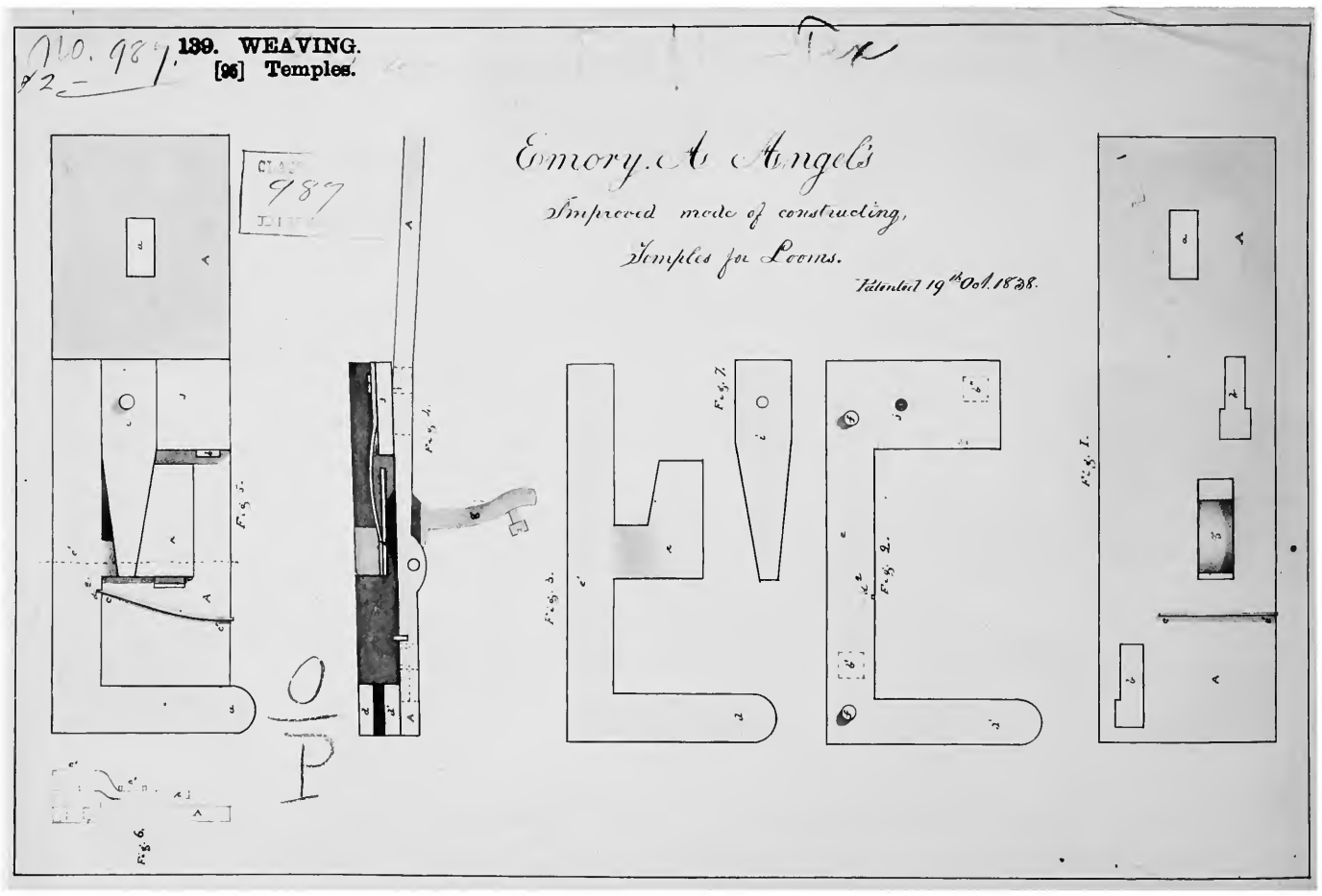


FIGURE 48.—Patent drawing 987. (U.S. National Archives)

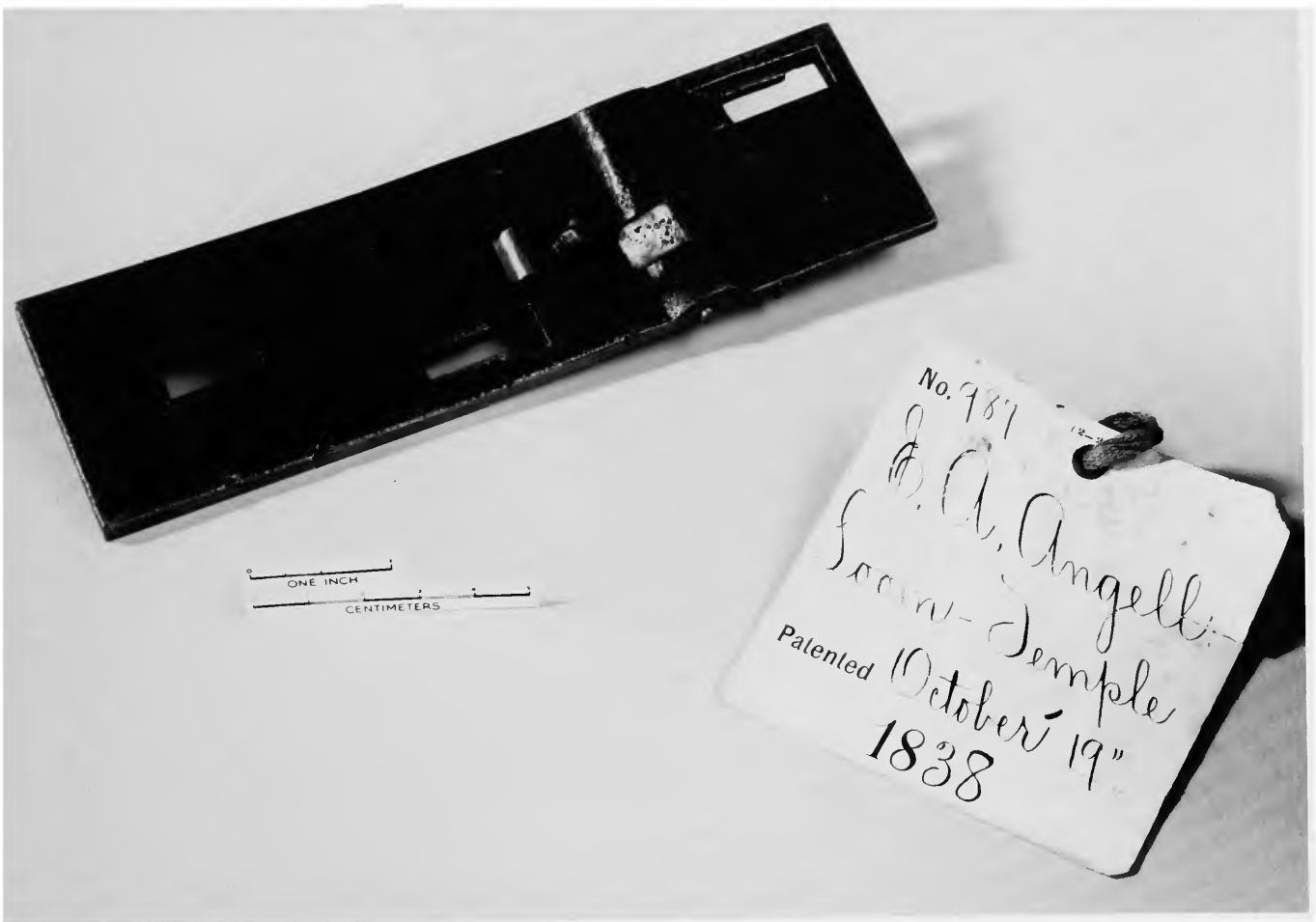


FIGURE 49.—Patent model 987. (S.I. neg. 80-15213)

PATENT 1015 and RESTORED PATENT 3082x: Cloth Shearing Machines

Issued November 25, 1838, and March 2, 1819

Seth Parsons

Hoosick Falls, Rensselaer Co., New York

Seth Parson's patent 1015[1] was an improvement on his earlier patent 3082x. The later patent resembled the earlier one but differed from it by its ability "to shear broad and narrow cloths, the machine operating upon [the cloth] in its passage back and forth both ways without changing it from end to end, thereby saving much time ...."[2] Also claimed was the motion of a brush that would brush the nap in either direction and a few other minor construction details.

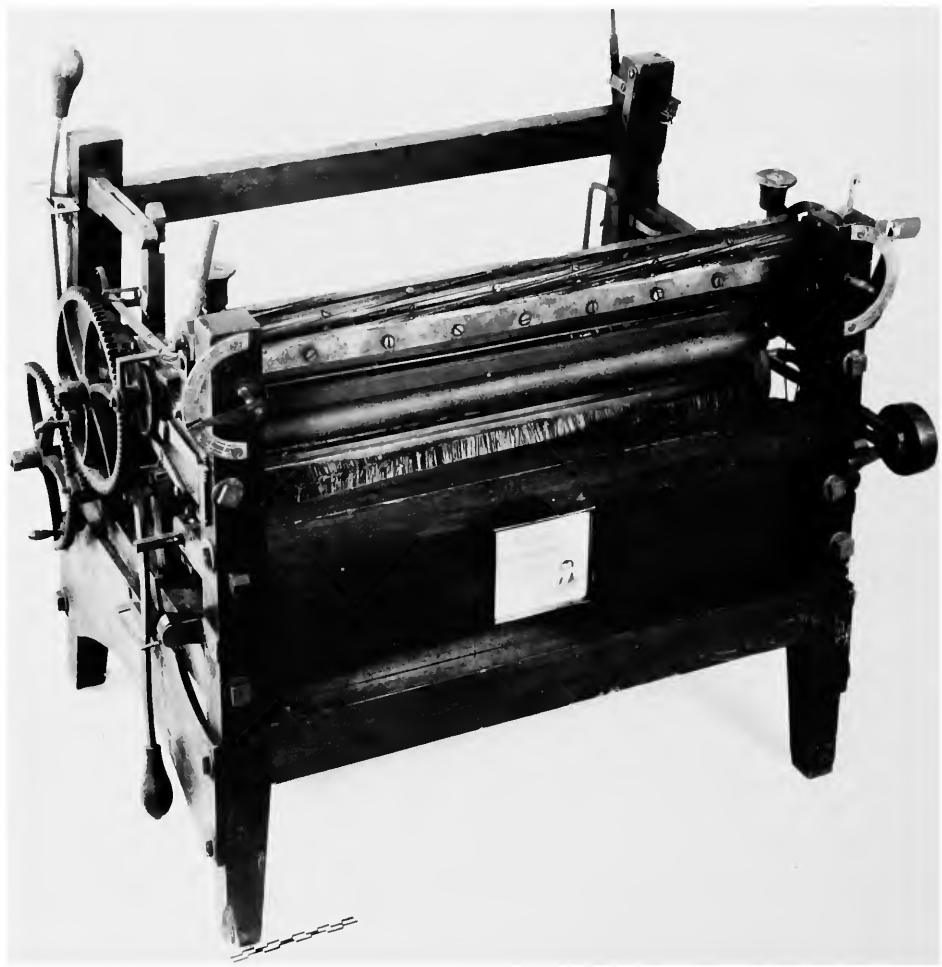


FIGURE 50.—Patent model 1015. (S.I. neg. 82-3603)

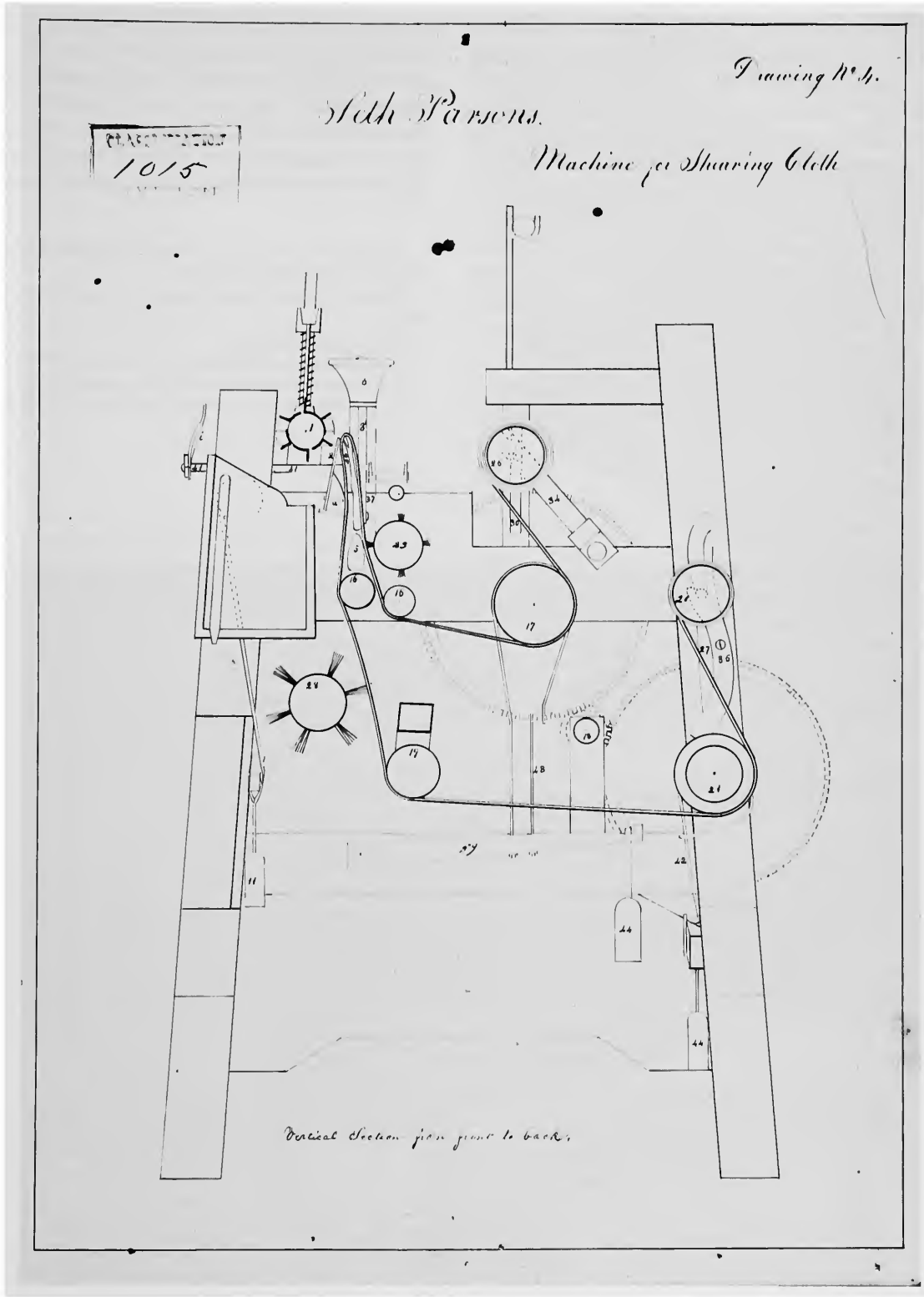


FIGURE 51.—Patent drawing 1015 (side view). (U.S. National Archives)

Parsons' patent 3082x had claimed to be an improvement on Samuel Dorr's 1794 patented shearing machine (not illustrated), which was called the "wheel of knives." The "wheel of knives" refers to the shearing cylinder, which was wrapped with blades in a spiral pattern. Parsons said of his improvement that it could be "composed of frame of suitable size, about 3 feet 7 inches long; 2 feet 4 inches wide and 4 feet high. Instead of knives on a large circle it should be a small one, about 2-1/2 inches in diameter ...."[3] Figure 54 shows Parson's improvement of using conical-shaped spreaders and a cylindrical roller with wire teeth to stretch and advance the cloth.

In the 1820 Manufacturers Census, there is a reference to Parsons' first shearing machine being used by a woolen manufacturer, Shearwood and Goreham from Rensselaer County, New York.[4] This earlier machine is also mentioned in an account of the Patent Office fire of 1836 as being one of several models of valuable improvements in shearing and napping cloth.[5] At the twelfth Exhibition of American Manufacturers, in 1842, Parsons and an associate, Wilder (full name not known), were awarded certificates of Honorable Mention for their improved cloth shearing machines.[6]

[1]Portrait of Parsons is from the label on his patent model 1015 (S.I. neg. 82-2568). See also Figure 50 below.

[2]National Archives Record Group 241: Patent Application Files, patent 1015.

[3]Ibid., patent 3082x, page 1.

[4]Hitz, "Technical and Business Revolution," page 280.

[5]U.S. Patent Office, *Destruction by Fire*, pages 15–16.

[6]*Journal of the Franklin Institute*, third series, 4(1842):342.

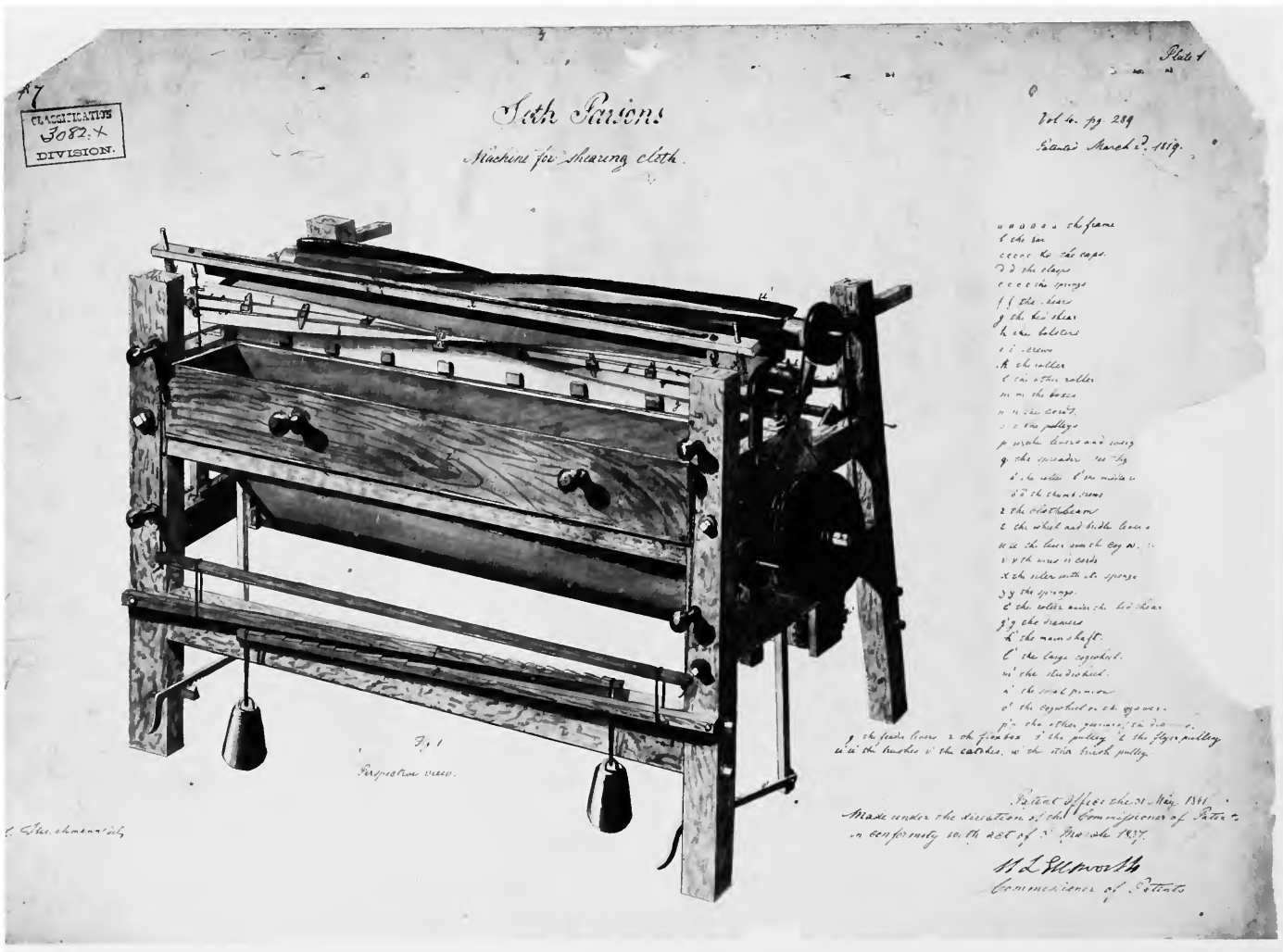


FIGURE 52 .—"Fig. 1" of restored patent drawing 3082x. (U.S. National Archives)

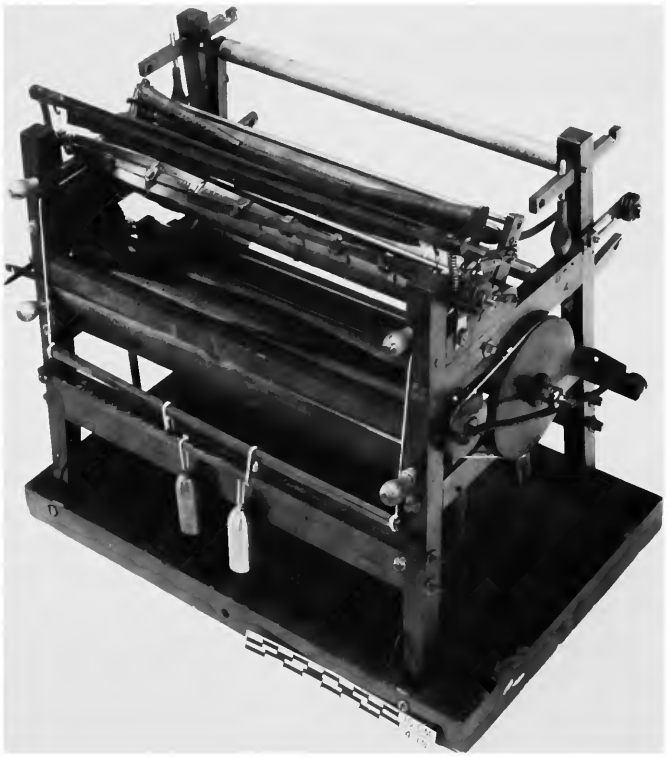
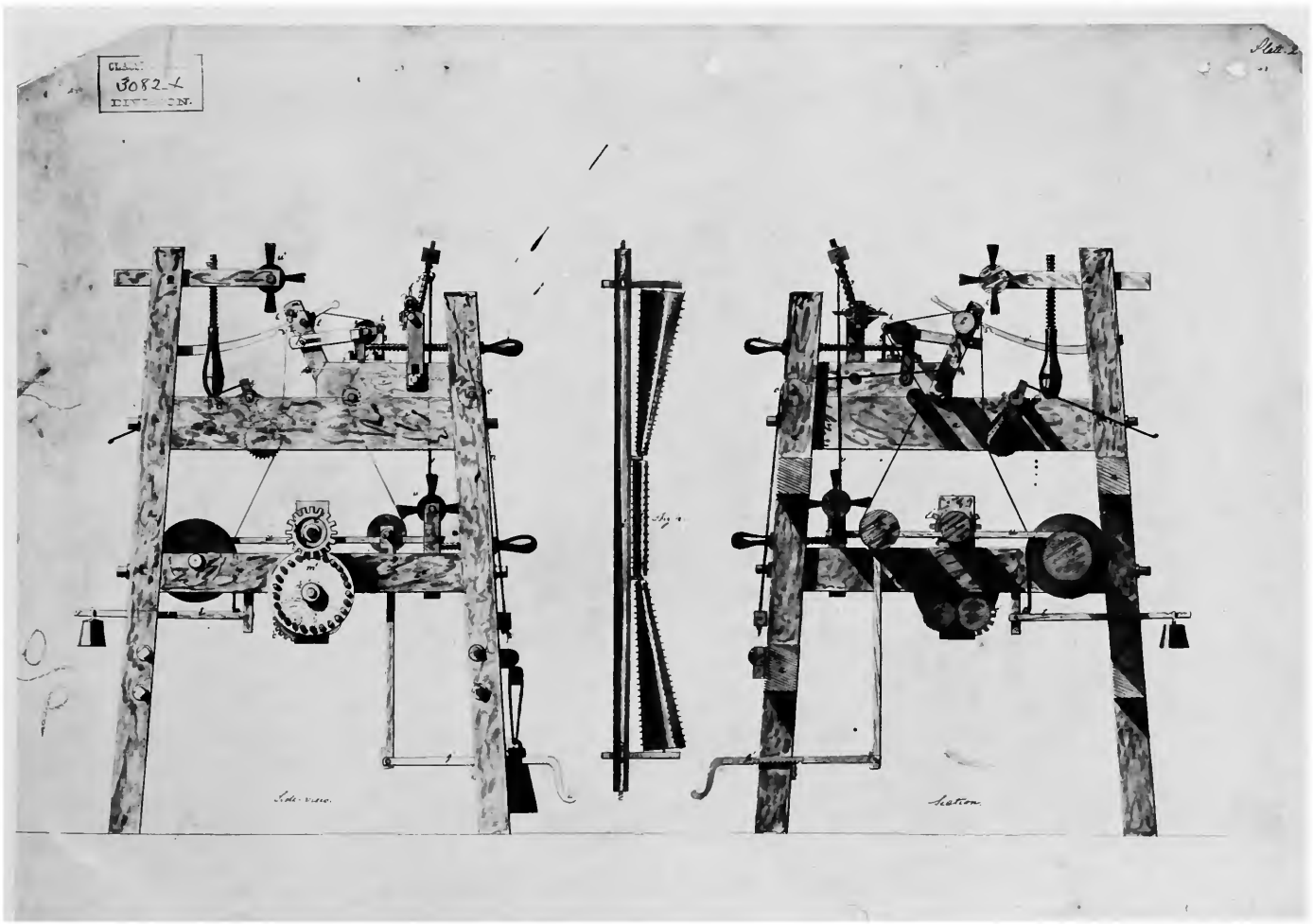


FIGURE 53 (right).—Restored patent model 3082x. (S.I. neg. 81-4416)

FIGURE 54 (below).—"Fig. 4" of restored patent drawing 3082x, side views and spreaders. (U.S. National Archives)



PATENT 1028: Carpet

Issued December 10, 1838

John Humphries

New York, New York Co., New York

Humphries' innovation was the addition of a supplementary layer to the bottom of a carpet to provide an extra cushion and to strengthen the overall structure. The added stuffer weft (Figure 56) is a stout, loosely twisted cord, woven into the underside of the carpet and interlaced with the ground warp. These samples of carpeting are important because they are the earliest known examples of patented carpeting in the United States.

Whether this patent was utilized is unknown but there is evidence of Humphries' being involved in the manufacture of carpeting. The *Journal of the Franklin Institute* lists premiums awarded at their eighth exhibition in 1833. John Humphries was presented a premium for four pieces of Brussels carpeting. The judges noted that "these goods are of excellent quality and style, and satisfactory assurances have been received that they are exclusively of American workmanship throughout all the processes, from the raw material to the finished product of the loom."[1]

[1]*The Journal of the Franklin Institute*, new series, 12(1833):387.

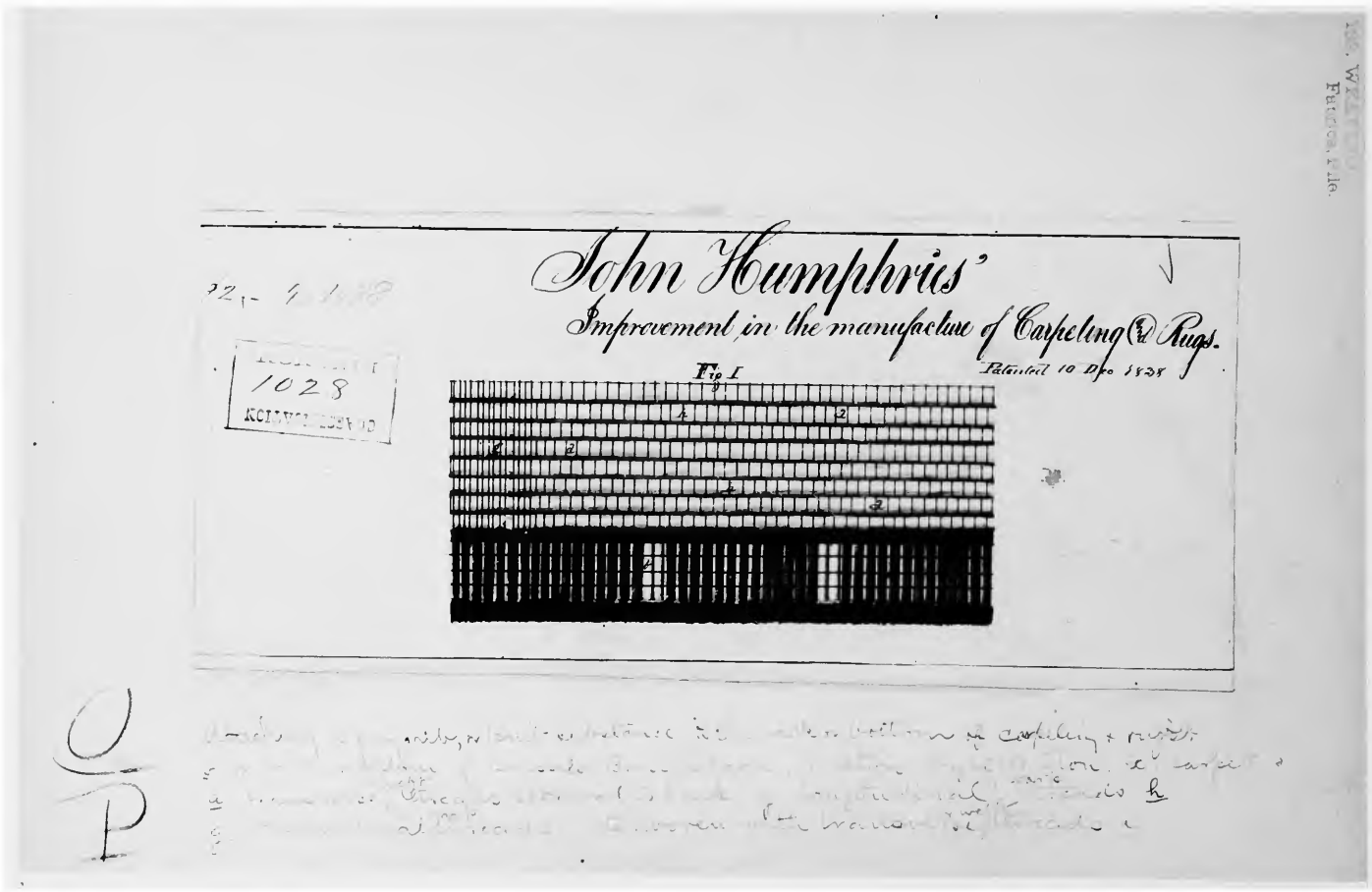


FIGURE 55.—Patent drawing 1028. (U.S. National Archives)

FIGURE 56.—Patent model 1028, carpet. These three pieces of carpeting were submitted as Humphries' patent. Only the Wilton carpet on the right has the added cord. The carpet on the left is a piece of Brussels and the piece in the middle is the underside of a Wilton carpet. (S.I. neg. 81-9858)

PATENT 1043: Spindle and Flyer

Issued December 28, 1838

John Howarth and Nathan F. Jones

Andover, Essex Co., Massachusetts

Howarth's and Jones' patent covered certain improvements on flyers and spindles attached to machinery (such as throstles or spinning frames) where a twisting apparatus was needed. The improvements were useful for roving and spinning cotton or other fibers.

They experienced some delay in obtaining a patent and hired R.H. Eddy of Boston, a patent attorney, to represent them. Their original claims were abridged and condensed. In the last letter (December 1, 1836) from Eddy to Commissioner of Patents Henry Ellsworth, Eddy returned the amended specification without any other essential changes in it and said: "...leaving it to your discretion to reject or admit the claim .... But I supposed that the arrangement and combination of these different parts with each other might show sufficient novelty to constitute and claim to a patent."[1] Presumably with Eddy's help, Howarth and Jones were able to receive their patent in 1838.

[1]National Archives Record Group 241: Patent Application Files, patent 1043.

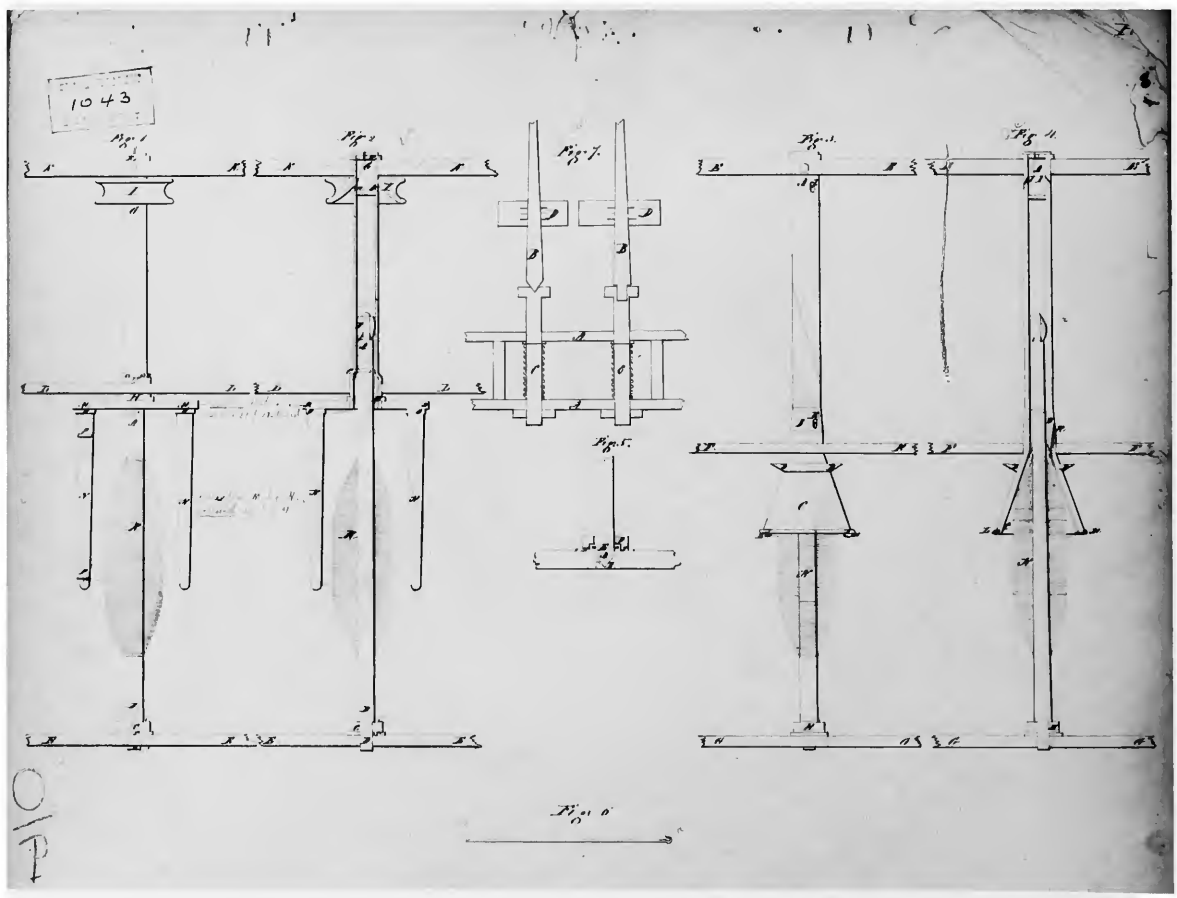


FIGURE 57.—Patent drawing 1043. (U.S. National Archives)

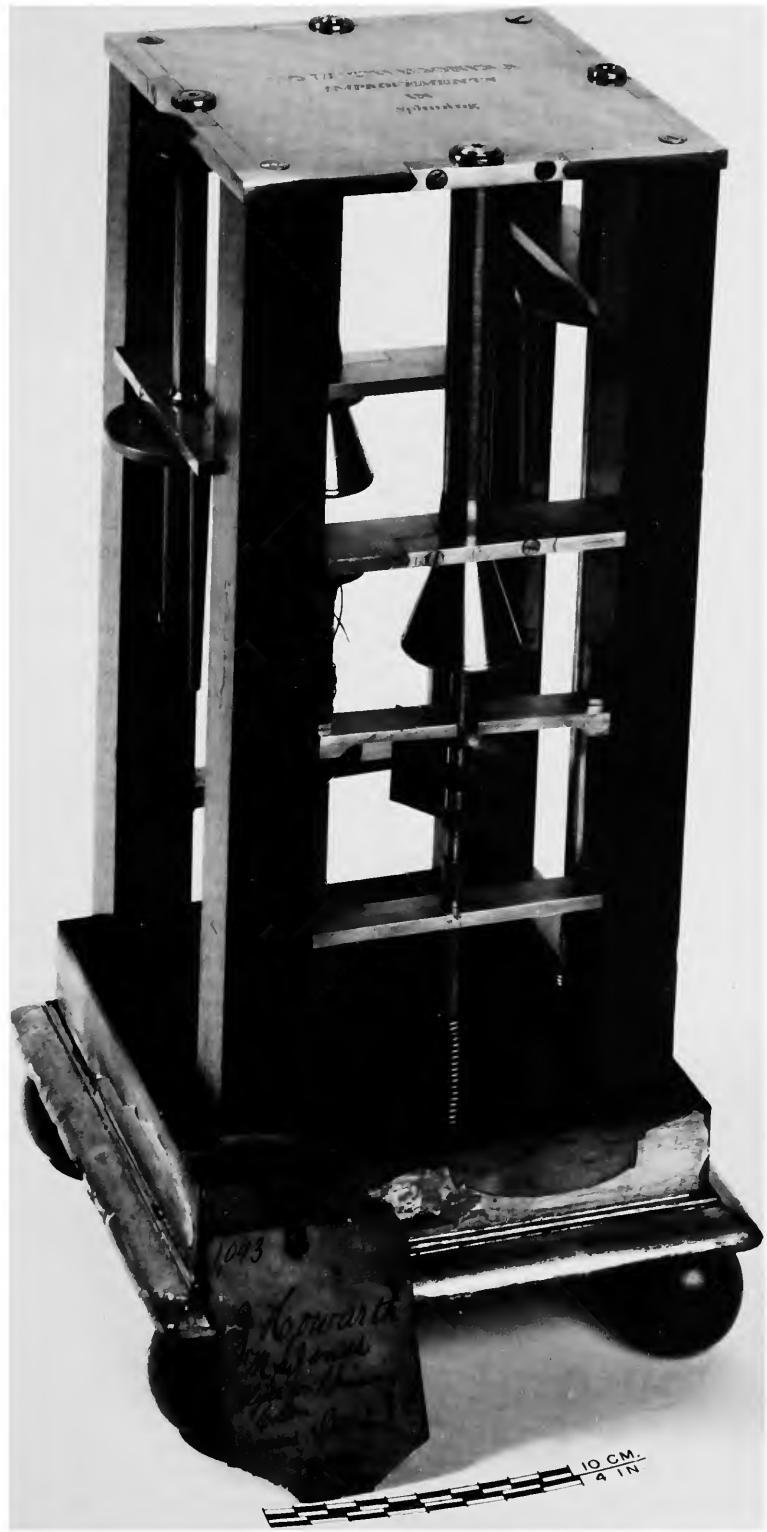


FIGURE 58.—Patent model 1043. (S.I. neg. 81-13336)

PATENT 1051: Loom Harness

Issued December 31, 1838

John Thorp and William G. Angell

Providence, Providence Co., Rhode Island

Thorp's and Angell's "extra-eyed flat knot" harness consisted of one or more rows of eyes for every heddle, so that rather than using the same row of eyes each time when weaving, warp yarns could be shifted into another row of eyes. By this addition, wear on the eyes was reduced substantially. The knots that made the eyes were also flattened so that the warp yarns could pass through more easily. These changes were alleged to make the harness more durable than the single-eyed harness. Also patented was the way in which the heddles were fastened to the back-band of the harness.

John Thorp (1784–1848)[1] gained distinction for his invention of ring spinning, which established the basis of modern spinning. His two patents of 1828 (5280x and 5322x) and his patent of 1844 (3766) were the basic patents for continuous spinning and twisting. Unfortunately, although brilliant in theory, Thorp's invention, which had the potential for high speeds at less power, had mechanical problems. These problems precluded the commercial use of his patents and in fact prejudiced many against his concept of ring spinning. It was not until the 1840s, when others, such as William Mason, had added improvements, that the ring frame started to become commercially accepted.[2]

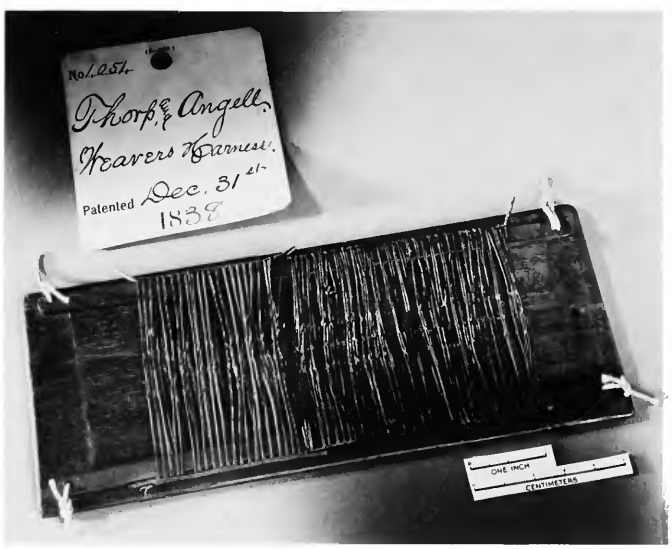


FIGURE 59.—Patent model 1051. (S.I. neg. 80-16794)

Thorp spent most of his life in or near Providence, Rhode Island, which was the center for cotton spinning in the United States. He was associated with Thomas and William Fletcher, North Providence Braid manufacturers, but eventually established a separate business as a machinist and later as a machine builder.[3]

Besides his various spinning patents, Thorp also patented a hand and water loom, 1812; a power loom, 1816; two braiding machines, 1821 and 1826; a netting machine, 1828; and a narrow fabric loom, 1829.[4]

As was typical of many inventors, Thorp was unable to financially capitalize from his inventions. There were several reasons for this; first was his failure to simplify the ring frame, and second his failure to protect his patent rights in court. Finally, he lacked the business acumen and capital to manufacture and sell his own machinery, which would have freed him from reliance on others to produce and market his inventions.[5]

William Gorham Angell (1811-1870) worked in the carpentry trade of his father until about 1831. He then entered into partnership with his uncle, John Gorham, manufacturing loom-reeds. It is presumed that they used a machine for making loom-reeds that Angell had invented previously. After 1838 Angell became involved with the manufacture of screws and was the President of the American Screw Company for many years.[6]

[1]The above daguerreotype (ca. 1843–1845, from the April/June 1928 issue of *Textile World*) is believed to be of John Thorp (S.I. neg. 80-15689).

[2]Clark, "John Thorp," 124/125(1928):72, 79–80. Lozier, "Taunton and Mason," pages 207–228. Navin, *Whitin Machine Works*, pages 34–35.

[3]Clark, "John Thorp," pages 85, 89.

[4]Ibid., page 77. Lozier, "Taunton and Mason," page 77.

[5]Ibid., page 228. Clark, op.cit., pages 90–92.

[6]*The Bibliographical Cyclopedia of Representative Men of Rhode Island* (Providence: National Bibliographical Publishing Co., 1881), page 374.

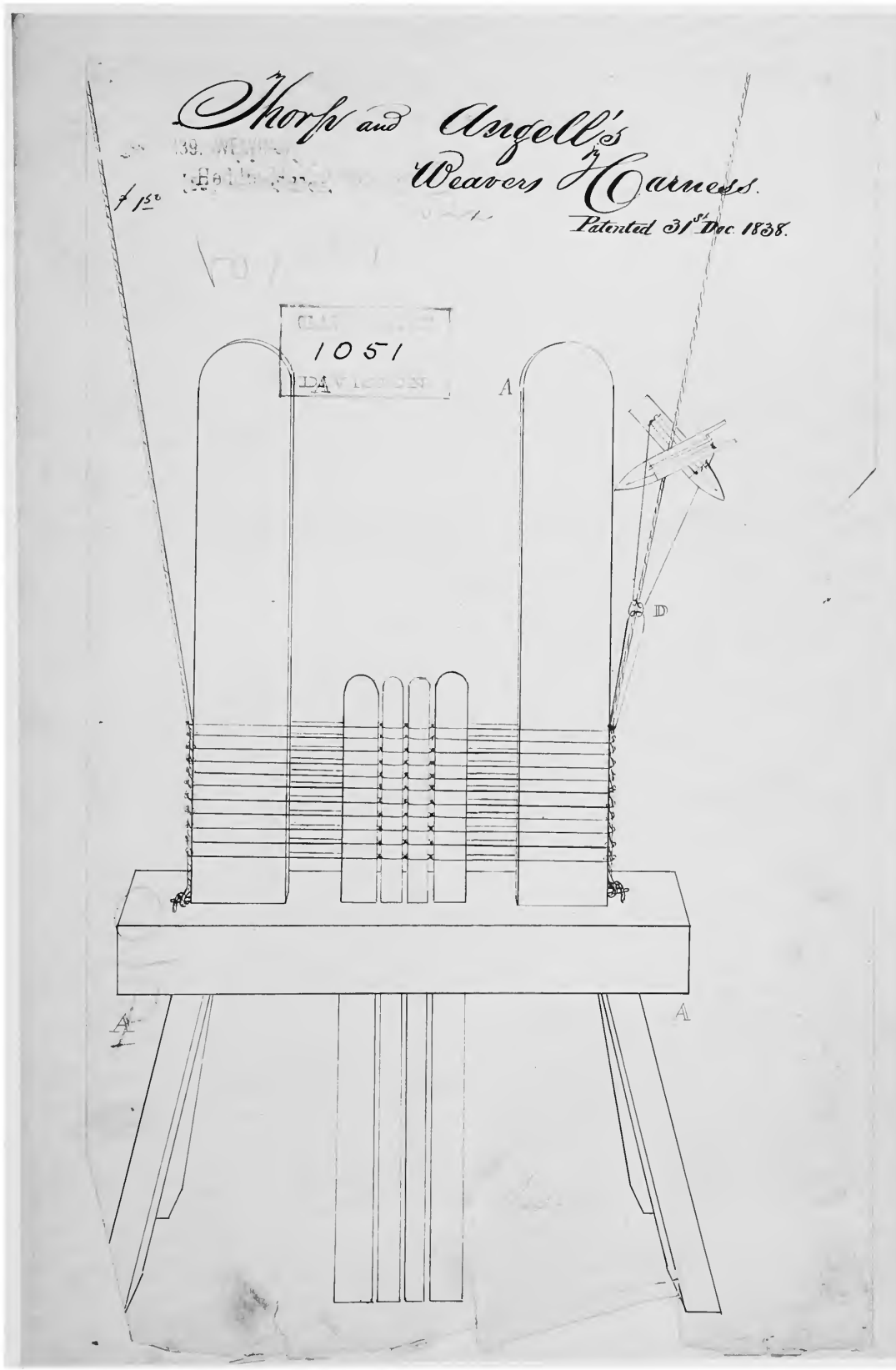


FIGURE 60.—Patent drawing 1051 shows the heddles in the process of being constructed on a harness bench. (U.S. National Archives)

FIGURE 61.—Patent model 3766. (S.I. neg. 80-15211)

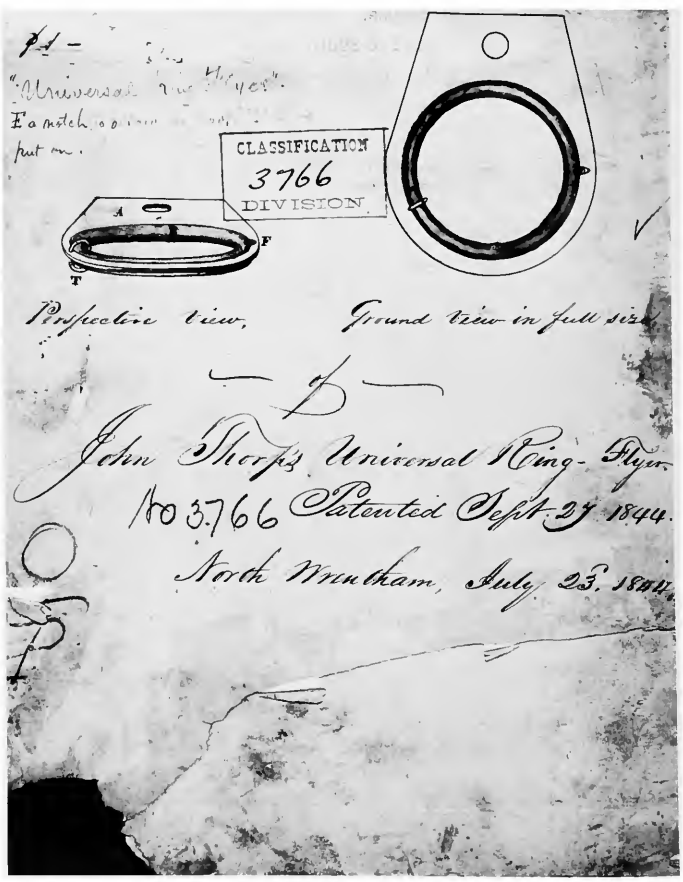


FIGURE 62.—Patent drawing 3766. (U.S. National Archives)

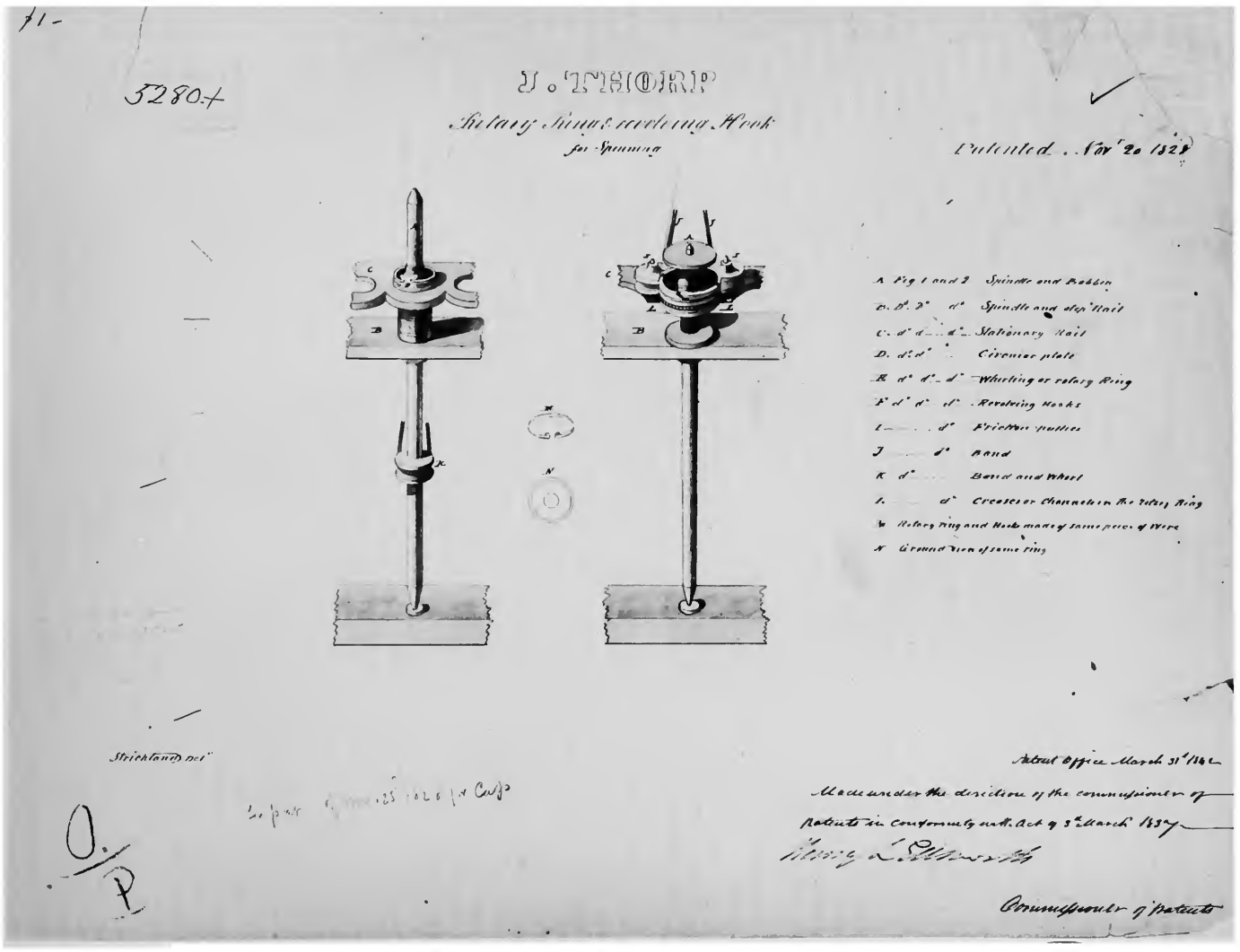


FIGURE 63.—Restored patent drawing 5280x. (U.S. National Archives)

PATENT 1080: Loom Temple

Issued February 13, 1839

Kendall Gibbs

South Berwick, York Co., Maine

As with the Mason and Angell temples (patents 291 and 987), Gibbs' temple was noted as being "a very near resemblance to some temples which have been previously in use ...."[1] His patent primarily covered the action of the jaws, as controlled by a joint for one operation and a spring for another.

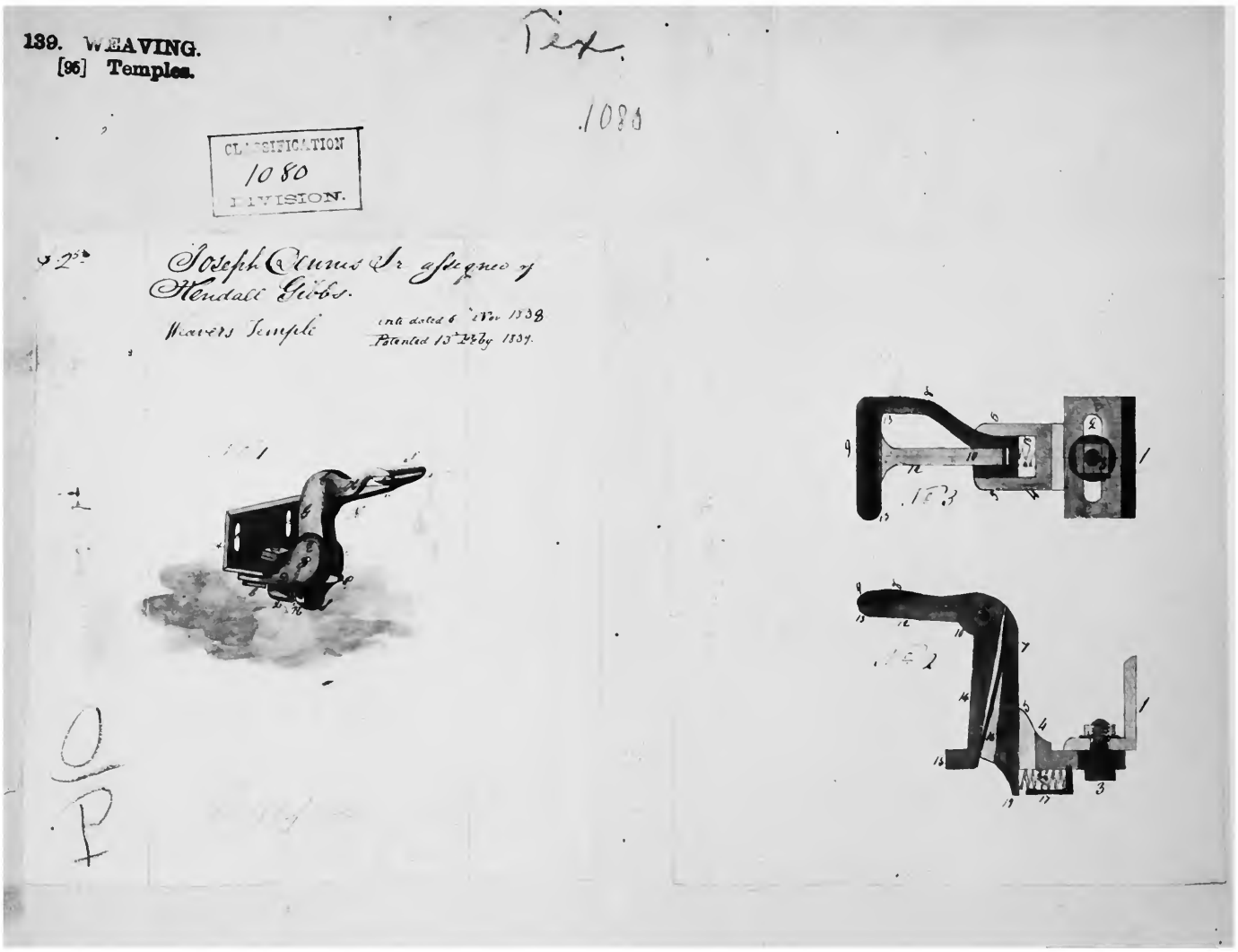


FIGURE 64.—Patent drawing 1080. (U.S. National Archives)

Gibbs assigned his patent to Jonathan Dennis, Jr. (of Portsmouth, R.I.), who in turn paid the required thirty dollar patent fee in exchange for the patent rights.[2] [Note that Figure 69 wrongly cites assignee as "Joseph."]

Although nothing is known about Gibbs, further information concerning Dennis relates to his other inventions. On December 28, 1838, he received two patents, 1040 and 1041, both for machines designed to wind silk. At the tenth Exhibition of Domestic Manufacturers, held by the Franklin Institute in 1838, he was awarded an honorable mention for his silk spinning and specimen of silk.[3] On June 21, 1838, patent 799 was awarded to Dennis for a circular trough used in protecting trees from the canker worm. The editor of the Franklin Institute, Thomas P. Jones, who was also the superintendent of the Patent Office, commented on this patent: "... we will undertake to prophecy ... the trees furnished with his protectors will still be few and far between ...."[4]

[1]*Journal of the Franklin Institute,* new series, 25(1840):108.

[2]National Archives Record Group 241: Patent Application Files, patent 1080.

[3]*Journal of the Franklin Institute,* new series, 23(1839):302.

[4]Ibid., page 396.

FIGURE 65.—Patent model 1080. (S.I. neg. 80-16791)

PATENT 1228: Cordage Machine

Issued July 9, 1839

Alfred Hathaway

Boston, Suffolk Co., Massachusetts

Hathaway claimed that his patent would do away with long buildings, called rope walks, which were then necessary to house the machinery used in the manufacture of rope. His intent was to replace them with much smaller buildings. He admitted that this particular invention was not original and that smaller more efficient machines had been the subject of previous inventions. He thought, however, that all of the currently patented cordage machines had some fault in construction or operation. In his machine for twisting and laying strands into cordage of various sizes, therefore, he felt that the six parts claimed in his patent specification corrected these defects. Other than these improvements, Hathaway's patent resembled other machines of the period.[1]

[1]*Journal of the Franklin Institute,* new series, 26(1840):108.

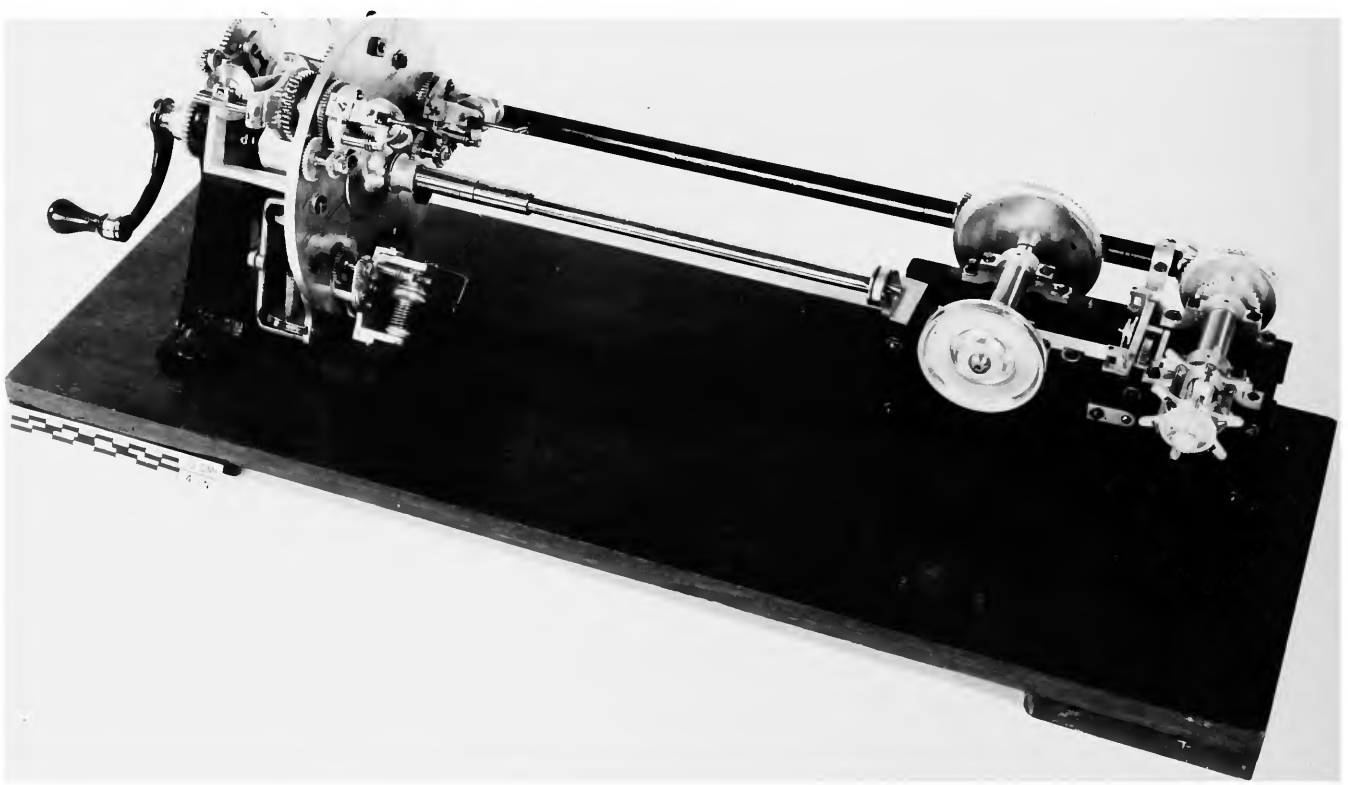


FIGURE 66.—Patent model 1228. (S.I. neg. 81-5250)

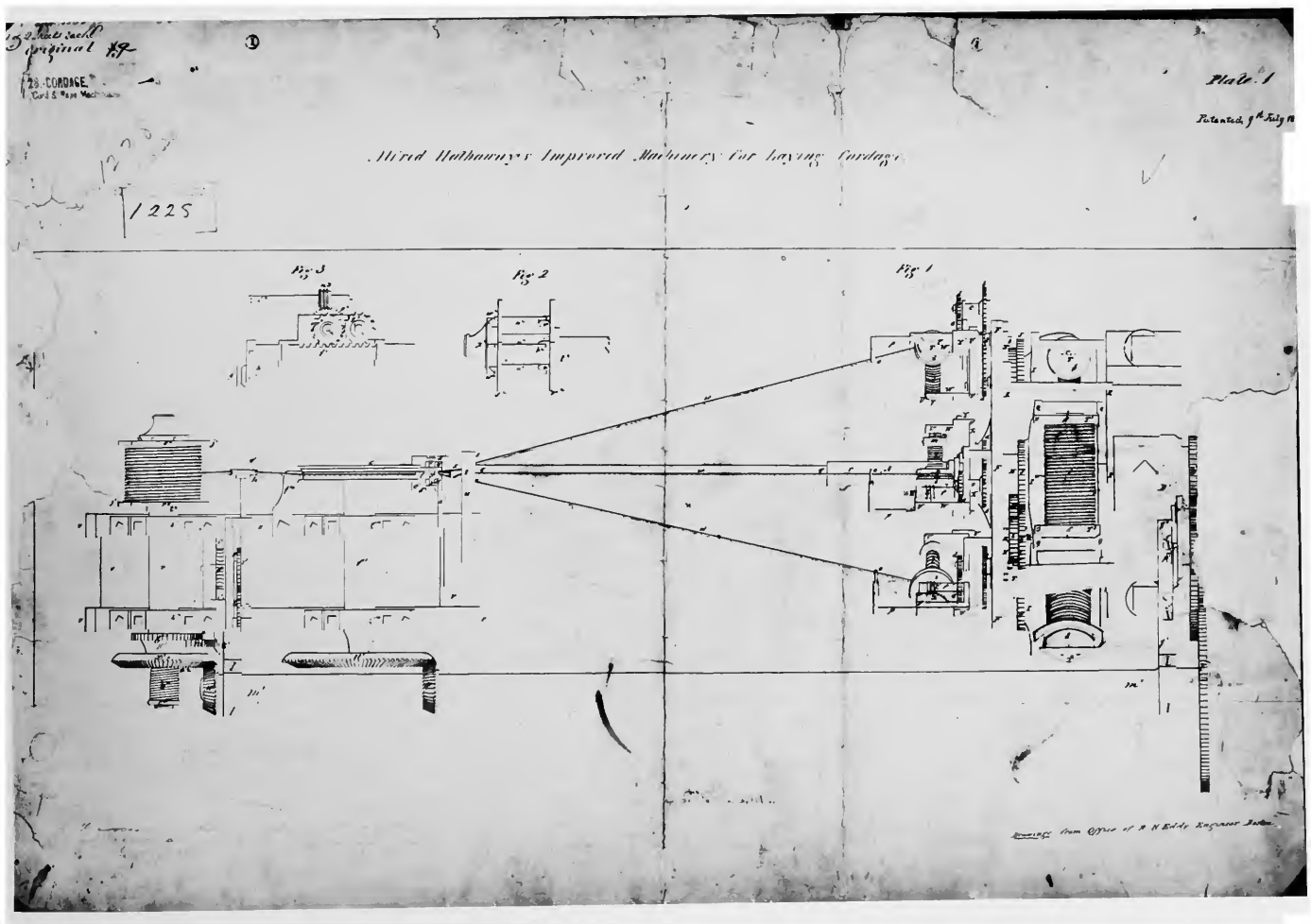


FIGURE 67.—Patent drawing 1228. (U.S. National Archives)

PATENT 1367: Reeling, Spinning, and Twisting Silk Machine

Issued October 12, 1839

Jacob Pratt
Sherborn, Middlesex Co., Massachusetts

Pratt is an example of an inventor who thought he had a more complicated original invention than he actually had. In his patent application file, his specification makes four claims. Out of those four, only one was approved by Charles M. Keller, the patent examiner, and that claim was for using a trough of zinc.[1] The trough held spools of silk fibers prior to spinning and was filled with warm water which kept the fibers from sticking together.

The *Journal of the Franklin Institute,* 1840, commented: "Its construction is, in general, similar to such as is well known, and is not claimed as new .... No particular reason is given for making the troughs of zinc, and we suppose that copper would do equally well; but from the special mention of this metal we were led to look for some ground of preference to it."[2]

[1]National Archives Record Group 241: Patent Application Files, patent 1367.

[2]*The Journal of the Franklin Institute,* new series, 26(1840):388.

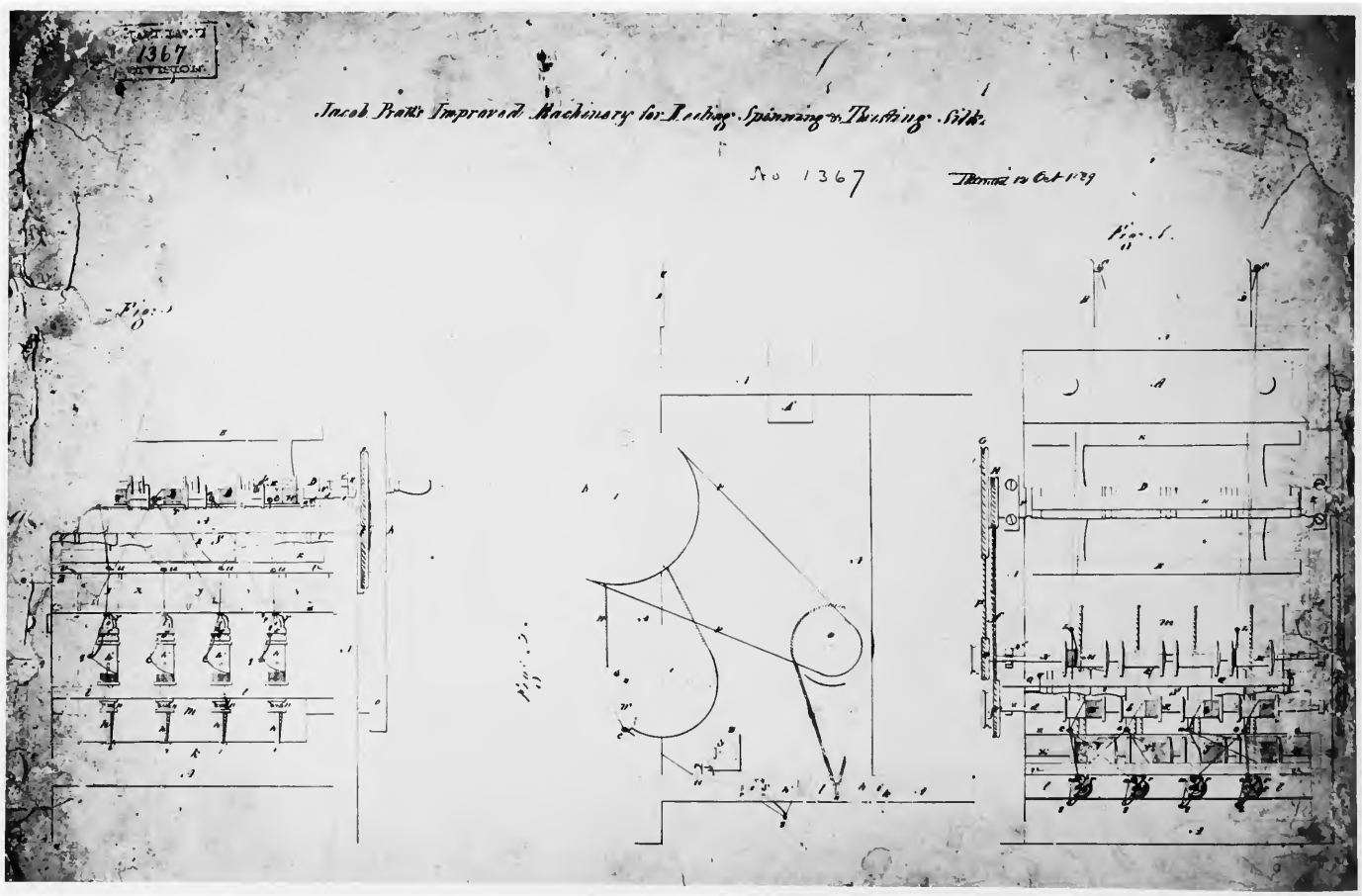


FIGURE 68.—Patent drawing 1367. (U.S. National Archives)

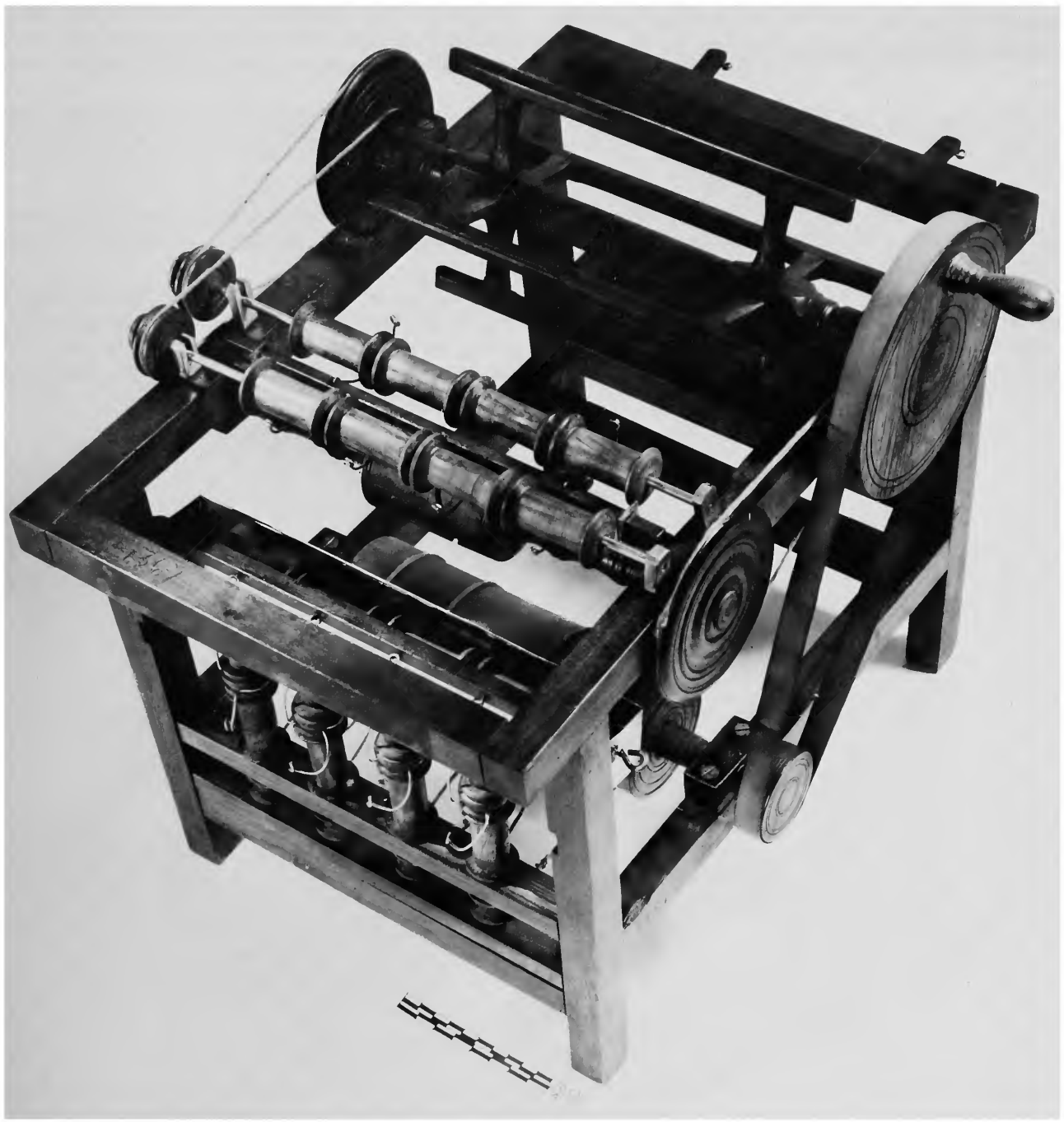


FIGURE 69.—Patent model 1367. (S.I. neg. 81-5254)

PATENT 1421: Knitting Machine

Issued December 5, 1839

Richard Walker

Portsmouth, Rockingham Co., New Hampshire

Walker's knitting machine, which he called a "rotary power stocking loom," knitted by a rotary motion and the action of a cam-shaft. The stocking loom could be operated as a single domestic machine turned by a crank or operated by belts and pulleys as would have been used in a factory. Walker claimed his arrangement made the knitting machine self-acting. He replaced the jacks, which were used in English machines, with a carriage and roller which produced more equal pressure on the yarn and therefore enabled the knitting of a harder twisted yarn.

The 1841 *Journal of the Franklin Institute* remarked: "Those who have ever seen a stocking frame must be aware of its great complexity .... In the present instance an attempt is made, and we think not without success, to give the machine greater

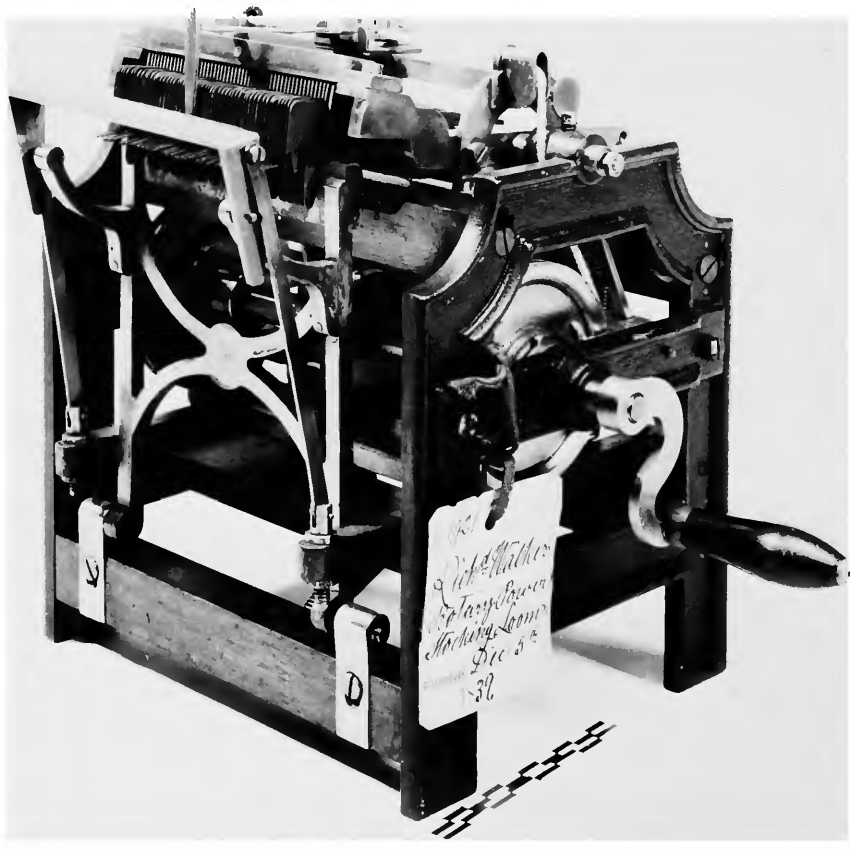


FIGURE 70.—Patent model 1421. (S.I. neg. 82-3602)

simplicity without sacrificing any of its good qualities."[1]

An article in the *Daily News Record* (New York), marking the centenary of power knitting, credited Richard Walker as patenting the first power drive rotary knitting machine in America.[2]

Walker owned a factory in Portsmouth, New Hampshire, which in 1839, was the largest knitting factory in the United States. He employed 220 workers and manufactured 3000 pairs of woolen stockings per week. He used his patented knitting machines in the factory.[3]

[1]*Journal of the Franklin Institute,* third series, 1(1841):98.

[2]"Centenary of Power Knitting in America Marks Vast Changes in World's Industry," *Daily News Record* (New York), April 8, 1931, page 17.

[3]Ira J. Haskell, *Hosiery thru the Years* (Lynn, Massachusetts: Carole Mailing Service, 1956), page 48.

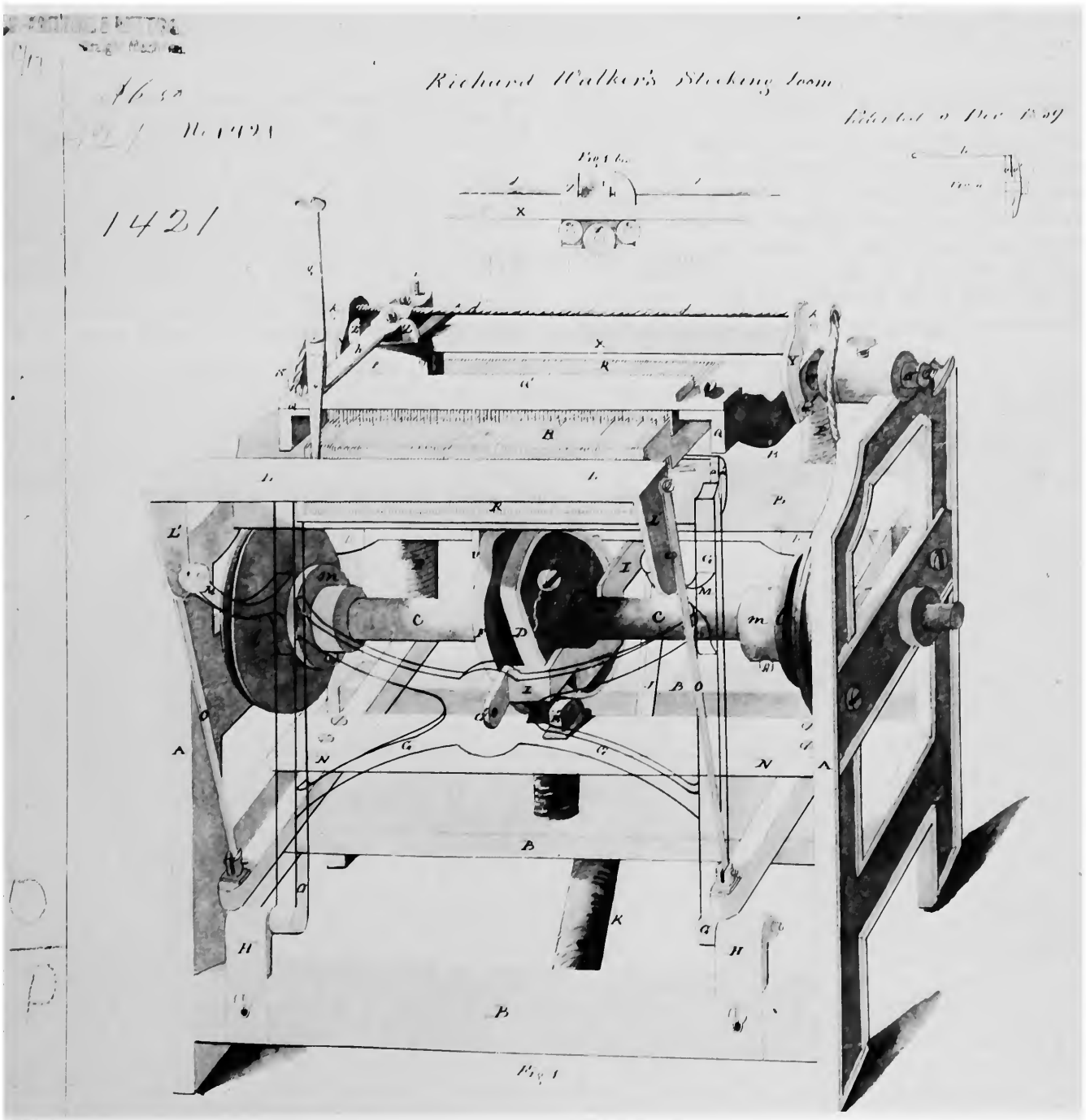


FIGURE 71.—Patent drawing 1421. (U.S. National Archives)

PATENT 1485: Loom Shuttle

Issued January 31, 1840

James Baldwin
Nashua, Hillsboro Co., New Hampshire

Baldwin's patent consisted of a steel spring and catch made in one piece that fits inside the wooden bobbin. In his patent specification he claimed this avoided the expense of separate catches and springs that were in the common shuttle as then in use. The arrangement and construction of the spring and catch were such that pushing the bobbin down on the spindle and into the mouth of the shuttle secured the bobbin on the catch. By pulling up on the bobbin, the head of the spindle pushed down on the spring, which in turn disengaged the catch and released the bobbin. These improvements made it easier for the bobbin changer to replenish the shuttle with thread.

An earlier notice of Baldwin's loom shuttle appears in the *Journal of the American Institute*. In 1838, at the eleventh Annual Fair of the American Institute, James and E. Baldwin were awarded a diploma for an improved loom shuttle.[1] On May 3, 1859, James Baldwin was successful in having his shuttle awarded reissue patent 710.

[1]*Journal of the American Institute*, 4(1840):37.

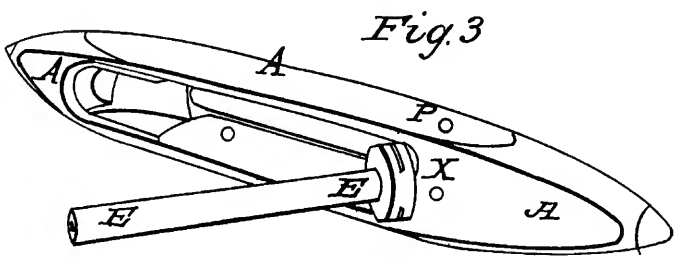


FIGURE 72.—"Fig. 3" of patent drawing 1485. (U.S. National Archives)

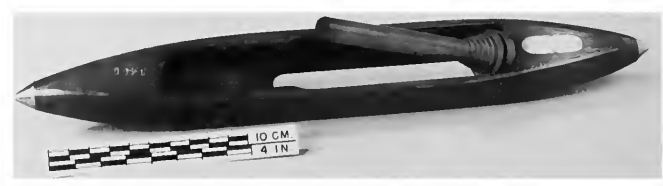


FIGURE 73.—Patent model 1485. (S.I. neg. 80-20143)

PATENT 1498: Loom Heddles

Issued February 26, 1840

John Thorp and William G. Angell

Providence, Providence Co., Rhode Island

These heddles were presented to the Patent Office in a round wooden frame, including examples of both wire and twine heddles. In the patent specification, Thorp and Angell described the dimensions of heddles for use in weaving cotton cloth on a common power loom. These dimensions could be changed, however, so that any kind of weaving could be done. A chain of the heddles was formed by taking two pieces of wire or twine and tying them with a common square knot, "which will unite them in the same way and manner that a lady ties her apron strings or a child his shoestrings."[1] The placement of the knots resulted in the formation of the eyes of the heddles.

Thorp and Angell did not include a patent drawing with the specification. The 1841 *Journal of the Franklin Institute* remarked of this omission: "We must suppose ... that the description, although to us somewhat obscure, would be clear to a professional weaver."[2]

[1]National Archives Record Group 241: Patent Application Files, patent 1498, page 1.

[1]*Journal of the Franklin Institute*, third series, 1(1841):275.

FIGURE 74.—Framed individual heddles, patent model 1498. (S.I. neg. 80-12385)

PATENT 1563: Metallic Loom Heddles

Issued April 24, 1840

Charles Strong
Hartford, Windsor Co., Vermont

The heddles are shown in the harness frame. Strong patented two improvements on the metallic heddle. One was the method of constructing the heddle eye, which consisted of soldering two pieces of thin tinned iron together with the metal strips bent to form the semicircular hole. The second improvement involved the arrangement of the heddles in two rows instead of one, which enabled higher slayed cloth to be woven.

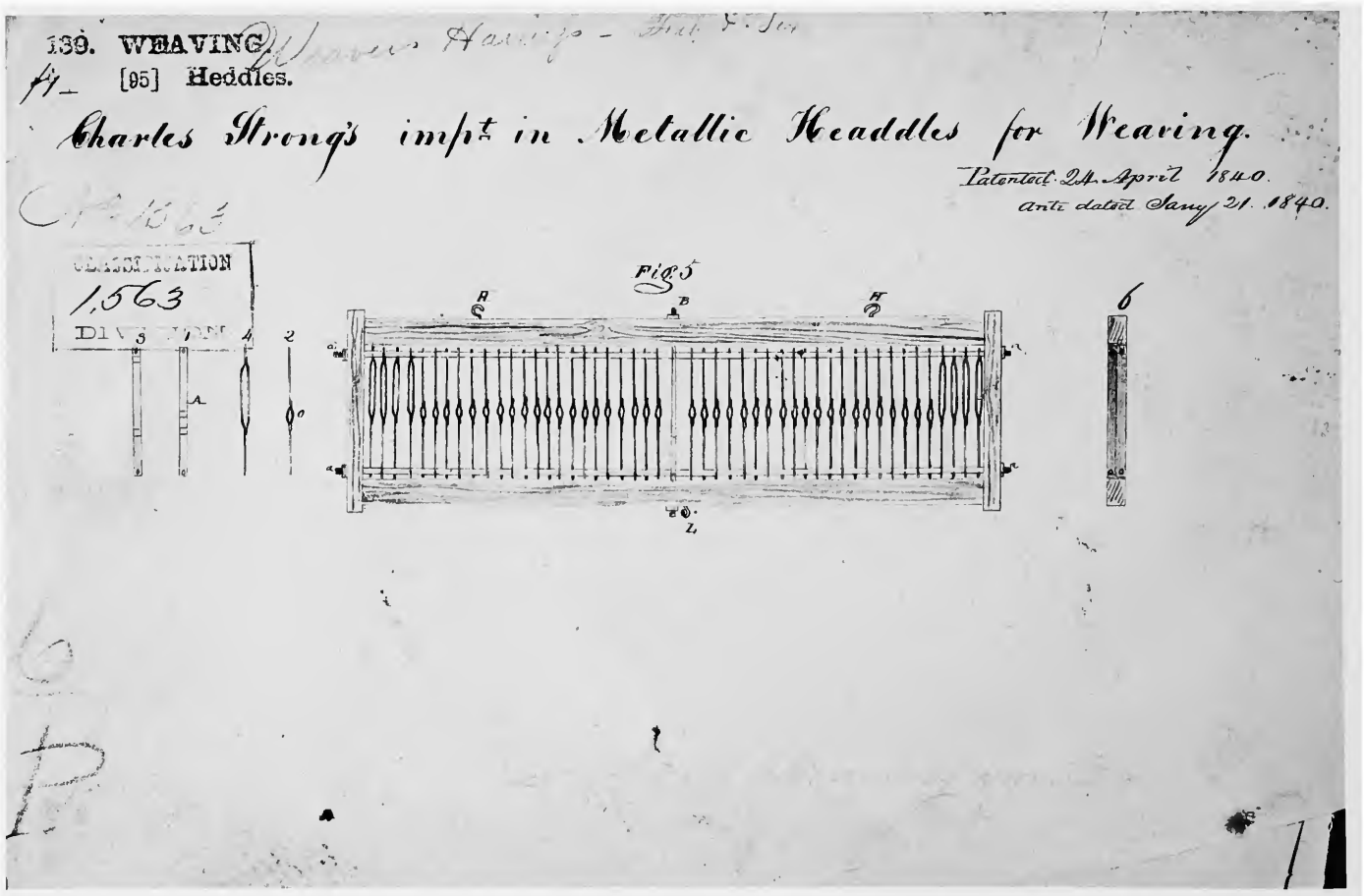


FIGURE 75.—Patent drawing 1563. (U.S. National Archives)

FIGURE 76.—Patent model 1563. (S.I. neg. 81-9860)

PATENT 1575: Wool and Cotton Picking Machine

Issued April 30, 1840

George C. Kellogg and Phineas Gillet
New Hartford, Litchfield, Co., Connecticut

According to the patentees, picking was improved because small matted fibers would not escape the opening and separation process. This improved feeding of the wool or other fibers was due to a combination of the feeder, shell, and picker cylinder. "Fig. 2" in the patent drawing (Figure 78) illustrates this combination. The fibers to be picked were first spread on the creeper cloth (A), then moved on to the concave shell (J) at which time the teeth of the feeder (I) engaged the fibers and brought them into contact (K) with the teeth (F) of the picker cylinder (E). (G) is a short bolt with a nut at one end.

Also patented was the method of holding the teeth in the picker cylinder, which enabled the teeth to be easily removed, sharpened, and set back in by the picker tender or a "small lad."[1] "Fig. 3" shows how the teeth were set by using a short bolt with a nut on one end. The patentees also specified that the picker teeth were made of cast steel, the shell of cast iron, and the spur wheel of the feeder of cast and wrought iron.

It is likely that Kellogg and Gillet produced these pickers, since in their patent specification they state: "We build them in all the variety of forms and sizes to suit the order, or magnitude of the work required, and our improvements are applicable to old and new pickers of every form."[2] This type of information was not usually included in patent specifications.

[1]National Archives Record Group 241: Patent Application Files, patent 1575, page 1.
[2]Ibid.

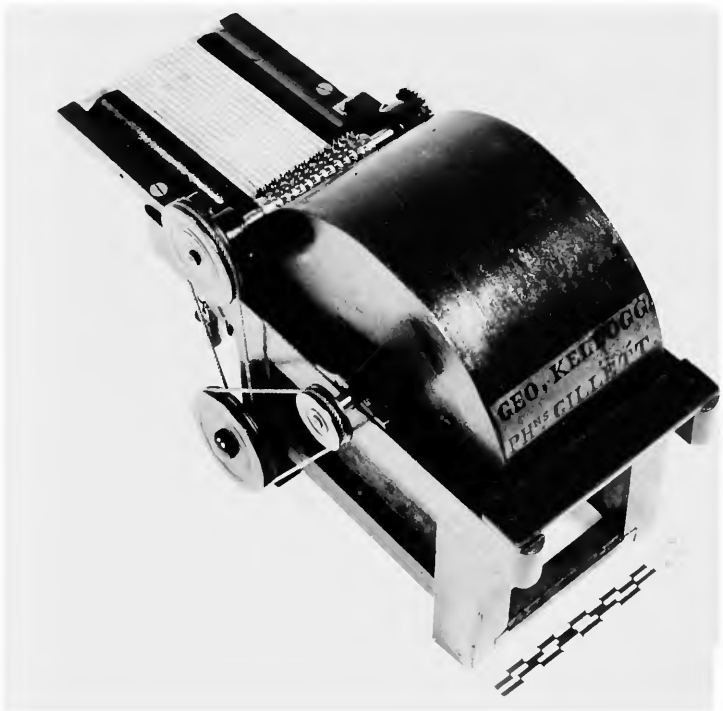


FIGURE 77.—Patent model 1575. (S.I. neg. 81-5255)

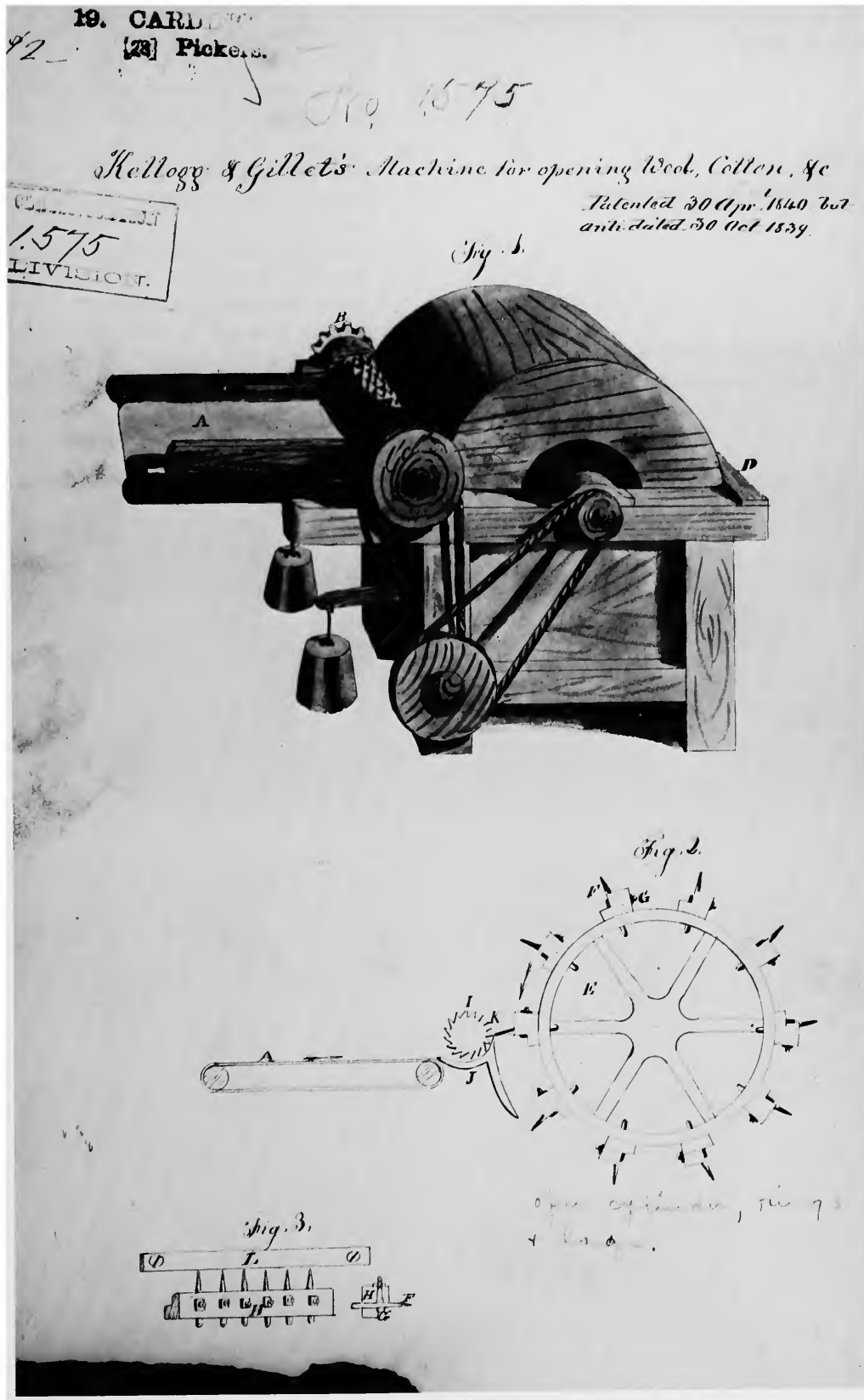


FIGURE 78.—Patent drawing 1575. (U.S. National Archives)

PATENT 1782: Rag Dressing Machine

Issued September 10, 1840

Emery Smith

North Sudbury, Middlesex Co., Massachusetts

Smith's machine prepared cotton waste prior to its being cut up and dusted and then processed into paper. Although the end product is paper, this model is included because it is in Burke's list of patents from Class III (see Appendix A). The cotton

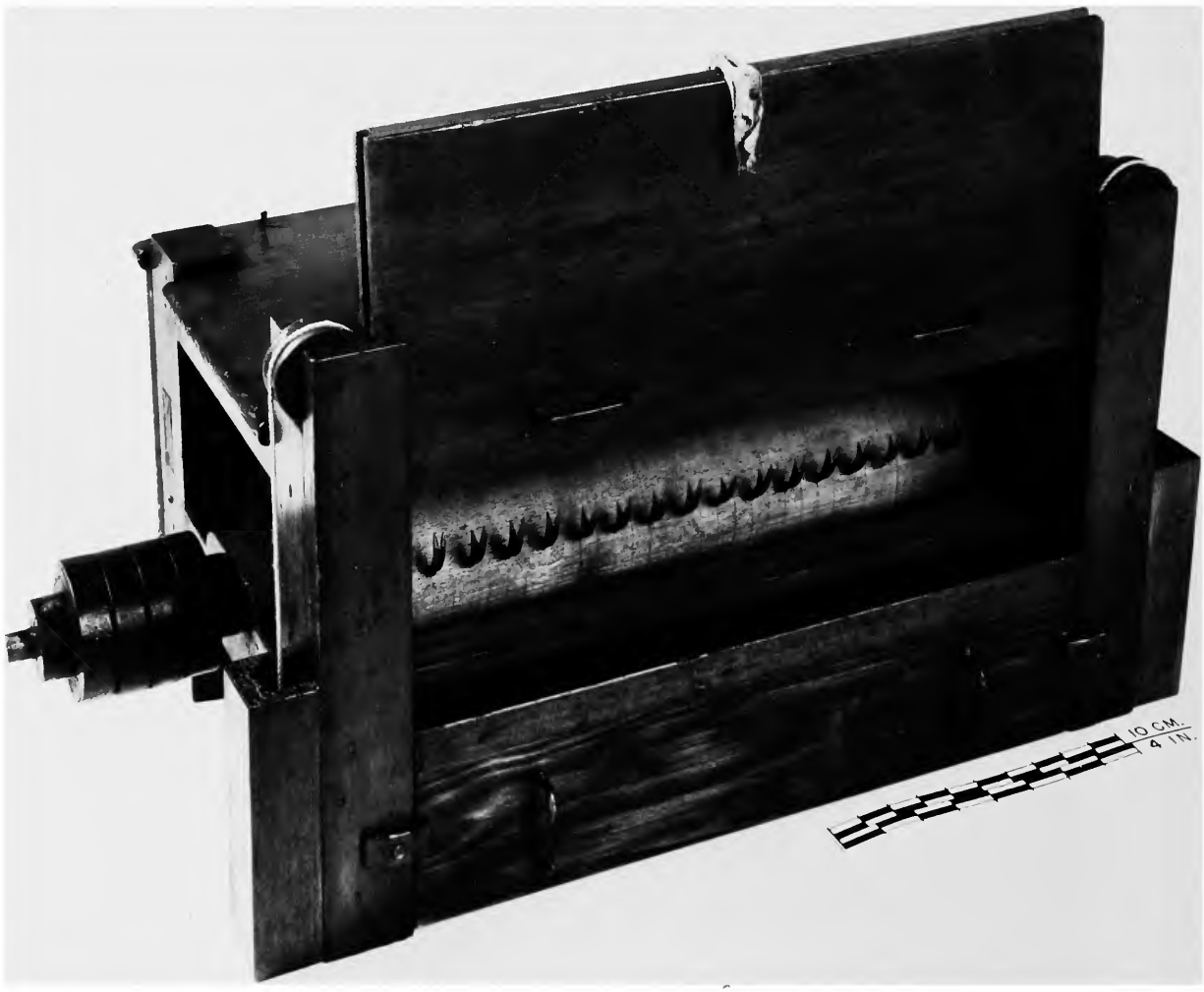


FIGURE 79.—Patent model 1782. (S.I. neg. 81-9857)

waste, usually thread obtained from factories, was generally twisted and knotted together and contained foreign matter that had to be removed before it could be further processed. This process was normally performed by hand. Smith claimed that his machine replaced 30 workers and thereby effected a great savings.

The patented action of the machine consisted of a cylinder with rows of forked teeth in combination with a row of pointed wires fixed to the inside wall of the box. The teeth and wires were so arranged that when the cylinder revolved they did not meet. The cotton was beaten by the turning of the cylinder, which caused the teeth to work the cotton against the wires, thus forcing the extraneous materials to separate and fall through a wire mesh to the bottom of the machine for subsequent removal. The cotton or rags were then considered "dressed" and ready for the next step in the papermaking process.

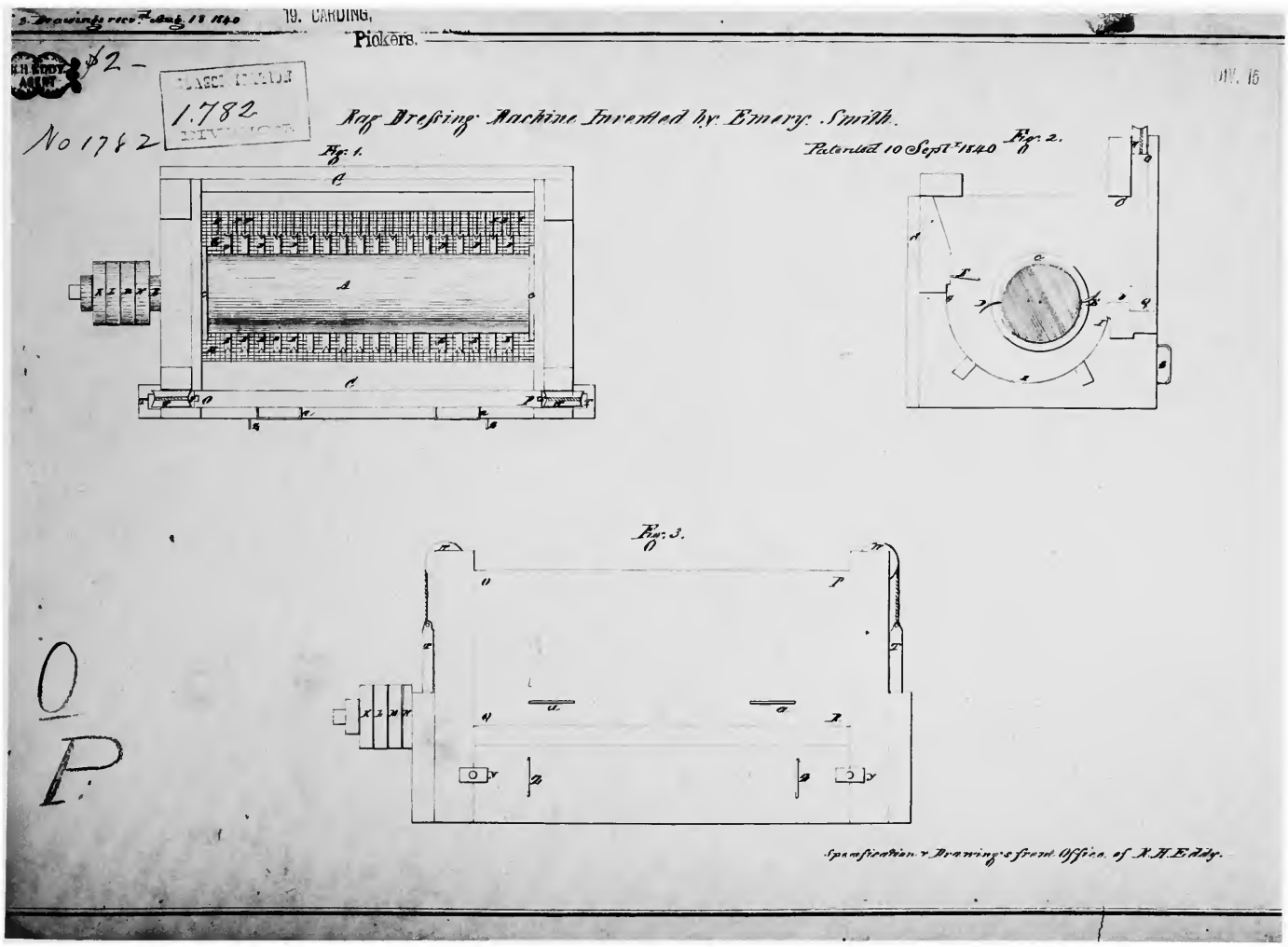


FIGURE 80.—Patent drawing 1782. (U.S. National Archives)

PATENT 1834: Knitting Machine

Issued October 22, 1840

Benjamin Hutchinson, Jr.

Springfield, Hampden Co., Massachusetts

Hutchinson's improvement was for knitting stockings with a closed seam. This he had accomplished by adding an endless chain of needles. The continuous chain is pictured in the patent drawing ("Fig. 3" of Figure 81) but is missing from the patent model. One of the knitting needles from the chain sits in front of the model (Figure 82).

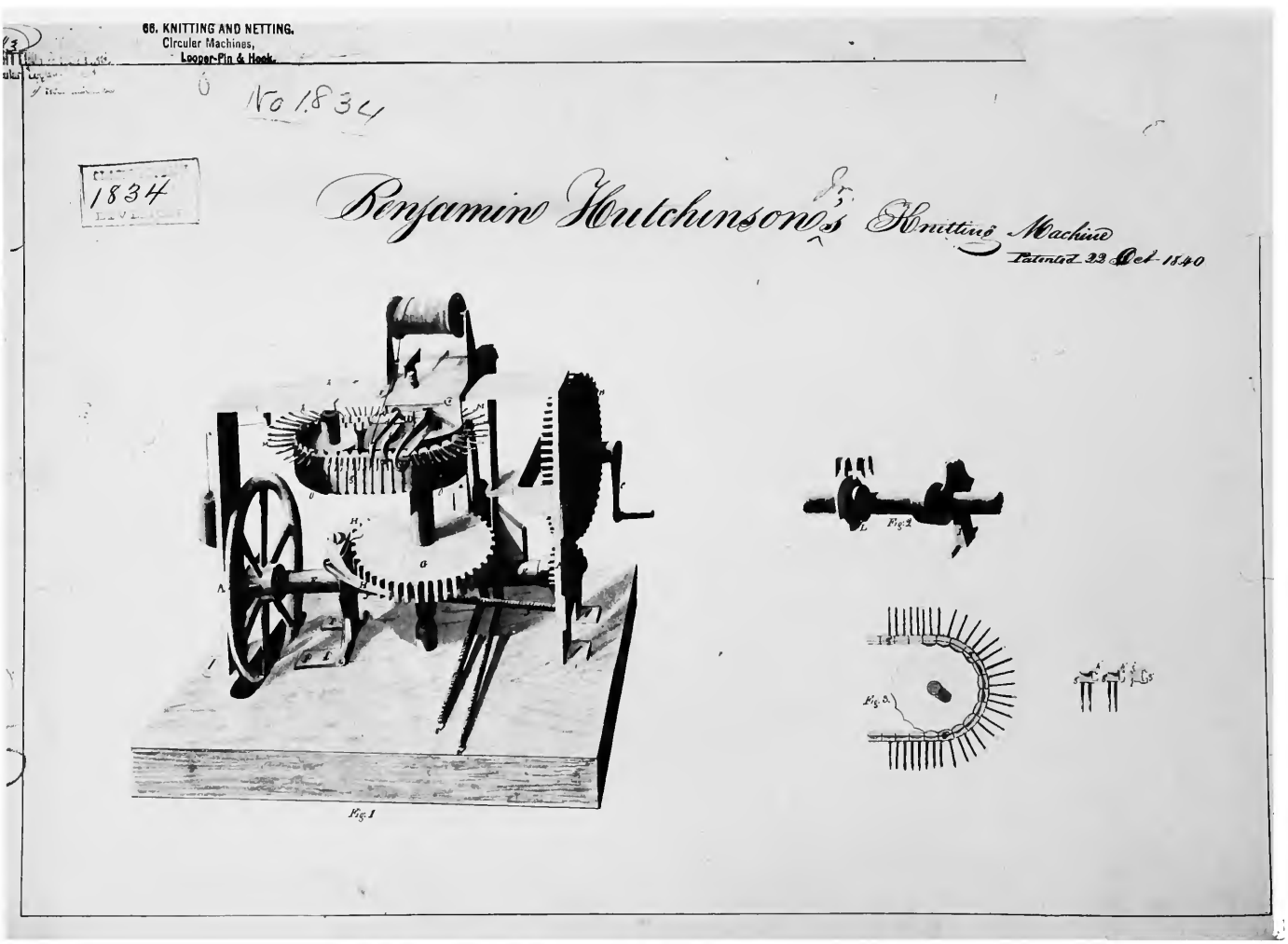


FIGURE 81.—Patent drawing 1834. (U.S. National Archives)

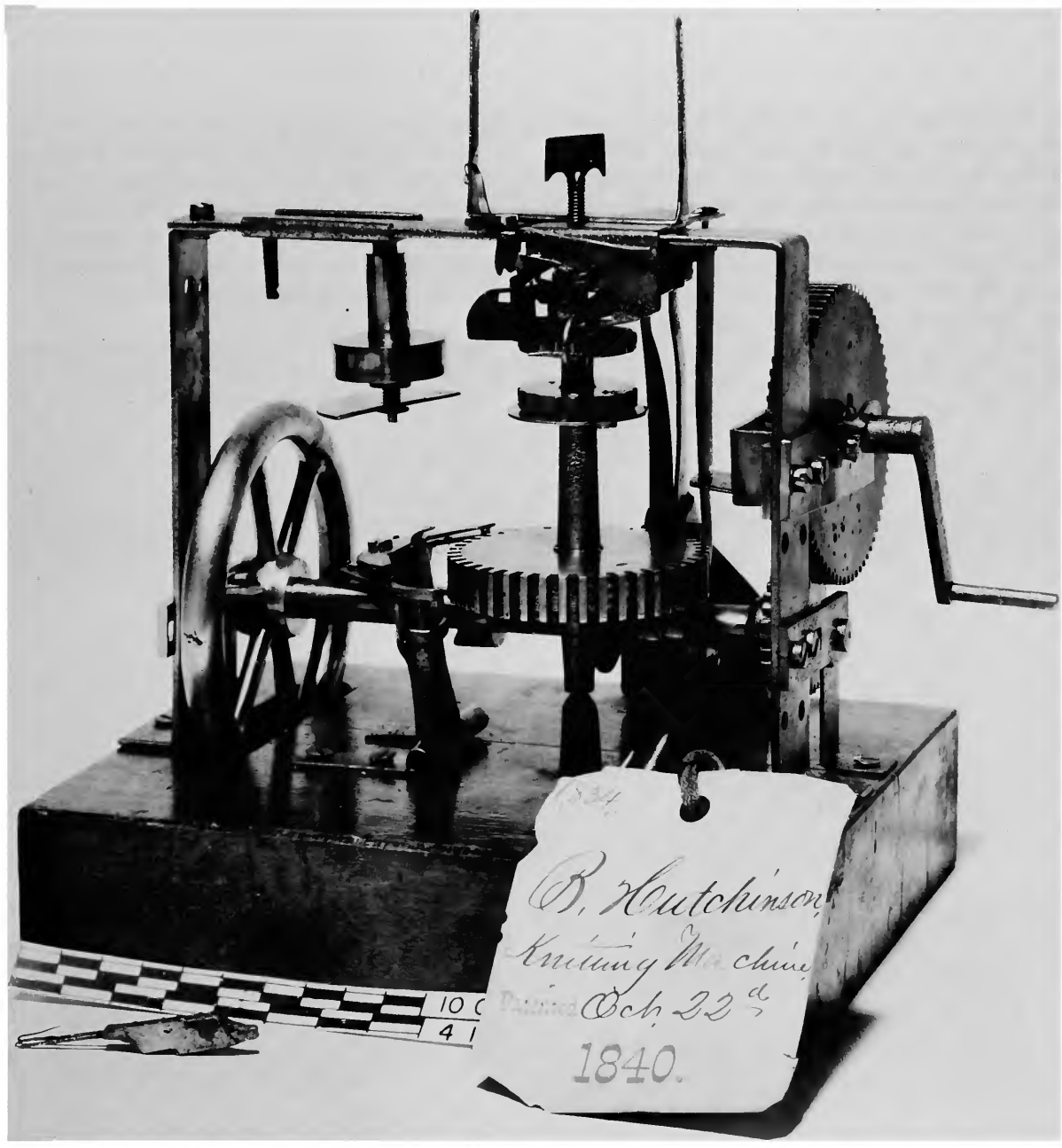


FIGURE 82.—Patent model 1834. (S.I. neg. 82-2566)

PATENT 1838: Rotary Loom Temple

Issued October 28, 1840

George Draper

Palmer, Hampden Co., Massachusetts

George Draper's temple further improved those of his father, Ira Draper, patented in 1816 and 1829 (patent 5419x). Ira patented the first self-acting rotary temple. George's improvement added a second row of teeth on the wheel of the temple. Previously, only a single row was utilized, which tended to leave a track of holes in the cloth as it was woven. The double row of teeth solved this problem of the fabric being marked in a single track. By having a double bearing on the selvage of the cloth, each row pulled on different threads and relieved the strain on a single warp yarn. It is evident from the patent drawings that the only difference between the two temples is in the extra row of teeth on George's temple wheel.

From 1816 on, the rotary temple was widely accepted and successful. In fact, Ira's invention doubled the number of looms that a weaver could handle.[1] The Draper family continued to improve their temples and bought the rights to other temple patents. Eventually they developed the Draper Company into the largest temple manufacturer in the world.[2]

[1]Waldemar Kaempffert, editor, *A Popular History of American Invention* (New York: Charles Scribner's Sons, 1924), page 241.

[2]*Dictionary of American Biography*, 5(1930):437.

FIGURE 83.—Patent model 1838, loom temples of which four are pictured. (S.I. neg. 81-5251)

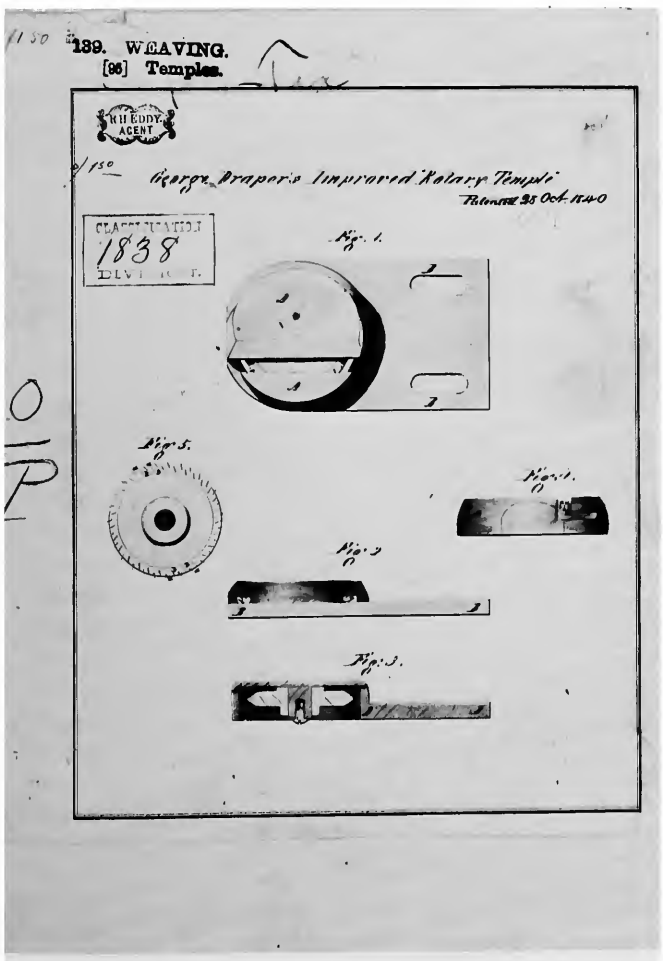


FIGURE 84.—Patent drawing 1838. (U.S. National Archives)

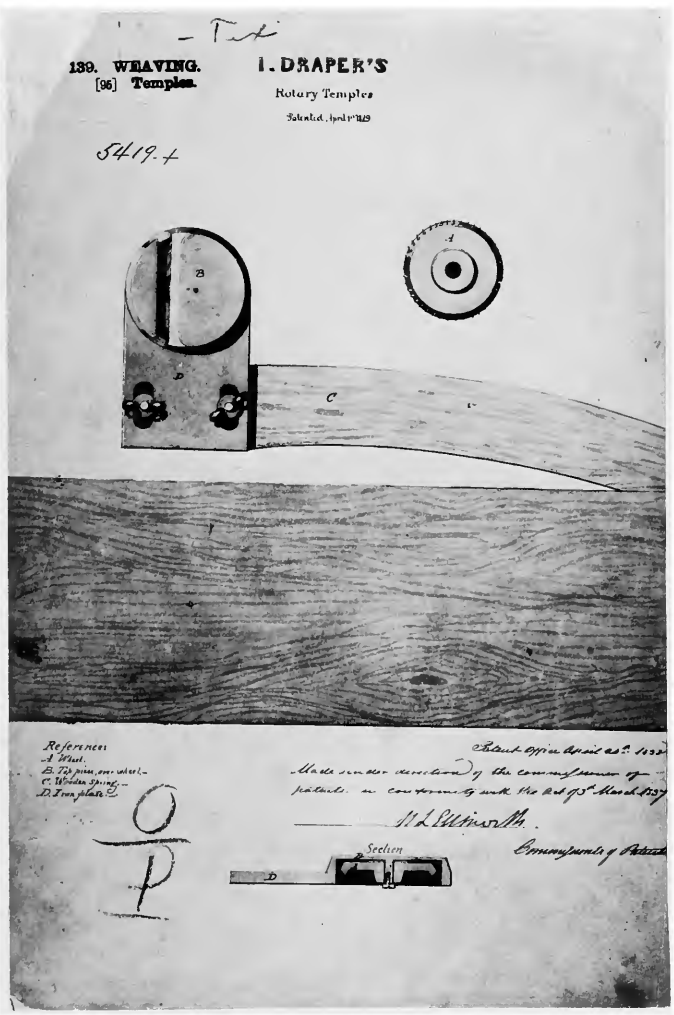


FIGURE 85.—Restored patent drawing 5419x. (U.S. National Archives)

PATENT 1902: Cloth-stretching Machine

Issued December 14, 1840

John Tillou
New Haven, New Haven Co., Connecticut

Tillou's machine was designed to remove mill wrinkles from cloth by stretching it in two directions. The cloth was stretched widthwise by transverse rubbers and was stretched lengthwise with rolling oblique cylinders. The rubbers are missing from the model, but are clearly seen in "Fig. 1(*EE*)" of the patent drawing (Figure 87).

In his patent specification, 1902, Tillou noted that this model is one-fourth of the size of the machine intended for stretching narrow cloth. The size of the machine would vary if used for stretching cassimere, satinet, or broadcloth.[1]

[1]National Archives Record Group 241: Patent Application Files, patent 1902, page 2.

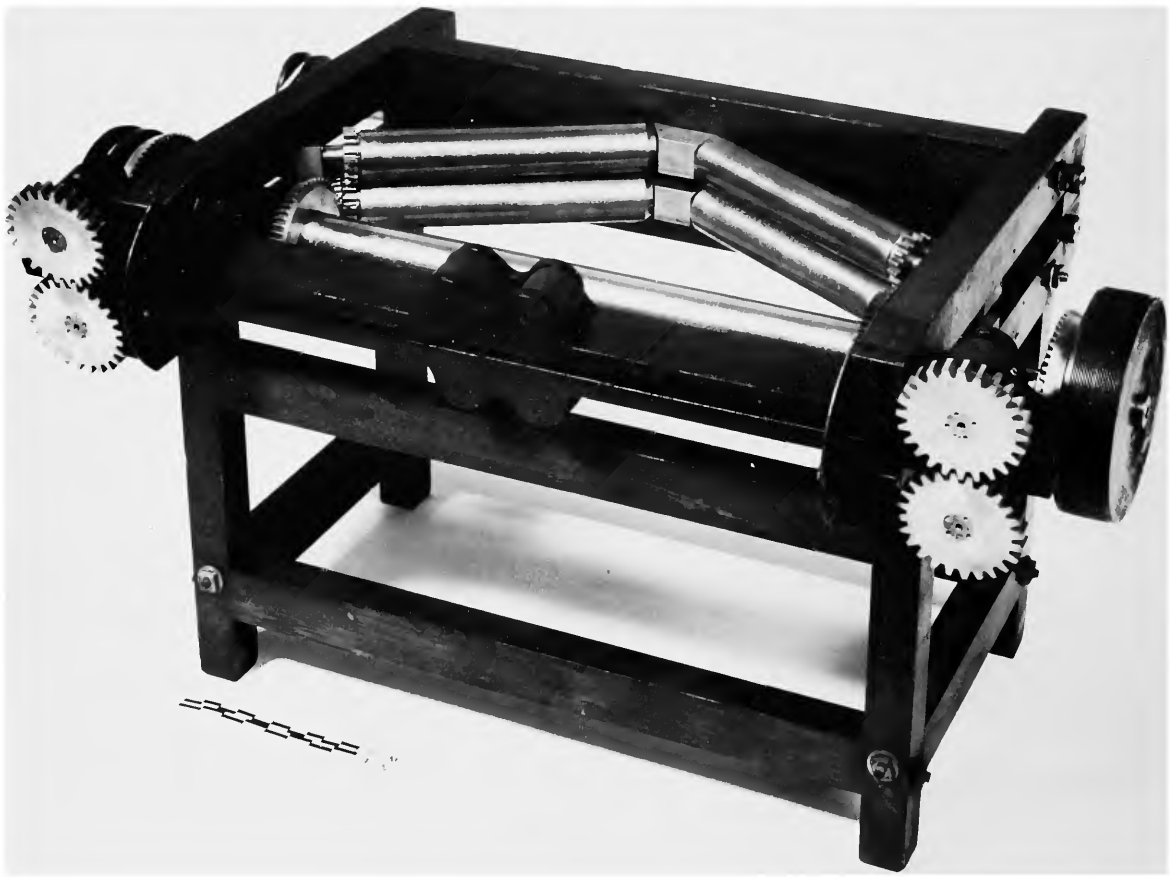


FIGURE 86.—Patent model 1902. (S.I. neg. 81-9861)

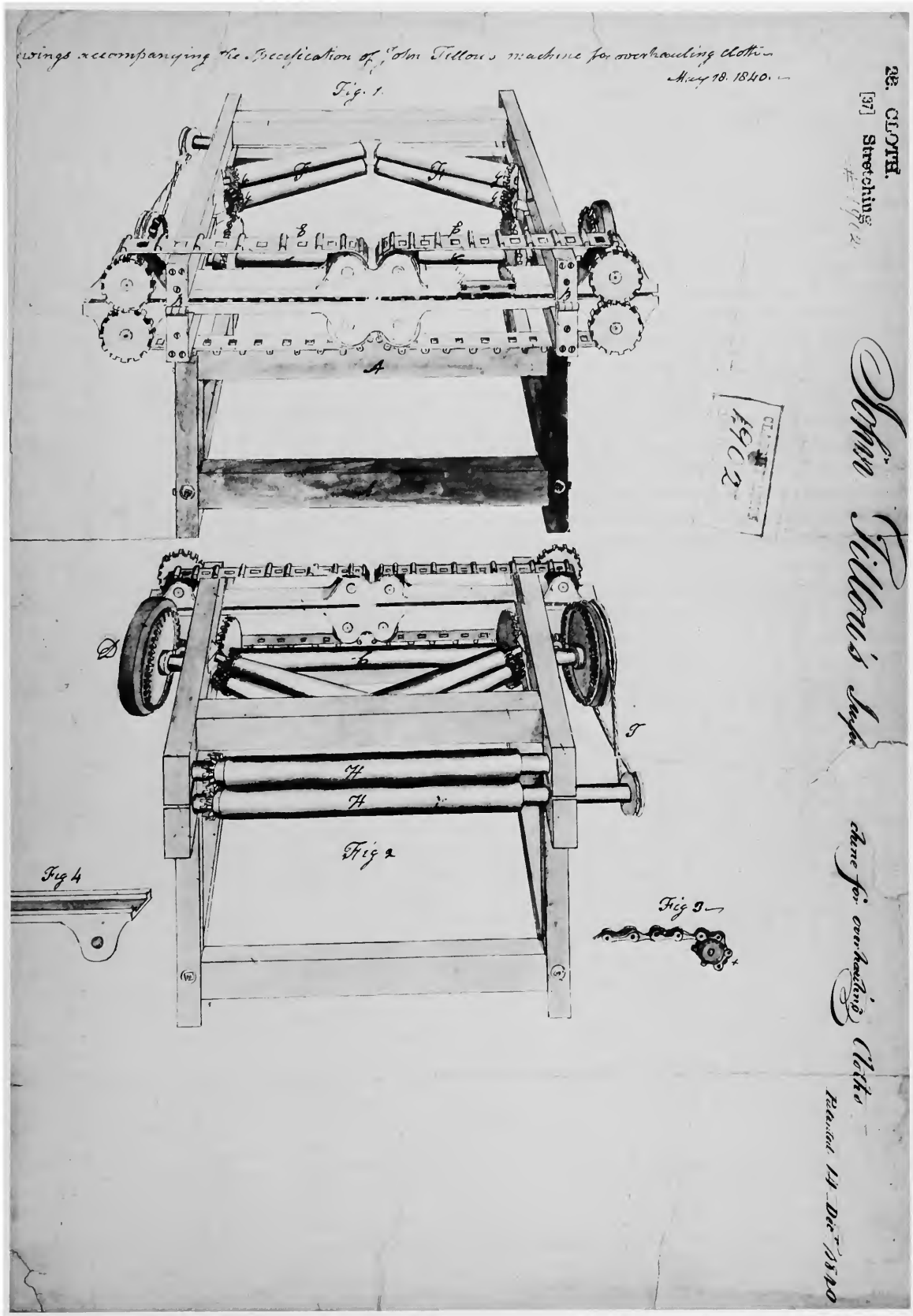


FIGURE 87.—Patent drawing 1902. (U.S. National Archives)

Appendix A

Complete List of Patents from Class III, 1790–1847

This appendix, "Manufacturers of fibrous and textile substances, including machines for preparing fibres of wool cotton, silk, fur, paper, &c." is excerpted from Edmund Burke's book, *List of Patents for Inventions and Designs, Issued by the United States, from 1790 to 1847*. Burke's edition is useful because the patents are first organized by class and then alphabetically within the class by subject matter, unlike other listings which are organized chronologically or by the patentee's name. In the case of the three-volume set *Subject-Matter Index of Patents for Inventions Issued by the United States Patent Office from 1790-1873, Inclusive,* the patents are listed alphabetically according to the subject of invention. The textile related patents are not grouped together as a class, but as individual subjects, for instance, following the listing of looms are loops, lotteries and lounges, which makes it difficult to know the scope of the entire set. In addition, the terminology is inconsistent and does not allow for easily locating individual inventions or inventions of a similar nature.

The starred patents indicate the models illustrated in the catalog. Note that there are inconsistencies between this list and other patent documents with respect to the spelling of the inventor's name, the title of the invention, and the inventor's residence. In patents where an assignee is listed, the residence is that of the assignee.

LIST OF PATENTS.

CLASS III.—MANUFACTURES *of Fibrous and Textile Substances, including Machines for preparing Fibres of Wool, Cotton, Silk, Fur, Paper, &c.*

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Asclepias syriaca, manufacturing external fibres	Margaret Gerrish	Salem, Mass.	Mar. 27, 1834
Bags, for separating claine and stearine by pressure	Martin H. Shepard	Cincinnati, Ohio	May 26, 1843
Blankets	Elkanah Cobb	Georgetown, D. C.	April 29, 1812
Blankets	Jac. Getzendenner	Frederick co., Md.	Sept. 30, 1814
Blankets, and cloth	A. Barnes, S. Gray, & Jabez Clark	Windham, Ct.	Feb. 3, 1813
Bobbin, cotton spool	Nathaniel Rider	Milbury, Mass.	Dec. 31, 1833
Bobbin, and flyer	Charles Danforth	Ramapo, N. Y.	Sept. 2, 1828
Bobbin, and flyer, Canton woollen	William B. Taber	Canton, Mass.	Jan. 30, 1829
Bobbin machine	James A. Post	Warwick t'ns'p, N.Y	April 23, 1828
Bobbin tube	Job Manchester	Warwick, R. I.	Dec. 13, 1824
Bobbin tube	Benj. Hutchinson	Philadelphia, Pa.	Oct. 18, 1827
Bonnets, &c., machinery for pressing	Richard Murdock	Baltimore, Md.	Oct. 12, 1842
Bonnet, portable	Thomas Hammond	New York	Oct. 30, 1844
Bonnet tips, pressing apparatus for	Thomas Kendall	New York	Sept. 3, 1844
Braid, machinery for pressing braid after it has been trimmed	Henry H. Robbins	Middleboro', Mass.	April 10, 1841
Braid, machinery for trimming straw braid	Henry H. Robbins	Middleboro', Mass.	Feb. 18, 1841
Braiding machine	Dudley D. Sacket	Westfield, Mass.	Jan. 22, 1840
Braiding machine, braiding manilla.	Daniel, Jesse, & Elisha Fitzgerald	New York	April 24, 1840
Braiding	John Thorp	Providence, R. I.	Aug. 10, 1821
Braiding	John Thorp	Providence, R. I.	July 10, 1826
Braid, Tuscan, &c., weaving	Elisha Fitzgerald	New York	Oct. 16, 1844
Brushes for cotton gins	Edwin Keith	Bridgewater, Mass.	Sept. 19, 1845
Burrs, cleaning from wool, & seed from cotton	Theodore Eli	New York	Sept. 14, 1843
Burrs, &c., picking and separating, also applicable to ginning cotton*	Francis A. Calvert	Patterson, N. J.	June 3, 1843
Burring machine	Thos. S. Washburn	Lowell, Mass.	Oct. 11, 1845
Burring machine	Alanson Crane	Lowell, Mass.	Oct. 11, 1845
Calico, &c., printing	Godfrey Woone	London, Eng.	April 2, 1838
Calico, &c., printing	Bennet Woodcroft	Hardwick, Eng.	April 5, 1838
* Calico, &c., printing	Alden Sibley	Pawtucket, Mass.	July 9, 1838
Calico and paper, printing	Leonard Beatty	Wilkesbarre, Pa.	Dec. 28, 1810
Cans, cotton	Horatio Moses	Patterson, N. J.	Mar. 12, 1833
Cans, cotton	William A. Crocker	Taunton, Mass.	June 3, 1834
Cans, shoe	James Dennis	Providence, R. I.	Sept. 8, 1834
Cap, substitute for fliers	Joseph Ripka	Manayunk, Pa.	July 31, 1833
Cap spinner	Jacob Peters	Kensington, Pa.	June 6, 1846
Carding, composition, applied	Ziba Parkhurst	Grafton, Mass.	Aug. 19, 1826
Carding, cotton	Wm. B. Leonard	Fishkill, N. Y.	Sept. 16, 1833
Carding, drawing and roping	William Tiffany and P. Allen	Otsego, N. Y.	July 17, 1815
Carding engine†	John Boynton	South Coventry, Ct.	July 12, 1843
Carding engine, feeding or delivering rollers of.	J. & H. C. Gleason, & N. D. White, ass'ees of H. Barbour	Lowell, Mass.	May 19, 1843

* Reissued Dec. 27, 1843. † Antedated Jan. 12, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Carding engine, machinery for making laps for feeding	John Mason	Great Britain	Feb. 10, 1843
Carding engine*	Charles Pooley	Chorlton upon Medlock, G. B.	Aug. 22, 1846
Carding, for gleaning savers	James Hugus	Greenbush, Pa.	Sept. 15, 1815
Carding hair of neat cattle	Arthur Kimball	New York	Nov. 4, 1813
Carding hats, fur and wool	Arnold Buffum		Feb. 21, 1807
Carding hats, wool	Abner Guild	Dedham, Mass.	Mar. 31, 1806
Carding machine	Heman Palmerler	Shoreham, Vt.	May 25, 1811
Carding machine	John Jessup	Orange co., N. Y.	Feb. 6, 1813
Carding machine	Joshua Woodward	Portage, Ohio	May 2, 1821
Carding machine	Nathaniel Rider	Sturbridge, Mass.	Mar. 12, 1825
Carding machine	Elijah Thompson	Lowell, Mass.	June 9, 1826
Carding machine	James H. Arnold	Bellemont, Ohio	Sept. 25, 1826
Carding machine	John Tillou	Newton, Ct.	Sept. 8, 1827
Carding machine	Henry A. Shannon	Columbia co., N. Y.	April 5, 1828
Carding machine	D. M. Bacon	Huntington, Pa.	April 10, 1828
Carding machine	John Boynton	South Coventry, Ct.	April 11, 1829
Carding machine	J. W. Shankland	Summerfield, Ohio	May 5, 1829
Carding machine	Uriel G. Warner	Ripley, Ohio	Oct. 1, 1830
Carding machine	P. L. King and E. B. Blasdell.	Sparta & Lawrenceburg township, Ia.	Oct. 14, 1830
Carding machine	Robert Bartlett	Ripley, Ohio	Oct. 25, 1832
Carding machine	Luther Colburn	Fairfield, Vt.	Nov. 20, 1832
Carding machine, packing sheets of leather on cylinders	Joshua Lamb	Leicester, Mass.	Aug. 21, 1819
Carding machine†	M. W. Obenchain	Springfield, Ohio	July 20, 1846
Carding machine	Charles Bishop	Newtown, Ct.	Sept 26, 1846
Carding machine	Hugh Whiteman	Pittsburg, Pa.	Feb. 12, 1845
Carding machine, self-stripping card for carding fibrous substances.	H. Barbour and J. Gleason	Lowell, Mass.	Dec. 4, 1844
Carding machine, wool	Nathan Freeman	Lowell, Mass.	Dec. 31, 1839
Carding machine, wool, cotton, &c	Ebenezer Crane and Alanson Crane	Lowell, Mass.	Jan. 30, 1841
Carding machine, wool, cotton, &c.	Joseph Munroe	Palmer, Mass.	Oct. 11, 1841
Carding machine, wool, condenser for	Levi L. Gowdy	Montgomery, N. Y.	Oct. 11, 1841
Carding rolls, cotton, forming	C. Whiting, S. Lowder, & S. Lowder, jr.	Dedham, Mass.	June 25, 1824
Carding, rolls, preserver	Charles Atwood	Middletown, Ct.	Nov. 1, 1830
Carding, spinning, and roping	T. Norton and G. Biddis	Milford, Pa.	April 15, 1813
Carding and spinning wool	Anson Holmes	Pomfret, N. Y.	Jan. 8, 1810
Carding and spinning wool	Philo C. Curtis	Paris, N. Y.	Oct. 15, 1823
Carding and spinning machines	Moses Chase	Baltimore, Md.	Mar. 23, 1842
Carding wool	John Boynton	South Coventry, Ct.	Mar. 11, 1833
Carding wool	Calvin Wing	Gardiner, Me.	Oct. 21, 1830
Carding wool	David Adams	Richmond, Va.	July 29, 1833
Cards, boards	Homer Whittimore	Newton, N. Y.	April 27, 1832
Cards, boards, smoothing	Daniel Stearns	Brattleborough, Vt.	Mar. 10, 1814
Cards, and can hoops, bending	John Butterworth	Philadelphia co., Pa.	July 20, 1831
Cards, cotton	William Barker	Smithfield, R. I.	Aug. 12, 1815
Cards, cotton and wool	Edward Faber	Pittsburg, Pa.	Jan. 24, 1832
Cards, cotton and wool, composition for preparing	John M. Gates	Warren, Mass.	Sept. 14, 1815
Cards, cut, prick, and set	Reuben Merriam	Leicester, Mass.	May 2, 1831
Cards, cylinders	Joshua Lamb	Leicester, Mass.	Aug. 21, 1819
Cards, grinding and facing	Gideon Drake	Windsor, Ct.	Feb. 28, 1817
Cards, grinding and straining	John Boynton	Windham, Ct.	Mar. 30, 1811
Cards, wool‡	Amos Whittemore	Massachusetts	June 5, 1797
* Cards, wool	George Faber	Canton, Ohio	Aug. 1, 1839
Carding wool	Benjamin Standring	New Hampshire	June 28, 1803
Carding wool	Daniel Smith	Philadelphia, Pa.	June 14, 1809

* Date of English patent, Nov. 17, 1845. † Antedated Jan. 20, 1846. ‡ Renewed by Cong., Mar. 3, 1809.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Carding wool	George Booth	Poughkeepsie, N. Y.	Oct. 13, 1812
Carding wool	Lewis French	New Haven, Ct.	May 18, 1814
Carding wool	E. Hale, jr., S. Hale, and James Hale	Haverhill, Mass.	Feb. 18, 1825
Carpet, canvass, design for	J. D. Edwards	Elizabethtown, N. J.	Mar. 20, 1844
Carpet, design for	John P. Ferguson	Thompsonville, Ct.	Oct. 20, 1843
Carpets, painted, design for	James Albro, jr.	Elizabethtown, N. J.	Oct. 6, 1843
Carpets, design for	Henry G. Thompson	New York	April 4, 1844
Carpet, felt	Aaron Byington	Herkimer, N. Y.	May 6, 1829
Carpet, ingrain	John and N. Haight	New York	Aug. 12, 1820
Carpet, ingrain	William A. Prince	New York	Feb. 12, 1823
Carpet, ingrain, taking figures of	William Sherwood	Summersworth, N.H	April 20, 1830
Carpet, paper	Francis Guy	Baltimore, Md	Feb. 23, 1819
Carpet, woollen	William Harrington	Harrison, N. Y.	Mar. 3, 1829
Carpet, woollen	William Harrington	Harrison, N. Y.	June 11, 1829
* Carpeting and rugs	John Humphreys	New York city	Dec. 10, 1838
Carpets, weaving	William Sherwood	Ridgefield, Ct.	July 20, 1846
Cloth, brushing and winding	Reuben C. Varnel	West Somers, N. Y.	Mar. 13, 1844
Cloth, dressing, finishing	Zachariah Allen	Providence, R. I.	Feb. 23, 1830
Cloth, dressing, singeing	A. Robeson	New Bedford, Mass.	Sept. 8, 1826
Cloth, dressing, sizing	Paul Moody	Waltham, Mass.	Jan. 17, 1818
Cloth, dressing, wool and cotton	Calvin W. Cook	Lowell, Mass.	April 23, 1831
Cloth, dressing	Isaac Sanford	Connecticut	Mar. 27, 1799
Cloth, dressing*	Seth Hart	Hempstead, N. Y.	July 27, 1812
Cloth, dressing	Calvin W. Cook	Lowell, Mass.	May 20, 1833
Cloth, dressing	Stephen R. Parkhurst	Mendon, Mass.	Dec. 23, 1833
Cloth, dressing, calendering	Zenos Bliss	Johnston, R. I.	Oct. 17, 1835
Cloth, drying	Joseph Hurd	Boston, Mass.	Jan. 23, 1830
Cloth, drying, by steam rollers	Duncan Wright	Medway, Mass.	Aug. 31, 1820
Cloth, felting apparatus	John Andrews	Bellville, N. J.	Jan. 31, 1845
Cloth, finisher	J. C. Carlisle	Armagh, Pa.	Oct. 21, 1846
Cloth, folding and measuring	Joel Spalding	Morristown, Vt.	Aug. 28, 1841
Cloth, folding and measuring, machinery for	Silas C. Durgin	N.Chelmsford, Mass.	Mar. 9, 1844
Cloth, forming the web without spinning or weaving	John Arnold	Norwalk, Conn.	July 15, 1829
Cloth, mangle	Thomas Rundle	Boston, Mass.	Nov. 11, 1830
Cloth, manufacturing	J. P. & R. G. Hazard	Providence, R. I.	Dec. 6, 1828
Cloth, manufacturing	Henry Raymond	New York	June 27, 1829
Cloth, manufacturing	N.Peck &D. Taylor	Fairfield, Conn.	June 27, 1829
Cloth, manufacturing	Freeman Wolcott	Stow, Mass.	July 21, 1835
Cloth, manufacturing, of flax and wire	Peter Laporte	Augusta county, Va.	July 12, 1830
Cloth, machine for measuring on the loom	F. W. Howe	N. Chelmsford, Mass	June 6, 1846
Cloth, napping and making waterproof	William K. Phipps	Framingham, Mass.	Aug. 31, 1839
Cloth, ornamenting	James C. Wood	Philadelphia, Pa.	Dec. 14, 1821
Cloths, printing, floor, design for	J. Albro, jr.	Elizabethtown, N.J.	Dec. 20, 1843
Cloths, printing, floor, design for	J. Albro, jr.	Elizabethtown, N.J.	Dec. 20, 1843
Cloths, printing, floor, design for	J. Albro, jr.	Elizabethtown, N.J.	Dec. 20, 1844
Cloth, &c., reducing worn out	Reuben Daniels	Woodstock, Vt.	Oct. 10, 1840
Cloth, scouring	Thomas L. Jennings	New York	Mar. 3, 1821
Cloth of all kinds, sewing, with a running stitch	Benjamin W. Bean	New York, N. Y.	Mar. 4, 1843
Cloth, stretching, in the process of fulling	Baxter D. Whitney & Geo. W. Lawton	Winchendon, Mass.	Mar. 25, 1840
* Cloth, taking wrinkles out of, while fulling	John Tillou	New Haven, Conn.	Dec. 14, 1840
Cloth of various kinds, manufac'g	Reuben Daniels	Woodstock, Vt.	Oct. 8, 1840
Cloth, washing, in calico printing†	Geo. J. Prentiss	Tiverton, R. I.	April 4, 1846
Cloth, winding up	J. Goulding and R. Brackett	Boston, Mass.	Nov. 30, 1835
Coach lace, loom, Bigelow's power‡	E. B. Bigelow	Boston, Mass.	April 20, 1837

* Reissued Jan. 23, 1834. † Antedated, Oct. 4, 1845. ‡ Reissued Sept. 26, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Cocooneries, lodgments in, &c.	Sol. M. Jenkins, M.D.	Easton, Md.	Sept. 28, 1839
Cocooneries, removing the filth from hurdles	Benjamin Benson	Smyrna, Del.	Jan. 10, 1840
Cordage	George Parkinson	Pennsylvania	June 16, 1794
Cordage	John Pittman	Rhode Island	May 25, 1795
Cordage	R. Fulton & N.Cutting	New York,	Mar. 4, 1808
Cordage	Abel Hill	Walpole, N. H.	June 30, 1812
Cordage	Charles L. Sargeant	Suffolk, Mass.	Oct. 4, 1817
Cordage	St. & James A. Bazen	Canton, Mass.	Oct. 17, 1817
Cordage	William B. Leonard	Fishkill, N. Y.	Jan. 9, 1819
Cordage	Robert Colbert	Boston, Mass.	Mar. 17, 1819
Cordage	Robert Graves	Boston, Mass.	April 10, 1819
Cordage	Robert Graves	Boston, Mass.	Nov. 22, 1820
Cordage	Robert Graves	Boston, Mass.	Feb. 1, 1821
Cordage	Franklin Kellsey	Middletown, Conn.	Feb. 8, 1825
Cordage	Erastus Bartholomew	Boston, Mass.	May 17, 1826
Cordage	Robert Graves	Brooklyn, N. Y.	July 25, 1827
Cordage	John Drummond	Brooklyn, N. Y.	July 22, 1833
Cordage, clothes line, straining and preserving	E. Allyn and C. B. Hildreth	Boston, Mass.	Nov. 26, 1840
Cordage, laying and spinning ropes for cables	William Shultz	Baltimore, Md	June 24, 1809
Cordage, laying and twisting seine twine	Joseph Clarkson	Baltimore, Md	Aug. 16, 1826
Cordage, long, manufacturing	William E. Maginnis	Philadelphia, Pa.	Nov. 9, 1839
* Cordage, manufacturing	Alfred Hathaway	Boston, Mass.	July 9, 1839
Cordage, pressing tar out of	Thomas Barnitt	Philadelphia, Pa.	May 20, 1822
Cordage, rope	Edward S. Townsend and Philo Durfee	Palmyra, N. Y.	Jan. 6, 1831
Cordage, rope	William Stone, jr.	Williamson co. Tenn	Sept. 8, 1831
Cordage, rope	Daniel Treadwell	Boston, Mass.	Feb. 5, 1834
Cordage and rope	William Fanning	New York	Feb. 3, 1836
Cordage, rope, forming & laying	George Bradley	Fishkill, N. Y.	Dec. 16, 1833
Cordage, rope, layer	David Myerle	Philadelphia, Pa.	Mar. 3, 1827
Cordage, rope, laying	John Goulding	Boston, Mass.	Oct. 10, 1835
Cordage, rope, making	Michael Wigglesworth	Massachusetts	June 26, 1799
Cordage, rope, making	John Sellers & A. Bartle	Alexandria, D. C.	May 5, 1807
Cordage, rope, making	Elenzer Crain	Springfield, Vt.	Jan. 10, 1820
Cordage, rope, making	Stephen Hills, 2d	Glastenbury, Conn.	June 11, 1829
Cordage, rope, making	J. Whiteman	Philadelphia, Pa.	Jan. 15, 1836
Cordage, rope, preserving —*See Composition, Class 4.*			
Cordage, rope, Readie's guage plate for	Robert Graves	Boston, Mass.	Dec. 31, 1819
Cordage, rope, reeding	A. Boring and William W. Jones	Thornville, Ohio	May 5, 1828
Cordage, rope, serving	James Fales	New Bedford, Mass.	Aug. 20, 1835
Cordage, rope, serving	Adam Montgomery	New York	Mar. 18, 1836
Cordage, rope, serving	Charles Parke	New York	April 13, 1836
Cordage, rope and twine	Stephen Gorham	Massachusetts	Feb. 4, 1800
Cordage, rope and twine	John Heaven	Montgomery c.h., Va	Aug. 13, 1813
Cordage, rope and twine	Sam'l F. Dexter and Sam'l Graves	Auburn, N. Y.	Aug. 24, 1830
* Cordage, rope, twisting strand	Moses Day	Roxbury, Mass.	Feb. 7, 1838
Cordage, rope yarn	John Pittman	Medford, Mass.	Mar. 14, 1817
Cordage, rope yarn, putting up	James H. Echols	Lynchburg, Va.	Oct. 20, 1836
Cordage, rope yarn, spinning	John Pittman	Rhode Island	Dec. 24, 1799
Cordage, rope yarn, spinning	Nathaniel Cutting	Washington, N. Y.	Aug. 14, 1806
Cordage, rope yarn, spinning	Sidney B. Whitlock	New York	Aug. 22, 1834
Cordage, rope yarn, spinning and winding	Christian Berg & Peter Schermerhorn, jr.	New York	July 2, 1811
Cordage, rope yarn, tarring	Daniel Treadwell	Boston, Mass.	Aug. 18, 1834
Cordage, small, and seine twine	Petersburg manufact'g company, assignees of Alson Pond	Petersburg, Va.	May 20, 1830

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Cordage, silk weed for	George Smith	New York	May 28, 1813
Cordage, top sled for	Robert Graves	Boston, Mass.	Mar. 28, 1821
Cordage, tow line, &c.	Aaron Bull	Caroline, N. Y.	Dec. 29, 1831
Cordage, twine, and cord	Jacob Sloat	Sloatsburg, N. Y.	Nov. 9, 1839
Cotton bats or laps, making	John C. Smith & Geo. C. Kellogg	New Hartford, Ct.	Feb. 20, 1843
Cotton, cleaning	Bornt Seguine	NewYork, N. Y.	July 3, 1843
Cotton, cleaning unginned	Robert M. Livingston	Mobile, Alabama	July 20, 1843
Cotton, cleaning	G. F. Saltonstall	North Carolina	Sept. 2, 1801
Cotton, cleaning	G. F. Saltonstall	North Carolina	May 14, 1803
Cotton, cleaning	James Simonds & Jas. McJames	Charleston, S. C.	May 17, 1804
Cotton, cleaning	George T. Sadler	Lawrence co. Ala.	Mar. 10, 1823
Cotton, cleaning	Jesse Reed	Marshfield, Mass.	Feb. 3, 1826
Cotton, cleaning	Amos Gilliam	Reedy Fork, S. C.	Oct. 10, 1829
Cotton, cleaning, Sea Island	Jesse Reed	Marshfield, Mass.	Aug. 10, 1827
Cotton, inspecting machine	Lewis Viales	New Orleans, La.	Oct. 29, 1818
Cotton, manufacture	John T. Sharrock	Winchester, Va.	June 20, 1823
Cotton manufacture	Elisha Congdon	Norwich, Conn.	Mar. 12, 1824
Cotton, roping	Jesse Whitehead	Manchester, Va.	June 24, 1839
Cotton roving, laying in cans*	John Tatham & David Cheetham	Rockdale, England	Nov. 18, 1845
Cotton, separating trash from	Jacob Idler	Philadelphia, Pa.	Dec. 31, 1838
Cotton, improvement in spinning	Waring, Peterson and Johnson, adm's of A. S. Wolcott, deceased	New York, N. Y.	Aug. 8, 1846
Cotton, wadding	James Beaumont	Kendall, Mass.	Dec. 3, 1814
Cotton, wadding	John Park & William S. Peck	Westmoreland, N. Y	July 10, 1833
Cotton, wadding, glazing, pelisse	Stukely Turner	Cranston, R. I.	July 25, 1833
Cotton wadding or batting, manufacture of	Jeremiah Essex	Bennington, Vt.	Feb. 10, 1846
Cotton, wadding, machine for	Oliver Tenny	Dorchester, Mass.	Jan. 10, 1845
*Cotton waste or rags, &c., dressing	Emery Smith	N'th Sudbury, Mass	Sept. 10, 1840
Cotton whippers and cleaners	Jane A. Davis, adm'x of Henry G. Davis, dec'd	Clark county, Ala.	May 16, 1845
Cotton, wool, &c., burring and cleaning	Silas G. Mumford	N. Providence, R. I.	Mar. 28, 1844
Doffer	Stephen H. Parkhurst	Providence, R. I.	Oct. 10, 1835
Doffer, circulating and transverse	Charles Atwood	Middletown, Conn.	April 18, 1829
Fabrics, figured, manufacturing	John Smith	Shaefferstown, Pa.	Aug. 4, 1834
Fabrics, reducing	John Biddis	Pennsylvania	May 6, 1809
Fabrics.—*See Class 22, India Rubber.*			
Fabrics, water proofing†	George John Newbery	Citizen U. States, now in London, Engla'd	Mar. 3, 1841
Fabrics, water proofing	Thomas B. Rogers	New York	Nov. 3, 1841
Felt, manufacturing	J. Barker and L. Kinsley	Green county, N. Y.	Aug. 29, 1829
Felt, manufacturing, for bottoms of vessels	Thomas R. Williams	Newport, R. I.	May 22, 1830
Felt, papermaker's, washing and cleansing	Samuel E. Foster	Brattleborough, Vt.	May 25, 1832
Felt, washer	William Cole	Lee, Mass.	Jan. 23, 1833
Felting cloth	Oliver Barret, jr.	Troy, N. Y.	Dec. 8, 1812
Felting and fulling	John D. Lounsburg, J. Arnold, J. A. McLean, and G. G. Bishop	Norwalk, Conn.	July 15, 1829
Felting of wool, without spinning or weaving	Levi Van Hoesen	Norwalk, Conn.	June 27, 1829
Felting, for coats, hats	Marmaduke Osborne	New York, N. Y.	May 28, 1842
Felt making, in the manufacture of fur hats	Hezekiah S. Miller	Philadelphia, Pa.	March 5, 1839
Felt cloths, hardening	Henry A. Wells	New York	Sept. 18, 1841

* Patented in England March 14, 1844. † Reissued Oct. 6, 1835. ‡ Antedated May 12, 1840.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Felt cloths and hat bodies, shrinking	Henry A. Wells	New York	Sept. 11, 1841
Felt cloths, planking	Henry A. Wells	New York	Sept. 18, 1841
Felt cloths, without spinning and weaving, machinery for	Thomas R. Williamson	Citizen U. States, now in London, Engla'd	Dec. 14, 1840
Figures to be stamped or painted on fabrics, design for*	Sparkman and Kelsey	New York, N. Y.	July 25, 1846
Flannels, wetting	Joseph W. Hale	Haverhill, Mass.	April 2, 1841
Flax, breaking	John Cannon	Delaware	Jan. 17, 1801
Flax, breaking	Samuel Davison	Romulus, N. Y.	May 17, 1822
Flax, breaking	Pierson Reading	Trenton, N. J.	Jan. 3, 1825
Flax, breaking and dressing	Samuel Mulliken	Philadelphia, Pa.	Mar. 11, 1791
Flax, breaking and dressing, and thrashing, and grinding	Joseph Briggs	Schoharie, N. Y.	Oct. 5, 1825
Flax dresser	Francis Burdick	Kortwright, N. Y.	Feb. 28, 1825
Flax dresser	William Wheeler	Warren, N. Y.	Mar. 26, 1825
Flax dressing	Elisha Mark		Mar. 21, 1806
Flax dressing	Jonathan Barlow	Granville, Mass.	Aug. 23, 1809
Flax dressing	Oliver Wilde	Canaan, N. Y.	April 16, 1810
Flax dressing	John Hawes	Hudson, N. Y.	June 19, 1812
Flax dressing	Joseph Hines and William Bain	New York	Aug. 12, 1826
Flax dressing	Henry Schoonhoven	Pultney, N. Y.	Dec. 11, 1827
Flax and hemp, bleaching.—*See Class 4.*			
Flax and hemp, breaking	Ferdinando Stith	Franklin, Tenn.	April 22, 1835
Flax and hemp, breaking	John Warren	Westbrook, Maine	June 14, 1837
Flax and hemp, breaking	Harvey Lull	Ithaca, N. Y.	June 14, 1837
Flax and hemp, breaking	Andrew Forsyth	Columbia, Tenn.	Jan. 9, 1838
Flax and Hemp, breaking	Alvin Keyes	Crittenden, Ky.	April 4, 1838
Flax and hemp, breaking and cleaning	Arnold Zellnor	Pulaski, Tenn.	July 26, 1833
Flax and hemp, breaking and cleaning.	David M. Longley and Samuel Davis	Westbrook, Maine	Sept. 21, 1837
Flax and hemp, breaking and dressing	Lafayette Tibbitts	New Glasgow, Va.	Oct. 22, 1831
Flax and hemp, breaking and dressing	Ebenezer C. Chase	Jay, Maine	Jan. 6, 1832
Flax and hemp, breaking and dressing	Arnold Zellnor	Giles county, Tenn.	Oct. 25, 1832
Flax and hemp, breaking and dressing.	Chapman Warner, A. T. Mixell, and Edwin J. Horn	Belvidere, N. J.	July 31, 1837
Flax and hemp, breaking, and shelling corn	Reynolds Gillman	New York	Nov. 5, 1824
Flax and hemp, breaking and thrashing	Noah G. Hayden	Harrodsburg, Ky.	April 12, 1833
Flax and hemp, cleaning and breaking	Robert Miller	Glasgow, Ky.	May 23, 1834
Flax and hemp, cleaning machine	Hezekiah Hawley	Louisville, Ky.	June 29, 1833
Flax and hemp, combing	Jos. and James Westerman	New York	Aug. 14, 1833
Flax and hemp, dresser	E. H. Nichols and Thaddeus Fairbanks	St. Johnsburg, Vt.	Oct. 1, 1830
Flax and hemp, dressing	Platt Wakelee	Augusta, N. Y.	April 16, 1824
Flax and hemp, dressing	Abel Smith and James Olney	Westmoreland, N. Y.	July 10, 1830
Flax and hemp, dressing	Hezekiah Hawley	Louisville, Ky.	June 4, 1833
Flax and hemp, dressing	Wm. and R. Brittain	Armwell, N. J.	Oct. 12, 1837
Flax and hemp, dressing, wheel for	C. and W. A. Benton	Armenia, N. Y.	May 22, 1816
Flax and hemp, &c., hatcheling	Daniel Treadwell	Boston, Mass.	Aug. 18, 1834
Flax and hemp, &c., hatcheling	Foster Demasters	Shelbyville, Ky	Nov. 20, 1838
Flax and hemp, and manilla grass, combing	S. Couillard, jr.	Boston, Mass.	Oct. 19, 1836
Flax and hemp machine	Samuel Mulliken	Philadelphia, Pa.	Jan. 15, 1795

* Antedated Mar. 23, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Flax and hemp machine	Benjamin Tyler	New Hampshire	Feb. 26, 1799
Flax and hemp machine	Hez. Betts	Connecticut	May 3, 1802
Flax and hemp machine	Owen Roberts	Pennsylvania	April 12, 1804
Flax and hemp machine	Richard Button	Cazenovia, N. Y.	Feb. 11, 1807
Flax and hemp machine	Thomas Cahoon	Cazenovia, N. Y.	April 13, 1808
Flax and hemp machine	Richard S. Chappell	Pawlet, N. Y.	Jan. 18, 1809
Flax and hemp machine	Eli F. Hill	Fabius, N. Y.	Feb. 11, 1809
Flax and hemp machine	Nathaniel P. Robinson	Fleming county, Ky.	Aug. 31, 1810
Flax and hemp machine	Edward Rumsey	Christian co., Ky.	April 26, 1811
Flax and hemp machine	John C. Johnson	Fayette county, Ky.	May 16, 1811
Flax and hemp machine	Robert Miller	Lexington, Ky.	July 13, 1811
Flax and hemp machine	J. A. Dana	Cazenovia, N. Y.	July 23, 1811
Flax and hemp machine	William Harper	Richmond, Va.	Oct. 15, 1811
Flax and hemp machine	Archibald Tanner	Trumbull co., Ohio.	Oct. 24, 1811
Flax and hemp machine	Ira Millard	Kent, Conn.	May 6, 1813
Flax and hemp machine	William Van Duzer	Warwick, N. Y.	June 30, 1818
Flax and hemp machine	Francis Hall	Tennessee	Oct. 7, 1813
Flax and hemp machine	G. H. Ricketts and John Kinney, jr.	Mount Pleasant, N. J.	July 12, 1814
Flax and hemp machine	G. H. Ricketts and John Kinney, jr.	Morristown, N. J.	Oct. 24, 1814
Flax and hemp machine	Thomas Pullen	Lexington, Ky.	June 20, 1816
Flax and hemp machine	David Melville	Newport, R. I.	Nov. 18, 1818
Flax and hemp machine	Henry Burden	Albany, N. Y.	June 15, 1822
Flax and hemp machine	William Cumberland	New York	July 9, 1822
Flax and hemp machine	James McDonald	New York	Aug. 31, 1822
Flax and hemp machine	Naman Goodsell	Paris, N. Y.	Sept. 19, 1822
Flax and hemp machine	James McDonald	New York	Jan. 18, 1823
Flax and hemp machine	Joseph Hines and William Bain	Columbus, Ohio	Feb. 3, 1823
Flax and hemp machine	Frederick Cox	Somerville, N. J.	Dec. 4, 1823
Flax and hemp machine	Benjamin Lewis	Ligonia, Maine	Jan. 28, 1824
Flax and hemp machine	Erastus Kellogg	Palmyra, N. Y.	May 11, 1824
Flax and hemp machine	William C. Davison	Pittsford, N. Y.	June 22, 1824
Flax and hemp machine	Franklin Kellsey	Middletown, Conn.	Nov. 26, 1824
Flax and hemp machine	T. S. and A. Barnum	New York	Nov. 27, 1824
Flax and hemp machine	John C. Wenzell	Louisville, Ky.	Jan. 17, 1828
Flax and hemp machine	Evans Christian	Philadelphia, Pa.	Feb. 8, 1828
Flax and hemp machine	Amos Salisbury	Troy, N. Y.	April 15, 1829
Flax and hemp machine	Amos Salisbury and J. C. Longdon	Troy, N. Y.	April 18, 1829
Flax and hemp machine	J. Y. Watson, J. Blossom, and A. Burnett	Salem, N. Y.	April 21, 1829
Flax and hemp machine	Thomas Cahoon	Troy, N. Y.	April 25, 1829
Flax and hemp machine	Reuben Medley	Bloomfield, Ky.	June 11, 1829
Flax and hemp machine	H. L. Barnum and M. Stephenson	Cambridge, N. Y.	July 8, 1829
Flax and hemp machine	Amos Salisbury and J. C. Langdon	Troy, N. Y.	July 29, 1829
Flax and hemp machine	Lafayette Tibbitts	New Glasgow, Va.	Aug. 1, 1829
Flax and hemp machine	J. L. F. Roumage	New York	Aug. 6, 1829
Flax and hemp machine	William K. Scott	Sandy Hill, N. Y.	Feb. 11, 1830
Flax and hemp machine	John Rich, jr.	Troy, N. Y.	May 20, 1830
Flax and hemp machine	Daniel Ball	Sandy Hill, N. Y.	July 7, 1830
Flax and hemp machine	Robert McCormick	Rockbridge co., Va.	Oct. 1, 1830
Flax and hemp machine	Joel Dewey, jr.	Troy, N. Y.	Nov. 25, 1830
Flax and hemp, preparing	Wm. Pickingbottom	New York	July 12, 1816
Flax and hemp, preparing	John Goulding	Boston, Mass.	Aug. 17, 1835
Flax and hemp, preparing for spinning	John Owings	Baltimore, Md	Mar. 5, 1812
Flax and hemp, preparing for spinning	Pinder Antrim	Philadelphia, Pa.	Nov. 25, 1814
Flax and hemp, rotting by steam	Achilles Chinn	Harrison county, Ky	Dec. 28, 1825
Flax and hemp, and tow hatcheling	John Goulding	Boston, Mass.	Oct. 10, 1835

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Flax and hemp, unrotted, machine for	William Cumberland	New York	Nov. 29, 1822
Flax machine	J. Halladay, T. Eldridge, C. Gibbs, and J. D. Smith	Hartford, N. Y.	Mar. 4, 1830
Flax and hemp, breaking	John P. Fry	Pulaski, Tenn.	Dec. 21, 1842
Flax and hemp, breaking and cleaning	William McMillen	Ripley, Ohio	Sept. 3, 1842
Flax and hemp, cleaning and dressing	J. C., G. W., and C. E. Geissendorff	Cincinnati, Ohio	Nov. 28, 1842
Flax and hemp, cleaning and hackling	Charles Learned	St. Louis, Mo.	Oct. 22, 1842
Flax and hemp, breaking	F. M. Barnes	Lexington, Mo	Jan. 10, 1843
Flax and hemp, breaking and cleaning	John Godden	Pittsburg, Iowa Ter.	Jan. 20, 1843
Flax and hemp, breaking and cleaning	William N. Stewart	May's Lick, Ky.	Feb. 4, 1843
Flax and hemp, breaking and scutchling	Henry Johnson	Maysville, Ky.	Mar. 4, 1843
Flax and hemp, preparing, preparatory to the various processes of cleaning and separating the fibres	Sands Olcott	New Hope, Pa.	Mar. 31, 1840
Flax and hemp, reducing the fibres of	Sanda Olcott	Philadelphia, Pa.	April 11, 1840
Flax, swingling	Samuel Achey	Heidelberg t'nsp, Pa.	Feb. 18, 1828
Flier and bobbing for twisting silk	Oliver Ellsworth	Hartford, Ct.	July 12, 1839
Flier for twisting silk	Edward L. Young	Norfolk, Va.	Oct. 8, 1840
Flocks, machine for cutting	Asa Barber	Stephentown, N. Y.	Nov. 18, 1846
Fulling cloth	M. W. Northrop and R. R. Dillon	Newton, N. J.	Dec. 4, 1823
Fulling cloth, by steam	Ross Winans	Warwick, N. Y.	June 26, 1821
Fulling mill	Asa Danielson	Otsego, N. Y.	May 16, 1815
Fulling mill	Martin Lee	Otsego, N. Y.	Nov. 6, 1817
Fulling mill, double crank	Levi Osborne	Fairfield, Ct.	July 12, 1804
Fulling mill, and power loom	Anson Atwood	Salem, N. Y.	Oct. 1, 1830
Fulling mill, stocks, propelling	Elisha O. Norris	Monmouth, Me.	July 7, 1835
Fulling mill, and washing	John Kennion	Dutchess co., N. Y.	Mar. 26, 1806
Fulling and scouring cloth	Horace Hickox	Rutland, N. Y.	Mar. 26, 1825
Fulling and scouring, and making carpeting	Harvey Slayton	Lockport, N. Y.	Nov. 25, 1829
Fulling mill	Sidney E. Coleman	West Haven, Vt	June 11, 1841
Furs, process of blowing & cleaning	John W. Cochran	New York, N. Y.	Nov. 4, 1842
Fur, blower	William R. Rotch	New Bedford, Mass.	Mar. 9, 1824
Fur, blower	Shepherd Whitman	New Albany, Ia.	Mar. 22, 1834
Fur, cleaning	William Woodworth	New York	April 19, 1831
Fur, cutting	Martin Clark	New York	April 21, 1810
Fur, cutting	Eleazer Sprague	Danbury, Ct.	May 9, 1810
Fur, cutting	David Beard	Guilford, N. C.	April 30, 1816
Fur, cutting	Jer. Hubbard	Jamestown, N. C.	Nov. 4, 1826
Fur, cutting	Michael Petre	Womelsdorf, Pa.	Dec. 20, 1827
Fur, cutting	Charles C. K. Beach	Portland, Me.	Nov. 10, 1827
Fur, cutting, and cloth shearing	Benjamin Marshall & D. Johnson	Concord, N. H.	Dec. 7, 1816
Fur, cutting machine, reciprocat'g	Curtis M. Lampson	New York	Feb. 5, 1835
Fur, cutting from pelt	Denison Williams	New York	Oct. 25, 1832
Fur, cutting from peltry	Joshua Witherle	Boston, Mass.	May 28, 1811
Fur, cutting from peltry	Ephraim Cutter	Walpole, N. H.	Feb. 4, 1813
Fur, cutting from peltry	William Jackson	Burlington, N. J.	Feb. 2, 1815
Fur, cutting from skins	Ira Ives	Bristol, Ct.	May 19, 1812
Fur, cutting from skins	Samuel Johnson	Walnut Lane, N. C.	Feb. 24, 1837
Fur, extracting hair from	Sam'l G. Ladd, ass'ee of Seth Graham	Farmington, Me.	Mar. 27, 1835

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Fur, extracting from skins, and manufacturing it in yarn.	Levi Ward, ass'ee of Phebe Atwell	Walworth, N. Y.	April 30, 1834
Fur, pulling from peltry	William Jackson	Burlington, N. J.	Feb. 2, 1815
Fur, separating from hair	C. Lockwood, R. Lockwood, & J. Arnold	Fairfield, Ct.	Dec. 4, 1832
Fur, substitute for dressed fur skins	Allen Belden	Hudson, N. Y.	April 22, 1835
Gin, cotton	Eli Whitney	Massachusetts	Mar. 14, 1794
Gin, cotton	Hodgen Holmes	Georgia	May 12, 1796
Gin, cotton	Robert Watkins	Georgia	Dec. 23, 1796
Gin, cotton	John Murray	Georgia	Dec. 23, 1796
Gin, cotton	Eben Whiting	Massachusetts	Jan. 22, 1801
Gin, cotton	Wm. Bell & Sam'l D. Montmollen	Georgia	April 7, 1802
Gin, cotton	Wm. Bell and J. S. D. Montmollen	Georgia	Mar. 7, 1803
Gin, cotton	William Bell	Pennsylvania	Nov. 24, 1803
Gin, cotton	John McBride	Nashville, Tenn.	Aug. 8, 1805
Gin, cotton	Obed Crawford		June 22, 1807
Gin, cotton	Robert Hancock, sen., & Edward W. Carr	Philadelphia, Pa.	Feb. 6, 1811
Gin, cotton	Isaiah Jennings	New York	Dec. 27, 1815
Gin, cotton	Engelhart Cruse	Charleston, S. C.	Nov. 18, 1816
Gin, cotton	Isaiah Jennings	New York	Jan. 17, 1817
Gin, cotton	Samuel Pennoyer	Cross Rivers, N. Y.	July 24, 1822
Gin, cotton	Eleazer Carver, jun.	Bridgewater, Mass.	June 13, 1823
Gin, cotton	J. and T. Leavitt	Comfort Lane, Suffield, Ct.	Mar. 24, 1825
Gin, cotton	Isaac B. Barnes	Beaufort, S. C.	Nov. 6, 1826
Gin, cotton	David Phillips	Jefferson co., Miss.	April 3, 1829
Gin, cotton	S. T. Conn	New York	June 11, 1829
Gin, cotton	Samuel Sawyer	Boston, Mass.	Mar. 30, 1833
Gin, cotton	James Lynch	Tuscaloosa, Ala.	July 22, 1833
Gin, cotton	Jacob Perkins	Bridgewater, Mass.	June 14, 1834
Gin, cotton	W. & J. McCreight	Winsborough, S. C.	Feb. 5, 1836
Gin, cotton	Henry Clark	New London, Ct.	Feb. 25, 1836
Gin, cotton	Pierson Reading	Trenton, N. J.	April 13, 1836
Gin, cotton	James McCreight	Winsborough, S. C.	July 2, 1836
Gin, cotton	Alexander Jones	New Orleans, La.	April 25, 1837
Gin, cotton	Goodell, Brown, Tracy & Moseley, ass'nees of J. Stevens	Poughkeepsie, N. Y.	Nov. 25, 1837
Gin, cotton	Lucilius H. Mosely	Poughkeepsie, N. Y.	Nov. 25, 1837
Gin, cotton	Wm. Whittemore, jr.	W. Cambridge, Mass	May 25, 1839
Gin, cotton	Henry Conklin	Poughkeepsie, N. J.	June 7, 1839
Gin, cotton	John Beath	Boston, Mass.	July 12, 1839
Gin, cotton	Fones McCarthy	Demopolis, Ia.	July 3, 1840
Gin, cotton	Lewis G. Sturdevant	Delaware, Ohio	July 23, 1841
Gin, cotton	William P. Baker	Boston, Mass.	Nov. 20, 1838
Gin, cotton, boxing for	William S. Cooley	Norwich, Ct.	Jan. 7, 1835
Gin, cotton, constructing & affixing the ribs or grates of saw-gins*	Asa Copeland, jr.	Bridgewater, Mass.	April 8, 1840
Gin, cotton, feeder	Joseph Ewbank, jr.	Glasgow, Ky	July 29, 1828
Gin, cotton, foot	William Gould	McIntosh co., Ga.	Feb. 28, 1821
Gin, cotton, frame	Eben. A. Lester	Boston, Mass.	Jan. 8, 1831
Gin, cotton, grates of saw-gin	Albert Washburn	Bridgewater, Mass.	June 16, 1841
Gin, cotton, grates	Edwin Keith	Bridgewater, Mass.	Mar. 4, 1836
Gin, cotton, hopper	G. F. Saltonstall	Fayetteville, N. C.	Dec. 31, 1817
Gin, cotton, improvement in	Peter Von Schmidt	Washington, D. C.	Oct. 17, 1846
Gin, cotton, improvement in	Edwin Keith	Bridgefield, Mass.	Dec. 22, 1846
Gin, cotton, in the roller	Rich'd Reynolds, jr.	Beaufort, S. C.	Feb. 2, 1844
Gin, cotton, propelling	Peter Knox	Augusta, Ga.	Dec. 7, 1826
Gin, cotton, railroad	David Phillips	Georgetown, Pa.	May 22, 1841
Gin, cotton, roller	Wm. Whittimore and Wm. Whittimore, jr	West Cambridge	Mar. 21, 1833

* Reissued Feb. 12, 1842.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Gin, cotton, roller	Samuel Sawyer	Boston, Mass.	Mar. 30, 1833
Gin, cotton, roller	Wm. Whittimore, jr.	W. Cambridge, Mass	Mar. 7, 1834
Gin, cotton, roller	Wm. Whittimore, jr.	W. Cambridge, Mass	May 29, 1835
Gin, cotton, roller	Eleazer Carver	Bridgewater, Mass.	Sept. 27, 1838
Gin, cotton, roller	Theodore Ely	New York	Dec. 11, 1845
Gin, cotton, roller, ginning long staple cotton	Eleazer Carver	Bridgewater, Mass.	Jan. 17, 1842
Gin, cotton, saw cylinder for	Jacob Idler	Philadelphia, Pa.	Dec. 1, 1837
Gin, cotton, saw cylinder for	Alexander Jones	New York, N. Y.	July 20, 1842
Gin, cotton, saw-gin for ginning cotton	C. A. McPhetridge	Natchez, Miss.	April 24, 1841
Gin, cotton, saw for ginning cotton	Theodore J. James	Princeton, Mass.	May 7, 1842
Gin, saw, ginning cotton	Hilery H. Kelley	Port Gibson, Miss.	May 19, 1843
Gin, saw, ginning cotton	William B. Stewart	Cincinnati, Ohio	May 19, 1843
Gin, cotton, saw-gin for ginning cotton	Eleazer Carver	Bridgewater, Mass.	April 4, 1844
Gin, cotton, saw-gin for ginning cotton	John H. Sherard	Livingston, Ala	April 30, 1844
Gin, cotton, saw	G. F. Saltonstall	North Carolina	Jan. 4, 1803
Gin, cotton, saw	Phineas Gardner	Woodville, Mass.	April 22, 1830
Gin, cotton, saw	Eleazer Carver	Bridgewater, Mass.	Jan. 4, 1845
Gin, cotton, saw and grates for	Eleazer Carver, jr.	Bridgewater, Mass.	June 12, 1823
Gin, cotton, saw ribs for*	Eleazer Carver	Bridgewater, Mass.	June 12, 1838
Gin, cotton and wool	Stephen R. Parkhurst	New York	May 1, 1845
Hair cloth	William Shotwell and Arthur Kinder	New York	July 23, 1813
Hair, curled, carding, and picking	Francis Harding	Cleaveland, Ohio	Aug. 25, 1845
Hair, extracting from fur, &c.	Ephraim Cutter	Brattleborough, Vt.	Mar. 1, 1809
Hair, extracting from fur, &c.	Ephraim Cutter	Walpole, N. H.	Feb. 12, 1810
Hair, extracting from fur, &c.	John Hollingshead and Daniel Baker	Trenton, N. J.	Aug. 19, 1813
Hair, extracting from skins	Nahum Swett	Redfield, Maine	Nov. 14, 1835
Hair, hatcheling	William Chubb	New York	July 9, 1829
Hair, picking, curled	John Thompson, 3d	Essex county, Mass.	July 8, 1834
Hair, picking, &c., for mattresses	Asahel Green and J. S. Osgood	Hamilton, N. Y.	Dec. 18, 1832
Hair, pulling from skins	Nicholas Young	Pennsylvania	June 28, 1803
* Hair, seating, weaving	Charles R. Harvey	Poughkeepsie, N. Y.	Nov. 25, 1837
Hair, separating from fur	John McDonald	New York	Sept. 11, 1827
Hair, separating from skins	Samuel Brooks	New York	April 4, 1822
Hair, shaving from deer skins	Rodolph Groning	New Orleans, La.	Oct. 10, 1831
Hatcheling machine	James Patterson	Southampton, N. Y.	Dec. 7, 1805
Hat blocks	A. and S. Chichester	Wilton, Conn.	May 29, 1835
Hat, blocking	David Beard	Guilford, N. C.	May 28, 1816
Hat, blocking	W. W. Jemeson	Wheeling, Ohio	Mar. 30, 1836
Hat, bodies	H. F. West and A. F. Stevens	Richland, N. Y.	Oct. 29, 1828
Hat, bodies	Benjamin Lapham and E. Cady	Canaan, N. Y.	April 15, 1829
Hat, bodies	A. Clarke & H. Chase	Falmouth, Mass.	June 11, 1829
Hat, bodies	Levi Van Hoesen	Norwalk, Conn.	June 19, 1829
Hat, bodies	William Nuns	New York	Aug. 14, 1834
Hat, bodies	Hugh Moore	New York city	April 20, 1837
Hat, bodies	Henry A. Wells, J. James, & R. W. Peck	Brooklyn, N. Y.	Sept. 20, 1837
Hat-bodies, fabrics for	Isaac L. Chapman	New York	May 1, 1845
Hat-bodies, mode of forming	Marmaduke Osborne	New York	Nov. 11, 1845
Hats, bodies, bats	Stephen Hurlbut	Glastonbury, Conn.	Feb. 14, 1831
Hats, bodies, batting or web for	Thomas Blanchard	New York city	June 14, 1837
Hats, bodies, batting or web for	Henry A. Wells, Jas. James, and Robert W Peck	Brooklyn, N. Y.	Sept. 22, 1837
Hats, bodies, forming	Orlando Root	Montgom'ry co. N. Y	Dec. 19, 1829
Hats, bodies, forming	A. H. Stevens	Richland, N. Y.	Jan. 27, 1830

* Reissued Nov. 16, 1839.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Hats, bodies, forming	Seth Graham	Fayette, Maine	May 15, 1832
Hats, bodies, machinery	Daniel Tenny	Plattsburg, N. Y.	Oct. 1, 1830
Hats, bodies, setting up	Joseph Grant	Providence, R. I.	April 28, 1825
Hats, bodies, stiffening	Henry Blynn	Newark, N. J.	May 9, 1835
Hats, bodies, stiffening	J. P. Kettell and J. Wright	Worcester co. Mass.	June 11, 1836
Hats, bodies, stiffening	E. P. Spear	Lexington, Mass.	July 2, 1836
Hats, bodies, winding and setting up	Joseph Grant	Providence, R. I.	April 10, 1827
Hats, bonnets, &c.	Elisha Pratt	Cambridge, Mass.	May 16, 1835
Hats, bonnets, &c., bark for	Sylvester G. Whipple	Hallowell, Mass.	April 17, 1807
Hats, bonnets, cutting chips for	Amos D. Allen and A. Kelsey	Windham, Conn.	Sept. 5, 1804
Hats, bonnets, of grass	Garden Wells& Sophia Wells	Wethersfield, Conn.	Dec. 29, 1821
Hats, bonnets, &c., ironing and pressing	Richard Murdock	Baltimore, Md	June 17, 1840
Hats, bonnets, &c., straw, pressing and finishing	William Chaplin	New York	Sept. 10, 1840
Hats and bonnets	Jonathan Dennis	Portsmouth, R. I.	May 2, 1843
Hats and bonnets of horse hair	Charles L. Noe	New York	July 20, 1843
Hats and bonnets, machine for pressing	Caleb Merritt	Baltimore, Md	Mar. 13, 1844
Hats, bowing, gearing cones	Truman F. Mayhew	Boston, Mass.	Aug. 22,1827
Hats, bowing wool for	H. S. Holladay and E. G. Griffin	Lyme, Conn.	June 6, 1812
Hats, bowing wool, &c.	Edward C. Griffin	Lyme, Conn.	Aug. 10, 1815
Hats, bowspring for	Daniel Nichols	New Milford, Conn.	March 1, 1809
Hats, buoyant, used as life-preservers	Samuel White White	England	Oct. 14, 1840
Hats, carding	Josiah C. Seely	Dutchess co., N. Y.	Mar. 15, 1827
Hats, carding	Isaac Sanford	Brockley, Pa.	Oct. 10, 1828
Hats, cassimere	Oliver Brooks and Jas. A. Sloan	Philadelphia, Pa.	Nov. 9, 1842
Hats, cemented	Nathan Weston	Reading, Mass.	May 24, 1816
Hats, chip	Amos D. Allen	Windham, Conn.	May 10, 1804
Hats, coloring	George M. Johnson	Port Deposite, Md.	Dec. 31, 1839
Hats, coloring	Joel Taylor	Danbury, Conn.	Nov. 20, 1823
Hats, coloring and cooling	Richard Pike	Wilton, Conn.	Jan. 23, 1834
Hats and furs, coloring	Harmon Hibbard	Attica, N. Y.	May 25, 1838
Hats.—*See Composition, Class* 4.			
Hats, dying.—*See Dying, Class* 4.			
Hats, elastic, ventilating	Daniel Greenleaf	Vicksburg, Miss.	Nov. 26, 1836
Hats, equalizing and polishing nap of.	John Lowdon & Thos. Shaw	New York	May 7, 1845
Hats, felting and napping	Thomas J. Cornell	Randolph, Vt.	Feb. 11, 1831
Hats, finishing	J. Cooper & P. Barnett	Philadelphia, Pa.	May 31, 1826
Hats, &c., leghorn, finishing	Joseph Snyder	Philadelphia, Pa.	Aug. 21, 1834
Hats, forming, wool and rorum	John Warely	Albany, N. Y.	Oct. 14, 1813
Hats, frame for	Richard Gookins	New Hampshire	Jan. 24, 1806
Hats, fur, preparing	George Cleveland	Hartford, Ct.	Sept. 9, 1803
Hats, fur, preparing	Arnold Buffum	Troy, N. Y.	Sept. 28, 1825
Hats, hardening them on a cone	Stephen Hurlbut	Glastonbury, Ct.	June 13, 1831
Hats of leather.—*See Class* 16.			
Hats, manufacture of	John N. Genin	New York	July 22, 1845
Hats, manufacture of	John Maguire	Washington, D. C.	Dec. 7, 1844
Hats, manufacture	Ezra Corning, jr.	Connecticut	July 13, 1803
Hats, manufacture	William Goodrich	Philadelphia, Pa.	Aug. 20, 1816
Hats, manufacture	Henry Lainhart, jr.	Baltimore, Md.	June 6, 1809
Hats, manufacture	Jedediah Carleton	Salem, N. H.	Jan. 21, 1814
Hats, manufacture	Jehiel Bryant and John Bryant	Saratoga, N. Y.	Aug. 26, 1815
Hats, manufacture	Silas Mason	Norfolk, Mass.	Feb. 20, 1819
Hats, manufacture	George Thatcher	Brooklyn, N. Y.	May 31, 1828

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Hats, manufacture	Joel Taylor and Chas. Brown	Danbury, Conn.	Jan. 13, 1832
Hats, military	Shubael Hoskin	Catskill, N. Y.	April 30, 1810
Hats, military	Samuel Tiballs, jr.	Tyringham, Mass.	Dec. 26, 1810
Hats, napping	James Long	Maryland	Aug. 5, 1799
Hats, napping	Jos. Dart, jr., William Wells & Dan'l Olmstead	Buffalo, N. Y.	May 12, 1832
Hats, napping	L. Lyon, 2d	Needham, Mass.	May 16, 1834
Hats, napping	L. Lyon, 2d	Needham, Mass.	April 13, 1836
Hats, napping, application of hot water.	Hiram Wortham and Garrard S. Pelly	Lancaster, Ky.	July 9, 1832
Hats, napping	Andrew Rankin	Newark, N. J.	Sept. 20, 1839
Hats, napping, with rabbit's fur	David Evans	Alexandria, D. C.	Oct. 2, 1820
Hats, palm leaf	Frederick Groening	Brooklyn, N. Y.	June 25, 1836
Hats, palm leaf, pressing	Chester Gorham	Barre, Mass	Mar. 3, 1840
Hats, paper	Jos. Ford&John White	Boston, Mass.	Nov. 25, 1811
Hats, plank kettle for	Schuyler Fisher	Herkimer, N. Y.	July 15, 1816
Hats, plank kettle for	Ezra Joyce	Brooklyn, N. Y.	June 6, 1825
Hats, planking	Jo. Pitkin and Timothy Kimball	Hartford, Conn.	Oct. 19, 1807
Hats, planking	John Gregg	Greene co., Pa.	Mar 14, 1810
Hats, planking	L. L. Macomber	Bath, Maine	Dec. 31, 1825
Hats, planking	Robert Bacon	Boston, Mass.	Jan. 31, 1827
Hats, planking	George Page & Edwin Page	Manchester, Conn.	Nov. 9, 1832
Hats, planking and felting	Israel Swaim	Haverhill, N. H.	Mar. 7, 1811
Hats, pressing leghorn, &c.	R. Tyler & B. P. Coston	Philadelphia, Pa.	May 23, 1826
Hats, rounder and guage	Samuel Jones	Bridgeport, Pa.	June 2, 1819
Hats, scalding and napping	Daniel Baldwin	Ithaca, N. Y.	Oct. 15, 1829
Hats, scalding and napping	Alonson P. Gregnry	Ithaca, N. Y.	May 13, 1830
Hats, setting up	Joseph Grant	Providence, R. I.	Aug. 11, 1821
Hats, setting or ironing the brims of*	Francis Degen	New York, N. Y.	Aug. 31, 1842
Hats, sizing and napping	George Henning	Ithaca, N. Y.	April 28, 1830
Hats, by steam	William Harkins	Wheeling, Va.	Dec. 29, 1826
Hats, by steam	David Sutton	Lancaster, Ky.	June 13, 1831
Hats, by steam, and hardening	Jonathan Sizer	New London, Ct.	Nov. 6, 1811
Hats, by steam, and hardening	Nirum Wildman	Danbury, Conn.	April 2, 1824
Hats, stiffening	A. and G. V. Raymond	Baltimore, Md.	Feb. 7, 1818
Hats, stiffening	Jonathan D. Wilson	New York	Aug. 6, 1829
Hats, stiffening, lathe for	Henry Raymond	Baltimore, Md.	Nov. 20, 1820
Hats, washing	Samuel Drinkhouse	Easton Borough, Pa.	Jan. 30, 1832
Hats, washing and cleaning	William Carlock	Baltimore, Md.	Mar. 12, 1830
Hats, water proof	Richard Mills	Baltimore, Md.	Feb. 27, 1832
Hats, water proof, elastic	A. Buffum & J. Kelly	Westfield, R. I.	Feb. 17, 1820
Hats, water proof, of paper	Benjamin Grut	New York	Oct. 1, 1830
Hats, water proof, stiffening	William Buckles	Baltimore, Md.	Nov. 28, 1817
Hats, water proof, stiffening	Johan H. Tilge	Washington, D. C.	Sep. 23, 1819
Hats, water proof, stiffening	Stephen Hempstead, jr	St. Charles co., Mo.	May 25, 1827
Hats, water proof, stiffening	Stephen Hempstead, jr	St. Charles co., Mo.	Oct. 26, 1827
Hats, water proof, stiffening	George W. Downs	Circleville, Ohio	Oct. 25, 1832
Hats, water proof, silk	George B. Dexter	Boston, Mass.	Jan. 6, 1836
Hats, weaving grass	Lucy Burnap	Merrimack, N. H.	Feb. 16, 1823
Hats, without bowing	Roswell Pitkin	East Hartford, Ct.	April 23, 1808
Hatters' fur machine	Nicholas Young	Pennsylvania	May 14, 1802
Hatters' furnace for heating irons	G. V. Raymond	Richmond, Va.	Sept. 29, 1825
Hatters' furnace for heating irons	Daniel L. Tuthill	New York	Nov. 8, 1831
Hatters' grates, steam boiler applied	H. V. Raymond	New York	Sept. 16, 1824
Hatters' kettles, constructing	William Porter and Abram. Sauger	Waltham, Mass.	July 8, 1834
Hemp, break	J. S. Van de Graaff	Scott, Ky.	May 12, 1828
Hemp, break	William Mason	Washington co., O.	Dec. 28, 1829
Hemp, breaking	William Greathouse	Mason co., Ky.	July 30, 1831

* Reissued Dec. 31, 1845.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Hemp, breaking	William Stone, jr.	Williamson co., Ten.	Sept. 8, 1831
Hemp, breaking	John Pursell	Perryville, Ky	Mar. 18, 1836
Hemp, breaker	P. G. Gardiner	New York	Feb. 28, 1845
Hemp, break	Coleman C. Estes	Maury co., Tenn	July 14, 1845
Hemp, break	Thos. L. Fortune	Liberty, Mo.	Sept. 3, 1846
Hemp, breaking and cleaning	Geo. T. Tate and W. English	Frankfort, Mo	July 11, 1842
Hemp, breaker and cleaner	Constant B. Butler	Petersburg, Tenn	Jan. 6, 1844
Hemp, breaking and cleaning	Geo. W. Billings and John Harrison	Glasgow, Mo.	June 7, 1845
Hemp, breaking and scotching	S. H. Sample	Fayette, Mo.	Aug. 18, 1846
Hemp and flax breaking and dressing	Benjamin M. Smith	Massillon, Ohio	Oct. 7, 1845
Hemp and flax dressing	Wm. Y. Singleton	Springfield, Ill.	May 7, 1845
Hemp and flax break	Aaron F. Bruce	Marshall P. O., Mo.	June 24, 1844
Hemp, hatcheling	Phineas G. Rice and Gabriel Rice	Danville, Ky.	July 11, 1837
Hemp, &c., heckling and spinning	Wm. Montgomery	Boston, Mass.	Feb. 20, 1844
Hemp, &c., machine	Richard Deering, sen.	Louisville, Ky.	June 10, 1845
Hemp and manilla, dressing	Chandler E. Potter	Portsmouth, N. H.	Dec. 23, 1834
Hemp, machine*	Geo. W. Billings and John Harrison	Glasgow, Mo.	May 1, 1845
Hemp, machine for dressing	Langdon & Salisbury	Troy, N. Y.	April 25, 1846
Hemp, preparation	Abraham K. Smedes	Lexington, Ky.	Oct. 11, 1828
Hemp, &c., preparing & spinning†	Moses Day	Roxbury, Mass.	April 30, 1840
Hemp, spinning	John McCully	Salem, Mass.	July 14, 1846
Hemp, tarring slivers or bands of machinery for, & making oakum	Wm. Montgomery	Boston, Mass.	Aug. 28, 1840
Jacquard frames, improvement in	John Perrins	Philadelphia, Pa.	May 28, 1846
Knitting machine	John McMullen and J. Hollen, jr.	Sinking Valley & Logan's Valley, Pa.	Feb. 11, 1837
Knitting stockings	A. Porter, J. Mead, & James Stedwell	Queensbury, N. Y.	July 31, 1815
Knitting stockings	John McMullen and J. Hollen, jr.	Huntington co., Pa.	Mar. 5, 1831
Knitting stockings	Arasmus French	Springfield, Mass.	Mar. 18, 1842
Knitting stockings	Henry Burt	Boston, Mass.	Sept. 23, 1843
* Knitting stockings, machine for	Benj. Hutchinson	Springfield, Mass.	Oct. 22, 1840
Linens, glazing and polishing	William Smith	New York	May 9, 1805
Linens, smoothing	Wm. P. Smith and J. Odell	Durham, N. H.	July 17, 1810
Loom	Amos Whittemore	Massachusetts	Nov. 17, 1796
Loom	David Grieve	Massachusetts	June 8, 1797
Loom	Walter Janes	Ashford, Ct.	Feb. 16, 1810
Loom	Walter Janes	Ashford, Ct.	Sept. 1, 1810
Loom	Philo. C. Curtis	Paris, N. Y.	Nov. 17, 1810
Loom	Nathan'l Miller and P W. Miller	Franklin, Mass.	Aug. 20, 1811
Loom	Nathaniel Perry	Boston, Mass.	Sept. 25, 1811
Loom	Richard C. Rodgers	Maine	Nov. 29, 1811
Loom	Richard Crosbie	Newark, N. J.	Jan. 6, 1812
Loom	Job Rood	Canterbury, Ct.	Jan. 23, 1812
Loom	Asa Campbell	Kingston, Pa.	Mar. 28, 1812
Loom	John Phelps	Manlius, N. Y.	Aug. 27, 1812
Loom	C. Cooper & G. Shalk	Lebanon, Pa.	Aug. 28, 1812
Loom	John Heavin	Montgomery co., Va.	Oct. 16, 1812
Loom	Shepard Briggs	Canaan, Ct.	May 27, 1813
Loom	Alfred Ware, jr.	Franklin, Mass.	June 18, 1813
Loom	Thos. R. Williams	Newport, R. I.	July 3, 1813
Loom	Elisha Robinson	Augusta, Mass.	July 24, 1813
Loom	Robert Sugden	Boston, Mass.	Dec. 2, 1813
Loom	John M. Guiramond	Baltimore, Md.	Jan. 7, 1814
Loom	John Heavin	Montgomery co., Va	Feb. 18, 1814
Loom	Daniel Briggs	Canaan, Ct.	Feb. 19, 1814

* Antedated Nov. 1, 1844. † Reissued March 12, 1844.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Loom	J. Coulter and S. Gano	Berkeley co., Va.	April 18, 1814
Loom	Jac. Spinkle	Wythe c. h., Va.	April 27, 1814
Loom	Thomas Siddall	Bristol, Pa.	July 9, 1814
Loom	William Wright	Brooklyn, N. H.	Oct. 12, 1814
Loom	Seth Craig	Philadelphia, Pa.	Oct. 18, 1814
Loom	Salmon Bronson	Kent, Ct.	Nov. 25, 1814
Loom	F. C. Lovel and P. T. Jackson	Boston, Mass.	Feb. 23, 1815
Loom	Joseph Jelleffs	Butternuts, N. Y.	May 24, 1815
Loom	C. Cooper & G. Shalk	Lebanon, Pa.	May 31, 1815
Loom	Ira Draper	Weston, Mass	Jan. 7, 1816
Loom	Robert Jackson	Attleboro', Pa.	July 23, 1816
Loom	Samuel Chapman	Otsego, N. Y.	Aug. 30, 1816
Loom	Benjamin Cummings	Townsend, Mass.	Oct. 3, 1817
Loom	Stephen Armstrong	Poughkeepsie, N. Y	April 7, 1818
Loom	David Grieve	Providence, R. I.	April 11, 1818
Loom	Edmund Warren	New York	Aug. 27, 1818
Loom	Lot Forrester	Ridgefield, Ct.	May 15, 1819
Loom	J. H. Pierson & J. H. Simmons	Hampstead, N. Y	Dec. 31, 1819
Loom	Edmund Warren	New York	Dec. 11, 1821
Loom	Edmund Warren	New York	May 1, 1822
Loom	C. Whiting, J. Goulding & W. James	Dedham, Mass.	June 25, 1824
Loom	Roswell Wilcox	Columbus, Ohio	Mar. 21, 1825
Loom	Joseph Scholfield	Stonington, Ct.	Sept. 9, 1825
Loom	Roswell Wilcox	Franklin co., Ohio	April 21, 1826
Loom	Cornelius Bergen	New York	June 14, 1826
Loom	Samuel Chidester	Windham, N. Y.	Sept. 2, 1826
Loom	Oliver C. Burr	Milbury, Mass.	July 17, 1835
Loom*	Christian W. Shonherr	Subject of the King of Saxony	May 8, 1837
Loom†	Enoch Burt	Manchester, Ct.	Aug. 8, 1837
Loom, beam for	Simeon Pettee	Foxborough, Mass	June 15, 1813
Loom‡	E. B. Bigelow	Boston, Mass.	Aug. 18, 1846
Loom, beam for	Goliah Williams	N. Providence, R. I.	Aug. 24, 1813
Loom, brushes for dressing warps	Samuel Taylor	Lowell, Mass.	May 28, 1842
Loom, cam, improvement in	Richard Garsed	Frankford, Pa.	July 20, 1846
Loom, carpet	Horace Baker	North Salem, N. Y.	April 14, 1826
Loom, carpet	Josiah R. Clark	S. Coventry, Ct.	May 7, 1830
Loom, carpet	John Haight	Harsimus, N. J.	May 17, 1834
Loom, carpet and rug	William Bacon	Philadelphia, Pa.	April 7, 1830
Loom, cassinet	James Hammond and John McClelland	Williamsport, Pa.	July 3, 1830
Loom, crank	Ephraim Cutter	Walpole, N. H.	Sept. 27, 1811
Loom, damask	Tompkins & Gilroy	N. Providence, R. I.	May 9, 1835
Loom, domestic	Benjamin Maltby	New York	April 13, 1822
Loom, domestic	Jer. Hubbard	Jamestown, N. C.	Nov. 6, 1826
Loom, domestic and factory	Walter Janes	Ashford, Ct.	Mar. 20, 1813
Loom, family	Charles Hathaway	Walton, N. Y.	Oct. 11, 1814
Loom, figure cloth	William Levalley	Canterbury, Ct.	Mar. 20, 1819
Loom, fish nets	J. Carr, J. Shannon, and Wm. Carr	Sunbury, Pa.	Sept. 14, 1844
Loom, hand and power	John Thorp	Providence, R. I.	Mar. 28, 1812
Loom, hand, for weaving fabrics‖	Wm. Townshend	Rochester, N. H.	April 10, 1845
Loom, hand, for weaving fringe	Eliza Ann B. Judkins	Portland, Me.	Feb. 2, 1839
Loom, harness for§	John Blackmar	Killingly, Ct.	Aug. 7, 1834
Loom, harness for	John Blackmar	Killingly, Ct.	Oct. 20, 1836
* Loom, heddle, metallic¶	Charles Strong	Hartford, Vt.	April 24, 1840
* Loom, heddle stuff, making weavers' eye harness.	John Thorpe & Wm. G. Angell	Providence, R. I.	Feb. 26, 1840
Looms, improvement in	W. Dutcher	Bennington, Vt.	June 27, 1846
Loom, (improvement on Rogers')	Richard C. Rodgers	Maine	June 23, 1812
Loom, ingrain carpet	William Sherwood	Somersworth, N. H.	Jan. 26, 1830

* Antedated March 21, 1837. † Antedated Feb. 10, 1837. ‡ Antedated Feb. 18, 1846.
‖ Antedated April 26, 1845. § Reissued Oct. 20, 1836. ¶ Antedated Jan. 21, 1840.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Loom, knitting	Richard Walker and Jefferson McIntire	Portsmouth, N. H.	Feb. 12, 1844
Loom, knitting*	Pierre E. Ladrange	Vignory, kingdom of France	Oct. 16, 1844
Loom, lint	Francis Hall	Charlestown, Mass.	Nov. 28, 1817
Loom, making and using	John Goulding	Dedham, Mass.	July 7, 1830
Loom, metallic, heddle for	W. Janes & D. Bolles.	Ashford, Ct.	April 26, 1815
Looms, mode of delivering warp in	John Coulter	Zenia, Ohio	April 25, 1843
Looms, operating shuttles of	R. P. Cunningham	Abington, Ct	Dec. 16, 1645
Loom, picker, tube	Benjamin Holbrook	Providence	Feb. 21, 1826
Loom, power	William Gilmour	Smithfield, R. I.	Oct. 28, 1820
Loom, power	Wm. B. Leonard	Fishkill, N. Y.	May 23, 1827
Loom, power	Amasa Stone	Providence, R. I.	April 30, 1829
Loom, power	James C. Kempton	Manayunk, Pa.	June 14, 1834
Loom, power	Aden Holbrook & B. F. French	Dunstable, N. H.	June 17, 1834
Loom, power	David Whitman	Windham, Ct.	Mar. 20, 1835
Loom, power	William G. Gavit	Washington co., R.I	April 8, 1835
Loom, power	F. C. Lewis	Grafton, Mass.	Mar. 30, 1836
Loom, power	Benjamin Lapham	Waterford, N. Y.	June 28, 1836
*Loom, power	Elijah Fairman	Stafford, Ct.	Feb. 6, 1838
Loom, power	Wm. B. Pender & N. C. Horn	Wolfeborough, N.H.	Aug. 15, 1838
Loom, power	Caleb Duxbury and J. Nield	Taunton, Mass.	April 21, 1842
Loom, power	James Nield	Taunton, Mass.	May 25, 1844
Loom, power	James Nield	Taunton, Mass.	Mar. 15, 1845
Loom, power	James Nield	Taunton, Mass.	Mar. 15, 1845
Loom, power	Daniel Barnum	Bridgeport, Ct.	Mar. 26, 1845
Loom, power†	George B. Sanford	Putney, Vt.	Mar. 17, 1843
Loom, power, broad	John Leland	Milbury, Mass.	Mar. 9, 1833
*Loom, power, check and plaid	E. Burt, O. D. Boyd, and A. H. Boyd	Manchester, Ct.	Aug. 19, 1828
Loom, power and common	Benjamin Lapham	Saratoga, N. Y.	Jan. 20, 1838
Loom, power, figure	James M. Hoggan	New Haven, Ct.	Oct. 14, 1834
*Loom, power, figure	William Crompton	Taunton, Mass.	Nov. 25, 1837
*Loom, power, friction to yarn beam	Stephen Kimball	Putney, Vt.	May 30, 1838
Loom, power, lathe for	John Whitehead	N. Providence, R. I.	Aug. 30, 1819
Loom, power, lay for	Benjamin Brooks	New Market, N. H.	Dec. 17, 1834
Loom, power, for silks	Gamaliel Gay	Poughkeepsie, N. Y.	Sept. 26, 1835
Loom, power, and stopping	Jesse Taylor & Joseph Woodhead, &c.	Middletown, Pa.	April 21, 1831
Loom, power, and taking up cloth	Wm. B. Leonard	Fishkill, N. Y.	May 23, 1827
Loom, power, & taking up motion	Amasa Stone	Johnston, R. I.	Aug. 17, 1835
Loom, power, & taking up motion	H. Hendrick	Killingly, Ct.	Sept. 22, 1836
Loom, power, & taking up motion	John P. Comins	Killingly, Ct.	Oct 20, 1836
Loom, power, treadle in	Eli Horton	Stafford, Ct.	Feb. 22, 1838
Loom, power, upright	C. Shepard & J. Thorpe	Taunton, Mass.	July 25, 1816
Loom, power, weav'g stock frames	F. Goodell and F. H. Harvey	Ramapo, N. Y.	Dec. 2, 1835
Loom, power, wire	John S. Gustin	New York	Feb. 23, 1826
Loom, power, mode of throwing shuttles‡	R. P. Cunningham	Pomfret, Ct.	April 25, 1843
Loom, power, weaving plain cloth	Frederick Downing	Enfield, Mass.	Jan. 27, 1843
Loom, power, for weaving plaid	Erastus B. Bigelow	Boston, Mass.	April 10, 1845
Loom, power, rotary temples for	George Draper	Sangus, Mass.	Feb. 24, 1842
Loom, power, stopping when weft and filling fails	O. M. Stillman	Stonington, Ct	Nov. 10, 1841
Loom, power, weaving carpets	Thomas Flint	Boston, Mass.	June 27, 1841
Loom, power, weaving counterpanes‖	Erastus B. Bigelow	Lancaster, Mass.	July 28, 1842
Loom, power, weaving counterpanes‖	Erastus B. Bigelow	Lancaster, Mass.	Aug. 2, 1842

*Patented in France, June 1, 1843. †Antedated Oct. 31, 1842. ‡Reissued Mar. 14, 1846. ‖Antedated May 1, 1842.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Loom, power, weaving figured counterpanes	Erastus B. Bigelow	Lancaster, Mass.	April 24, 1840
Loom, reeds, machine for making	Jeptha A. Wilkinson	Otsego, N. Y.	July 3, 1816
Loom, reeds	Jacob Sennett	Philadelphia, Pa.	Oct. 1, 1830
Loom, reeds	Horace Holt	Rutland township, O.	Oct. 17, 1831
Loom, reeds, heddles or harness*	Jeptha A. Wilkinson	Providence, R. I.	July 17, 1835
Loom, reeds, metallic	Peter F. Herben	Patterson, N. J.	Nov. 15, 1821
Loom, reeds, polishing wire or brass for —*See Polishing, Class* 2.			
Loom, regulating yarn beam	Welcome A. Potter	Cranston, R. I.	Nov. 23, 1837
Loom, regulating the delivery of the warp from the warp beam	William H. Brayton	Warren, R. I.	Jan. 6, 1844
Loom, rotary temples for	Isaac C. Lane	Waltham, Mass.	Mar. 26, 1844
Loom, sail cloth	James Davenport	New Jersey	Feb. 14, 1794
Loom, sail cloth	James Richards	Patterson, N. J.	Aug. 10, 1821
Loom, sail duck	Joseph Chapman	Frankfort, Pa.	July 9, 1821
Loom, sattinette	John D. Seagrave	Uxbridge, Mass.	May 17, 1838
Loom, sattinette, power	Richard Mitchell and N. Butterworth	Troy, Mass.	Mar. 22, 1838
Loom, securing the bobbin in shuttles for weaving	Daniel Leavitt	Cabotville, Mass.	Aug. 18, 1842
Loom shuttles, mode of throwing	John Goulding	Dedham, Mass.	Aug. 24, 1827
*Loom, shuttle, tongue	Comfort B. Thorpe	Smithfield, R. I.	April 17, 1837
Loom, shuttle, spindle spring	Samuel Cranston	Cumberland, R. I.	Mar. 20, 1822
Loom, shuttle, tying knots	John Thorpe	Providence, R. I.	Nov. 20, 1828
*Loom, shuttles for weaving cloth	James Baldwin	Nashua, N. H.	Jan. 31, 1840
Loom, silk, weaving narrow goods	Cornelius Bergen	Brooklyn, N. Y.	Dec. 18, 1839
Loom for silk ribbons	C. Ganahl, assignor to F. Ganahl.	Innsbruck, Austria	Oct. 3, 1846; for. pat. dated May 19, 1837
Looms, stop apparatus for	Enoch Burt	Manchester, Ct.	June 20, 1845
Loom, stocking	Eb. Herrick	Stockbridge, Mass.	Oct. 22, 1813
Loom, stocking	John Bazin, jr.	Canton, Mass.	Oct. 28, 1814
Loom, stocking	Aaron Porter	Queensbury, N. Y.	Aug. 22, 1816
*Loom, stocking, rotary power	Richard Walker	Portsmouth, N. H.	Dec. 5, 1839
Loom, temples for	J. Beard & A. Whitney	Waltham, Mass.	April 6, 1842
Loom, temples	Erastus B. Bigelow	Boston, Mass.	Feb. 24, 1845
Loom temples	Benjamin Rogers	Beaver creek, Ohio	Nov. 24, 1814
Loom temples	John Bazin, jr.	Canton, Mass.	Aug. 8, 1823
Loom temples	Philo C. Curtis	Paris, N. Y.	June 16, 1825
Loom temples	Orsemus S. Stillman	Brookfield, N. Y.	Jan. 30, 1826
Loom temples	John Standish	Providence, R. I.	Nov. 11, 1830
Loom temples†	Peter Newell	Waterford, N. Y.	Jan. 5, 1833
Loom temples	C. T. K. Rawlings	Lowell, Mass.	Aug. 30, 1833
*Loom temples	Emory A. Angell	Killingly, Conn.	Oct. 19, 1838
Loom, temples, opening and closing the jaw	Erastus Williams and Dan. L. Huntington	Norwich, Conn.	Nov. 16, 1841
Loom temples, perpetual	Daniel A. Smith	Townshend, Mass.	Feb. 23, 1816
Loom temple, revolving bar	E. B. Harris and A. R. Arnold	Woodstock, Conn.	April 13, 1830
*Loom, temples, rotary	George Draper	Palmer, Mass.	Oct. 28, 1840
Loom temple, rotary	Ira Draper	Sagus, Mass.	April 1, 1829
*Loom, temples, self-acting†	Jonathan Dennis, jr., assignee of Kendall Gibbs	Portsmouth, R. I.	Feb. 13, 1839
Loom temple, self-acting	Arnold Palmur	New Lebanon, N. Y.	Feb. 10, 1846
Loom, temples, self-acting rotary	William Craig and John Cochrane	England	Nov. 25, 1841
*Loom temple, self-adjusting	Samuel P. Mason	Newport, R. I.	July 22, 1837
Loom temple, self-operating	Ephraim R. Otis	River Head, Conn.	April 2, 1830
Loom temple, sliding	John Waterman	Providence, R. I.	May 28, 1818
Loom temple, spring	A. Jenk and J. Clewel	Holmesburg, Pa.	Mar. 19, 1827
*Loom treadles and harness	B. Hartford and W. B. Tilton	Enfield, N. H.	Dec. 29, 1837
Loom, vibrating, cam	William H. Howard	Worcester, Mass.	Feb. 12, 1830

*Reissued May 24, 1836, lost by fire Dec. 16, 1836; renewed Aug. 29, 1840, and again reissued April 29, 1843.
†Antedated November 6, 1838. ‡Reissued December 2, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Loom warp suspender	William Squire	New York	Jan. 17, 1815
Loom warping	Calvin Whitney	Dedham, Mass	Feb. 1, 1814
Loom warping	Thomas Siddall	Germantown, Pa	Mar. 27, 1815
Loom warping	James Morgan	Baltimore, Md	April 5, 1831
Loom warps, regulating tension	Erastus B. Bigelow	Boston, Mass.	Mar. 12, 1845
Loom, water	Thomas Mussey	Philadelphia, Pa.	Mar. 4, 1811
Loom, water	Cyrus Shepard	Philadelphia, Pa.	April 27, 1812
Loom, water	Brightberry Brown	Albemarle, Va.	Mar. 21, 1814
Loom, water	Philo C. Curtis	Paris, N. Y.	May 28, 1816
Loom, water	Thomas Mussey	New London, Conn.	June 10, 1817
Loom, water, steam	S. Blydenburg and Hezekiah Healey	Worcester, Conn	Feb. 20, 1815
Loom weaving	Phœnix Manufacturing Company, assignees of Benjamin Slingerland	Patterson, N. J.	April 1, 1845
Loom, weaving, figured goods	Horace Baker	North Salem, N. Y.	Aug. 30, 1827
Loom, weaving, figured goods	John Smith	Shæfferstown, Pa	April 22, 1835
Loom, weaving, girth cloth	Robert Lloyd	Philadelphia, Pa.	Feb. 8, 1810
Loom, weaving, harness	M. Chandler and E. Brown	Cazenovia, N. Y.	Jan. 26, 1821
Loom, weaving, improvement in	John Standish	Providence, R. I.	Nov. 11, 1830
*Loom, weaving, knotted counterpanes	Erastus B. Bigelow	W. Boyleston, Mass.	Jan. 6, 1838
Loom, weaving, stocks	Conrad Kile	Erie, Pa.	Sept. 18, 1835
Loom, weaving, webbing, tape	Asa G. Bill and George Spalding	Middletown, Conn.	Mar. 28, 1831
Loom, weaver's harness, metal eyes for.	J. Conger and L. Woodbury	Locke, N. Y.	Nov. 15, 1825
*Loom, weaver's harness for	J. Thorp and W. G. Angell	Providence, R. I.	Dec. 31, 1838
Loom, weaving	Charles Cooper	Lebanon, Pa.	Nov. 4, 1808
Loom, weaving	Cullen Whipple	Douglass, Mass.	June 11, 1836
Loom, weaving, chips	Philip Bennet	Rochester, N. Y.	Feb. 8, 1806
Loom, weaving, cloth for stocks	Conrad Kile	Philadelphia, Pa.	Oct. 11, 1836
Loom, weaving, coverlets*	E. Meily, jr., J. Millinger, and S. Millinger	Lebanon, Pa.	Mar. 1, 1834
Loom, weaving, feathered cloth	Jon. and Rozanna Sizer	New London, Conn.	Oct. 21, 1812
Loom, weaving, figured cloth	George Detterich and J. Conger	Tompkins co. N. Y.	Mar. 12, 1831
Loom, weaving	David Farrior and D. P. J. Murphy	Aberfoil, Alabama	Dec. 4, 1843
Loom, weaving figured fabrics	Clinton Gilroy	New York, N. Y.	April 15, 1843
Loom, weavers', for working any number of heddles	Gavin McCrac	Baltimore, Md	Oct. 18, 1843
Loom, weaving counterpanes, &c., manner of mounting the	Erastus B. Bigelow	Lancaster, Mass.	May 30, 1842
Loom, weaving figured and other fabrics.†	Jeremiah Wilbur, assignee of Clinton G. Gilroy, of G. Britain	New York, N. Y.	Mar. 12, 1842
Loom, weaving fish nets	Levi Van Hoesen	New Haven, Conn.	Oct. 7, 1842
Loom, weavers' harness, wire heddles for.	Abraham Howe and Sidney S. Grannis	Morrisville, N. Y.	Sept. 30, 1841
Loom, weavers' harness, wire heddles for.‖	Abraham Howe and Sidney S. Grannis	Morrisville, N. Y.	Oct. 11, 1841
Loom, weaving figured cloths, jacquard machinery for	Alexander Calderhead,	Philadelphia, Pa.	Feb. 3, 1841
Loom, weaving figured damask hair-seating	Samuel Ross	Camden, N. J.	Sept. 18, 1841
Loom, weavers' shuttles	Roswell Douglass, assignee of J. Coburn	Lowell, Mass.	Mar. 12, 1842
Loom, weaving	Benjamin W. and Horace Hendrick.	Woonsocket Falls, R. I.	May 12, 1842

* Reissued June 26, '35. † Antedated May 1, '42. ‡ Date of Eng. pat. Nov. 12, '39. ‖ Reissued May 30, '42.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Loom, weaving bolting cloth, mounting and using the harness	Rollin White	Williamstown, Vt.	April 1, 1842
Loom, weaving carpets*	Erastus B. Bigelow	Lancaster, Mass.	May 16, 1842
Loom, weaving carpets†	Erastus B. Bigelow	Lancaster, Mass.	May 26, 1842
Loom, wire, harness	Elisha Otis	Cazenovia, N. Y.	Dec. 31, 1824
Loom, wire, harness	Ezra Brown	Cazenovia, N. Y.	April 12, 1826
Loom, wire, harness	Ezra Brown	Cazenovia, N. Y.	Oct. 30, 1828
Mats, of manilla grass	Samuel S. Williams	Roxbury, Mass.	Aug. 22, 1828
Mule, self-acting	William Mason	Taunton, Mass.	Oct. 3, 1846
Nankeen, making, yellow & buff.	Joseph B. Nones	Philadelphia, Pa.	April 28, 1825
Napping cloth	Samuel Mulliken	Philadelphia, Pa.	Mar. 11, 1791
Napping cloth	William Burt		June 23, 1797
Napping cloth	James Olney	Hartford, Ct.	Mar. 1, 1813
Napping cloth	John Mathes	Barre, Va.	May 27, 1813
Napping cloth	Isaac Sanford	Providence, R. I.	Mar. 26, 1814
Napping cloth	Daniel Merwin & Horace Kellogg	Hudson, N. Y.	Oct. 28, 1814
Napping cloth	T. S. Barnum & E. Smith	Litchfield, Conn.	April 4, 1815
Napping cloth	William Duncan and J. Davidson	Ackworth, N. H.	May 29, 1815
Napping cloth	E. Starr and Nathan Couch	Sullivan town'p N. Y.	Mar. 20, 1817
Napping cloth	Bishop N. Parsons	New York	April 16, 1817
Napping cloth	Levi & Jedediah Prescott	Pittsburgh, Pa.	Nov. 5, 1818
Napping cloth	Job Wilkerson	New York	May 12, 1825
Napping cloth	Stephen Marsh	Fairfax, Vt.	July 20, 1825
Napping cloth	M. R. Norris and L. Phillips	Covington, N. Y.	Mar. 21, 1829
Napping cloth	Zachariah Allen	Providence, R. I.	Aug. 10, 1829
Napping cloth	Zachariah Allen	Providence, R. I.	Feb. 2, 1830
Napping cloth	Joseph Groff	Rapho, Pa.	Feb. 10, 1830
Napping cloth	Thomas Hurd & Jesse Fox	Lowell, Mass.	June 23, 1830
Napping cloth	John Jewett	Dudley, Mass.	Dec. 30, 1830
Napping cloth	Eliakim Benham	Roxbury, Mass.	Jan. 22, 1833
Napping cloth	Reuben Daniels	Woodstock, Vt.	June 26, 1835
Napping cloth	Stephen Marsh	Jericho, Vt.	Jan. 11, 1836
*Napping cloth	Benjamin Swazey	Mount Vernon, Vt.	Aug. 8, 1837
Napping cloth, and brushing	John Bryan and S. D. Fuller	Mendam co., N. J.	April 4, 1820
Napping cloth, and carding	Jos. A. Christie	Elizabethtown, N. J.	Jan. 24, 1816
Napping cloth machine, called cross napping machine.	John Taylor and John Smith	New Lebanon, N. Y.	May 4, 1842
Napping cloth, shearing and brushing	John J. Bryant	Andover, N. H.	Sept. 2, 1818
Napping cloth, and steaming	S. R. Parkhurst	Providence, R. I.	June 24, 1834
Napping cloth, teasling & brushing	John Taylor	Waltham, Mass.	Oct. 28, 1815
Napping cloth, vibrating	Samuel Duncan	Northampton, N. Y.	Jan. 21, 1828
Napper, metallic	John M. Pratt	Dudley, Mass.	Oct. 3, 1838
Napper, teasling cloth	James Olney	Westmoreland, N. Y.	Mar. 29, 1817
Napper, teasling cloth	Josiah Beckwith	Lyme, Conn.	May 16, 1817
Napper, teasling cloth	Aaron Foster	Poultney, Vt.	Nov. 25, 1818
Napper, teasling cloth	Aaron Foster	Whitestown, N. Y.	Aug. 24, 1821
Net or seine making machine	John McCullen	Baltimore, Md	June 27, 1846
Oakum, machinery for manufacture of.	Thaddeus, Henry and Daniel Tibballs	Chatham, Vt.	July 8, 1843
Oakum, making	James Tibbals	Haddam, Ct.	Feb. 8, 1839
Oakum, picking	Daniel French	Middletown, Conn.	Oct. 9, 1805
Oakum, picking	Michael Morrison	New Bedford, Mass.	Feb. 14, 1806
Oakum, picking	Daniel Rider	New York	April 26, 1808
Oakum, picking	E. Waterhouse	Gardner, Maine	April 24, 1826
Oakum, picking	Ebenezer Cook	Haddam, Conn.	July 9, 1832

* Antedated May 1, 1842. † Antedated May 1, 1842.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Oakum, picking	Ebenezer Cook & Selden Usher	Haddam, Conn	June 7, 1834
Oakum, picking	Hiram Burnham	Boston, Mass	Oct. 5, 1838
Oakum, picking	Otis Allen	Tewksbury, Mass	July 16, 1842
Oakum picking, combination of machinery for.	Jno. Stanbury & Wm. Ridgway, jr	Baltimore, Md	Jan. 17, 1842
Oakum and hair, picking	R. B. Lewis	Hallowell, Maine	June 25, 1836
Oil cloth, drying	Daniel Sampson	Winthrop, Maine	May 30, 1837
Oil cloth, manufacture	Isaac Maccauley	Philadelphia, Pa	April 4, 1825
Oil cloth, manufacture	Deborah Powers, adm'x of Wm. Powers	Lansingburg, N. Y.	Feb. 18, 1832
Oil silk, manufacture	Ralph Hodgson	New York	Feb. 1, 1793
Painting cloth	Otis Ferrin	Lansingburg, N. Y.	Nov. 28, 1831
Paper, &c., applying paste or sizing to sheets of, &c., in the process of making cards, &c.	David H. Gibert	Dorchester, N. Y.	April 11, 1842
Paper, books, &c., machine for cutting	Joseph Woodhouse	Otsego, N. Y.	May 30, 1835
Paper, brown, from beach grass	Isaac Sanderson	Milton, Mass.	Feb. 22, 1838
Paper, cane hemp, making	B. C. Smith	Burlington, N. J.	Nov. 21, 1843
Paper, carbonated, for multiplying writings	Joseph Hartshorne	Philadelphia, Pa.	April 20, 1810
Paper, cloth, &c., staining and printing	Benjamin Mestayer	New York	June 28, 1815
Paper, cutting machine	John McClintic & Geo. Faber	Chambersburg, Pa.	Dec. 18, 1825
Paper, cutting machine	Francis B. Howell	Lockport, Ohio	May 21, 1830
Paper, cutting machine	John Slugert	Quincy, Pa.	Dec. 14. 1830
Paper, cutting machine	Edward Pine	Troy, N. Y.	July 20, 1831
Paper, cutting & trimming books *	Frederick J. Austin	New York	June 16, 1841
Paper, cutting and trimming the edges	Jonas Bateman	Harvard, Mass.	Mar. 12, 1834
Paper, cutting and trimming in the ream	John Ames	Springfield, Mass.	Feb. 28, 1834
Paper, cutting in sheets	John Ames	Springfield, Mass.	Feb. 28, 1834
Paper, cylinders for drying	H. P. Howe	Shirley, Mass.	Sep. 20, 1836
Paper, cylindrical machine	Isaac Sanderson	Milton, Mass.	April 18, 1829
Paper, drying	Henry Howe	Shirley, Mass.	Mar. 12, 1836
Paper, engine	William Dickinson	Worcester, Mass.	Sept. 3, 1840
Paper, engine regulator	John M. Hollingsworth	Braintree, Mass.	Dec. 31, 1838
Paper, engines, washers for	Clarke Rice	Watertown, N. Y.	April 26, 1834
Paper, finishing	Irah White & L. Gale	Newberg, Vt.	Feb. 28, 1827
Paper, finishing machine	Thomas Gilpin	Philadelphia, Pa.	June 25, 1830
Paper, hangings, printing	Peter Force	Washington, D. C.	Aug. 22, 1822
Paper, hangings, with satin grounds	Hez. Steele	Hudson, N. Y.	Sep. 8, 1813
Paper, hot pressing	Francis Bailey	Salisbury, Pa.	July 31, 1809
Paper, leather	Ephraim F. Blank and Thomas Blank	New York	Feb. 16, 1830
Paper, on machines, manufactur'g	Richard Waterman & Geo. W. Annis	Providence, R. I.	Aug. 30, 1828
Paper, machine	John Ames	Springfield, Mass.	Feb. 20, 1835
Paper, mach'e for prepar'g top, &c.	Abm. Frost		Mar. 19, 1804
Paper, machine for separating sand, &c., from pulp, in the manufacture of	Wm. Bishop	Coventry, Conn.	Dec. 31, 1845
Paper, making	John Biddis	Pennsylvania	Mar. 31, 1794
Paper, making	Cyrus Austin	New Jersey	Dec. 14, 1798
Paper, making	Robert R. Livingston	New York	Oct. 28, 1799
Paper, making	Thomas Langstroth	Bucks county, Pa.	May 1, 1804
Paper, making	Charles Kinsey	Essex, N. J.	May 8, 1807
Paper, making	Thomas Gilpin	Philadelphia, Pa.	Dec. 24, 1816
Paper, making	John B. Pignatelle	New York	Dec. 2, 1819
Paper, making†	John Ames	Springfield, Mass.	May 14, 1822
Paper, making	Isaac Burbank	Worcester, Mass.	Sep. 8, 1824

* Antedated Dec. 16, 1840. † Reissued Oct. 25, 1832.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Paper, making	Gardiner Burbank	Worcester, Mass	April 12, 1826
Paper, making	Andrew Sprague and Nich. A. Sprague	Fredonia, N. Y.	Oct. 31, 1828
Paper, making	Joseph Truman	Bridgeport, Pa.	Feb. 28, 1834
Paper, making	Charles Forbes	East Hartford, Ct.	Feb. 20. 1836
Paper, making*	Wm. & Abij. L. Knight & Edward F. Condit	Whippany, N. J.	Sept. 25, 1839
Paper, making	John M. and Lyman Hollingsworth	Boston, Mass.	Dec. 4, 1843
Paper, making, agitator	Reuben Fairchild	Trumbull, Conn.	May 4, 1829
Paper, making from corn husks	Burgess Allison & Jno. Hawkins	New Jersey	Dec. 30, 1802
Paper, making card	Edward L. Perkins	Boston, Mass.	July 10, 1840
Paper making, ruling and cutting at one operation	John Ames	Springfield, Mass.	July 31, 1840
Paper, making, from curriers' shavings	Joseph Condit, jr.	New Jersey	Dec. 28, 1801
Paper, making, filtering for	Thomas Trench	Ithaca, N. Y.	May 26, 1832
Paper, making, by the flat press	Marsden Haddock	New York	July 17, 1828
Paper, making, from pelts	John McThorndike		Mar. 7, 1814
Paper, making, from rags, whitening straw	John W. Cooper	Wash'g'n town'p Pa.	Feb. 7, 1829
Paper, making, from sea grass	Elisha H. Collier	Plymouth, Mass.	April 15, 1828
Paper, making, from sea weed	Samuel Green	New London, Conn.	Feb. 15, 1809
Paper, making, from straw, &c.	William Magaw	Meadville, Pa.	Mar. 8, 1828
Paper, making, top press roller for	Mason Hunting	Waterbury, Mass.	Oct. 20, 1828
Paper, manufacturing	Solomon Stimpson	Newbury, Vt.	Mar. 12, 1832
Paper, manufacturing	Arthur Varnham	London, England	Aug. 9, 1845
Paper, manufacturing, for covered buildings	Frederick A. Taft	Dedham, Mass.	May 11, 1832
Paper, manufacturing, from wood	Lewis Wooster and J. B. Holmes	Meadville, Pa.	Aug. 3, 1830
Paper, mark of opacity in	John Reich and Edw. Star	Philadelphia, Pa.	May 11, 1816
Paper, moulds	John Carnes	Delaware	April 11, 1793
Paper, moulds	Phares Barnard	Whitestown, N. Y.	July 7, 1809
Paper, polishing	George Bird	Walpole, Mass.	April 11, 1825
Paper, polishing machine	William Coolidge	Boston, Mass.	April 18, 1808
Paper, preparing husks to make	Homer Holland	Westfield, Mass.	Aug. 13, 1838
Paper, press, cylinder, hot & cold	Asahel H. Jervis and Thomas Trench	Ithaca, N. Y.	Nov. 6, 1832
Paper, sand, glass, or emery	Edmund Morris	Philadelphia, Pa.	Sept. 14, 1844
Paper, sizing	John Ames	Springfield, Mass.	Sept. 1, 1832
Paper, sizing	Edmund Blake	Alstead, N. H.	Nov. 19, 1833
Paper, sizing	W. W. Wilson and Charles Dickerman	Westfield, Mass.	Aug. 3, 1839
Paper, sizing‡	John Ames	Springfield, Mass.	Dec. 1, 1837
Paper, sizing§	Lorenzo D. Brown	Lee, Mass.	Mar. 4, 1842
Paper, trimming machine	Parke Shee	Philadelphia, Pa.	Feb. 7, 1807
Paper, trimming machine	John McClintic	Chambersburg, Pa.	Mar. 31, 1827
Paper, vats, heating pulp in	Joseph Robeson	Montgomery, Pa.	May 22, 1816
Paper, for walls	James P. Howland and Alfred Griswold	Muncey, Pa.	Aug. 10, 1833
Paper, water marks	Jac. Perkins and Thomas Gilpin	Philadelphia, Pa.	Dec. 18, 1816
Pasteboard, &c., manufacturing	Frederick A. Taft	Dedham, Mass.	July 20, 1831
Paste paper, for band-boxes	Isaac Sanderson	Milton, Mass.	May 15, 1830
Picker, cotton	J. Pennell & H. Maxon	Barbourville, Va.	Oct. 10, 1828
Picker, and lap machine	Jesse Whitehead	Godwinville, N. J.	July 22, 1833
Picker, and spreading cotton	John C. Whiten	Northbridge, Mass.	July 20, 1832
Picker, wool	Michael Morrison	Boston, Mass.	Aug. 15, 1811
Picker, wool	Beriah Brown	Exeter, R. I.	Sept. 2, 1822
Picker, wool and cotton	Ephraim Raymond	Norton, Mass.	Jan. 18, 1812
Picking and breaking wool	John Shly	Augusta, Ga.	Oct. 27, 1836

*Disclamer May 13, '47. †Reissued May 22, '28, Feb. 19, '30. ‡Reissued Oct 22, '40. §Antedated Sep. 4, '41.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Plates, for pressing woollen cloths	Volkert Vedder	Amsterdam, N. Y.	Feb. 6, 1811
Printing, calico	Alexander Boyd	Providence, R. I.	April 22, 1845
Pulp, dresser	Elihu H. Thomas and Nathan Woodcock	Brattleborough, Vt.	Aug. 11, 1830
Pulp, dresser	Coleman Sellers	Philadelphia, Pa.	June 6, 1832
Pulp, preparing and dressing	John Ames	Springfield, Mass.	Sept. 1, 1832
Pulp, sifter	Sidney A. Sweet	Tyringham, Mass.	Dec. 31, 1833
Pulp, strainer	James Sawyer	Newbury, Vt.	Jan. 21, 1832
Pulp, washing	Francis Goucher	Chester county, Pa.	April 12, 1833
Pulp dressing, of which paper is made	Nathaniel Hebard	Dorchester, Mass.	Dec. 27, 1839
Rags, boiling and washing for the manufacture of paper	George Spafford	Windham, Conn.	Sept. 2, 1840
Rags, cleaning*	William Debit	East Hartford, Conn.	Jan. 13, 1828
Rags, cleaning	George Carriel	Manchester, Conn.	July 27, 1831
Rags, cleaning†	George Carriel	Manchester, Conn.	Feb. 7, 1832
Rags, cleaning	William Debit	Hartford, Conn	July 1, 1836
Rags, cleaning and dusting	Samuel E. Foster	Brattleborough, Vt.	June 1, 1832
Rags, cleaning machine for	James Phelps	West Sutton, Mass.	Nov. 24, 1843
Rags, cutting	Moses Y. Beach	Springfield, Mass.	Oct. 11, 1828
Rags, dusting	E. Burt and G. Carriel	Manchester, Conn.	Nov. 28, 1836
Rags, dusting	Enoch Burt	Manchester, Conn.	Sept. 14, 1838
Rags, dusting and tearing	Henry Clark and William Albertson	New London, Conn.	Sept. 19, 1838
Rags, preparing	Benjamin Cox	Northampton, Mass.	Mar. 28, 1818
Rags, washing	John Ames	Springfield, Mass.	April 6, 1831
Rags, washing	D. Ames, jr., and John Ames, assignees of Samuel Eckstein	Philadelphia, Pa.	June 13, 1831
Rags, washing	Robert Carter	Elkton, Md	Feb. 22, 1838
Reel for chalk lines	Gerard Sickles	Middletown, Conn.	Dec. 31, 1839
* Reeling, spinning, and twisting silk	Jacob Pratt	Sherburne, Mass.	Oct. 12, 1839
Ribbons, smoothing and glazing	Charles Cromwell	New York	Jan. 27, 1817
Rollers, calendering, heating, for glazing.	J. Bringhall and T. Keyes, jr.	W. Boyleston, Mass.	April 1, 1826
Rollers, covering, for sizing	Evert Williams	Stratford, N. H.	April 13, 1822
Rolling, vibratory, for cotton or wool	Jesse Hopkins	Strasburg, Pa.	Jan. 14, 1824
Ropes.—*See Hides, Class* 16.			
Ropes, machinery for laying	S. & James A. Bazin	Canton, Mass.	Feb. 28, 1844
Ropes, making	Charles Durfee, assignee of Edward S. Townsend	Palmyra, N. Y.	Feb. 28, 1845
Sand paper	Isaac Fisher, jr.	Springfield, Vt.	June 14, 1834
Sand paper	Isaac Fisher, jr.	Springfield, Vt.	June 14, 1834
Sand paper	Isaac Fisher, jr.	Springfield, Vt.	June 14, 1834
Sand paper, softening	Isaac Fisher, jr.	Springfield, Vt.	June 14, 1834
Sewing machine	Elias Howe, jr.	Cambridge, Mass.	Sept. 10, 1846
Shearing cloth	Beriah Swift	Washington, N. Y.	May 25, 1806
Shearing cloth	Russell Dorr	Kinderhook, N. Y.	May 8, 1807
Shearing cloth	Enoch Burt	Princeton, N. J.	June 23, 1807
Shearing cloth	Simpson Stewart, E. Hovey, and James Henderson	Pittstown, N. Y.	June 21, 1808
Shearing cloth	David Dewey	Poultney, Vt.	June 27, 1809
Shearing cloth	Eben Sprague	Danbury, Conn.	May 9, 1810
Shearing cloth	Heman Matthews	Delaware	May 15, 1810
Shearing cloth	Beriah Swift	New York	May 24, 1810
Shearing cloth	Ezra Wilmarth	Romney, Mass.	Feb. 28, 1811
Shearing cloth	Benjamin Cummings	Palmer, Mass.	March 2, 1811
Shearing cloth	George C. Kellogg	New Hartford, Conn.	March 4, 1811
Shearing cloth	Jesse Mollineux	Hemstead, N. Y.	April 28, 1811
Shearing cloth	Eleazer Hovey	Canaan, N. Y.	May 2, 1811
Shearing cloth	Stephen Treadwell	Redding, Conn.	April 27, 1812

* Reissued July 21, 1835. † Reissued July 1, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Shearing cloth	William Stillman	Westerly, R. I.	June 11, 1812
Shearing cloth	Walter Kennedy	Frankfort, Ky.	June 12, 1812
Shearing cloth	Gershom Bostwick	Brookfield, Conn.	Sept. 28, 1812
Shearing cloth	George Booth	Poughkeepsie, N. Y.	Oct. 13, 1812
Shearing cloth	Isaac Sanford	Providence, R. I.	Mar. 26, 1814
Shearing cloth	Beriah Swift	Washington, N. Y.	July 1, 1814
Shearing cloth	C. H. Orth and Frederick Strohn	Steubenville, Ohio	Oct. 11, 1814
Shearing cloth	Horace Osborne and William L. Frazer		April 25, 1816
Shearing cloth	John D. Smith	Fredericktown, Md.	May 24, 1816
Shearing cloth	Eliphalet Remington	Frankfort, N. Y.	Aug. 13, 1817
Shearing cloth	William Stillman	Westerly, R. I.	Jan. 17, 1818
Shearing cloth	David Dewey	Rutland county, Vt.	Mar. 16, 1818
* Shearing cloth	Seth Parsons	Hosack, N. Y.	March 2, 1819
Shearing cloth	Elihu Hotchkiss and Aaron Jaque	Brattleborough, Vt.	Dec. 15, 1819
Shearing cloth	Zach. Cary	Oxford, Maine	Feb. 20, 1821
Shearing cloth	Ezra Heald	Norridgewock, Me.	Dec. 4, 1822
Shearing cloth	Beriah Swift	Washington, N. Y.	Feb. 7, 1824
Shearing cloth	William Hovey	Worcester, Mass.	Dec. 17, 1824
Shearing cloth	James Collins	Anson, Maine	March 6, 1827
Shearing cloth	Isaac Kellogg and Geo. C. Kellogg	New Hartford, Conn.	April 7, 1828
* Shearing cloth*	Reuben Daniels	Woodstock, Vt.	May 13, 1834
Shearing cloth	John Davidson	Springfield, Vt.	May 29, 1834
Shearing cloth, &c., diamond figure	Charles P. Barber	Watervliet, N. Y.	Mar. 10, 1843
Shearing cloth, and laying the nap	Lemuel Dickerman	Scahticoke, N. Y.	July 18, 1812
Shearing cloth, revolving shears	James Collins	Anson, Maine	June 10, 1827
Shearing cloth, shears for	Samuel A. Britt	Cazenovia, N. Y.	Aug. 10, 1829
Shearing cloth, by wheel of knives	Samuel G. Dorr	Albany, N. Y.	Oct. 20, 1792
Shearing machine	Silas Hills	Hudson, N. Y.	Oct. 22, 1813
Shearing machine	William Stillman	Westerly, R. I.	April 28, 1815
Shearing machine, horizontal	Thomas Blanchard	Sutton, Mass	May 4, 1813
Shearing machine, or shears with curved edges	Samuel Fry	New York	Nov. 20, 1823
Shearing machine, vibrating	David Dewey	Poultney, Vt	Dec. 7, 1814
Shearing machine, zigzag	Edmund Durrin	Weatherfield, Vt.	Jan. 21, 1814
Shearing nap from woollen cloth	Merritt Hurd	Augusta, N. Y.	Dec. 7, 1829
Shearing sattinets and other woollen goods	James Pitts	Smithfield, R. I.	Oct. 17, 1842
Shearing wool and cloths	Samuel Kellogg	Vermont	Jan. 31, 1795
Shearing wool	Eb. Stowell	Worcester, Mass.	April 26, 1808
Shearing woollen cloths	Liberty Stanley	Massachusetts	June 25, 1803
Shearing woollen cloths	Friend B. Kellogg	Marlborough, Mass.	Nov. 22, 1805
Shearing woollen cloth†	Reuben Daniels	Woodstock, Vt.	April 7, 1838
* Shearing woollen cloth‡	Seth Parsons	Hoosic Falls, N. Y.	Nov. 25, 1838
Silk finishing, machinery for	Thomas White	Mount Pleasant, O.	Dec. 30, 1841
Silk reel, driving with foot	Aaron Clarke	Greenwich, Conn.	Jan. 20, 1841
Silk, reeling from the cocoons, machinery for	George Heritage	Chestertown, Md.	Dec. 19, 1840
Silk reel	Eliphalet Snow	Mansfield, Conn.	Mar. 16, 1832
Silk reel	Charles G. Greene	Windsor, Vt.	May 31, 1832
Silk, reeling	Jonathan Dennis, jr.	Portsmouth, R. I.	Dec. 28, 1838
Silk, reel for reeling	A. B. Jones, assignee of William H. Jones	Hartford, Conn.	Feb. 12, 1842
Silk reels	James S. Harris	Poultney, Vt.	July 30, 1844
Silk skeining, machinery for	George Heritage	Chestertown, Md.	Nov. 26, 1840
Silk twisting	Gamaliel Gay	Philadelphia, Pa.	June 7, 1839
Silk, throwing or twisting	Lucillius H. Mosely	Poughkeepsie, N. Y.	May 9, 1835
Silk, unwinding	Gamaliel Gay	Poughkeepsie, N. Y.	Aug. 17, 1835
* Silk, winding	Adam Brooks	South Scituate, Mass.	June 20, 1836
Silk, winding, gimp or cord	Adam Brooks	South Scituate, Mass.	June 20, 1836
Silkworms, cocoonery for	J. B. Tillinghast	Huron, Ohio	Nov. 10, 1841

* Reissued August 22, 1834. †Antedated October 7, 1837. ‡ Antedated May 25, 1838.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Silkworms, feeding of, apparatus for	Edmund Morris	Burlington, N. J.	June 16, 1841
Silkworms, feeding	John W. Gill	Mount Pleasant, Ohio	May 12, 1843
Sized paper, machine for drying	Joshua Norton, jr.	Boston, Mass.	April 25, 1846
Speeder fliers	Erastus B. Bigelow	Boston, Mass.	Feb. 24, 1845
Spindle, mode of steadying the live*	Alexander Anderson	Patterson, N. J.	Nov. 21, 1845
Spinning, accelerated	Leonard Norcross	Dixfield, Maine	June 15, 1835
Spinning, bobbins, method of operating in machinery for spinning fibrous substances	Francis McCully, jr.	Patterson, N. J.	Oct. 30, 1844
Spinning candle wick	Shalor Ives	Chillicothe, Ohio	May 17, 1820
Spinning, cap spinner, mode of driving bobbins in	Charles Danforth	Patterson, N. J.	April 21, 1842
Spinning, cap spinner, oiling the spindles or tubes of	Charles Danforth	Patterson, N. J.	April 21, 1842
Spinning, cop speeder for	Truman Estes & Warren Dutcher	Bennington, Vt.	July 26, 1839
Spinning cotton	William Pollard	Philadelphia, Pa.	Dec. 30, 1791
Spinning cotton	Nehemiah Giles	Fitchburg, Mass.	Nov. 19, 1812
Spinning cotton	L. Bissell, J. Hinman, L. C. Hinman, and Benoni Gains	Hartwick, N. Y.	June 19, 1813
Spinning cotton	L. Bissell, L. C. Hinman, and S. Wilson	Otsego, N. Y.	July 17, 1815
Spinning cotton	Elisha Fuller	Attleborough, Mass.	Feb. 6, 1823
Spinning cotton	William Bryant	Mill creek, Tenn.	Sept. 30, 1823
Spinning cotton	William Haworth	Providence t'nsp, Pa.	June 2, 1824
Spinning cotton	John Brown	Stonington, Conn.	June 13, 1831
Spinning cotton	John L. Eddy	Killingly, Conn.	Nov. 19, 1833
Spinning cotton	Welcome A. Potter	Cranston, R. I.	Dec. 16, 1833
Spinning cotton	Asahel M. Lanpher	Killingly, Conn	Mar. 19, 1834
Spinning cotton	Welcome A. Potter	Cranston, R. I.	Mar. 28, 1834
Spinning cotton	William P. Brayton	New York city	June 25, 1836
Spinning cotton bagging	John C. Dewes	Mason county, Ky.	Dec. 28, 1827
Spinning cotton, frame for	Paul Moody	Boston, Mass.	May 6, 1819
Spinning cotton, frame for	William Bald, jr.	Providence, R. I.	Oct. 10, 1820
Spinning cotton, frame for	Paul Moody	Boston, Mass.	Feb. 19, 1821
Spinning cotton seine twine	Thomas Rice	Petersburg, Va.	Oct. 1, 1830
Spinning cotton and silk	Samuel P. Mason	Killingly, Conn.	Jan. 17, 1834
Spinning cotton twine	Alson Pond	Petersburg, Va.	April 21, 1829
Spinning cotton, water frame for	Stephen Clements	Hartford, Vt.	Mar. 16, 1812
Spinning cotton and wool	G. Brewster, G. Trumbull, and J. Mathes	Barre, Vt.	Jan. 16, 1812
Spinning cotton and wool	Joseph Hathaway	Poultney, N. Y.	July 24, 1826
Spinning cotton and wool	John W. Wheeler	Galway, N. Y.	Oct. 11, 1828
Spinning cotton and wool	Levi Rice	Milburn, Mass.	Nov. 14, 1831
Spinning cotton yarn	Peleg Arnold	Coventry, Conn.	Aug. 1, 1818
Spinning cotton yarn	Luther Crane	Ware, N. H.	Mar. 26, 1825
Spinning cotton yarn	John Thorpe	Providence, R. I.	Nov. 11, 1830
Spinning cotton yarn and thread	John A. Bradshaw	Foxborough, Mass.	Jan. 18, 1833
Spinning cotton yarn, and roping	James Chestera	Cumberland, R. I.	April 16, 1834
Spinning cotton roving, &c., for condensing	Jacob Graves	New Ipswich, N. H.	Sept. 1, 1843
Spinning cotton wool	Amander N. Wilcox	Milton, N. Y.	May 8, 1843
Spinning, double speeder or fly frame used in roving cotton	William C. Duvoll	Fall River, Mass.	May 19, 1843
Spinning, driving bobbins	William Baxter	Patterson, N. J.	Sept. 30, 1845
Spinning filling, and slack twisted yarn	John Thorpe	Providence, R. I.	Nov. 25, 1828
Spinning flax, cotton, and silk	John Bogardus	New York	May 25, 1830
Spinning flax, cylindrical frame	William Griffin	New York	Jan. 11, 1812
Spinning flax and hemp	George Parkinson	Philadelphia, Pa.	Mar. 17, 1791
Spinning flax and hemp	Alpheus Webster	Greene county, N. Y.	Mar. 31, 1810
Spinning flax and hemp	W. Hunt and W. Haskins	Martinsburg, N. Y.	June 22, 1826

*Antedated May 21, 1845.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Spinning flax, reeling and spooling	Noel Jones	Madison co., N. Y.	Mar. 14, 1812
Spinning, fliers	Samuel Ladd	Waltham, Mass.	Feb. 20, 1836
Spinning, flier and dead spindle for	Phineas Stephens	Nashua, N. H.	April 20, 1844
Spinning, fliers	Samuel Ladd	Waltham, Mass.	May 6, 1836
Spinning, fliers, horing, &c.—*See Class* 2.			
Spinning, fliers, cotton	John Morse	Newton, Mass.	June 25, 1836
Spinning, fliers, cotton yarn	Azariah Walton	Keene, N. Y.	Jan. 6, 1812
Spinning, fliers, cotton yarn	Martin Newton	Fitchburg, Mass.	Sept. 28, 1812
Spinning, fliers, cotton yarn	Nehemiah Giles	Fitchburg, Mass.	Nov. 19, 1812
Spinning, fliers, for double speeders	Otis Pettee	Newton, Mass.	Mar. 28, 1834
Spinning, fliers, flax and hemp	H. Evans & B. Churchill	Plymouth, Mass.	Sept. 26, 1838
*Spinning, fliers, & spindles, cotton	Richard E. Yerkes	Philadelphia, Pa.	June 12, 1838
*Spinning, fliers, & spindles, cotton	John Hoarth & Nathan Jones	Andover, Mass.	Dec. 28, 1838
Spinning, fliers, for wheels	James Wilson	Monroe county, Ky.	Feb. 16, 1833
Spinning hair of neat cattle	William Shotwell and Arthur Kimball	New York	Nov. 4, 1813
Spinning hemp, &c.	James Lang	Greenock, Scotland	Jan. 16, 1834
Spinning hemp, &c.	Moses Day	Roxbury, Mass.	June 2, 1836
Spinning hemp and flax*	Nathaniel Foster	Flemingsburg, Ky.	June 28, 1809
Spinning hemp and flax	John F. Chappins	New York	Nov 8, 1814
Spinning hemp and flax	Daniel Treadwell	Boston, Mass.	Oct. 11, 1831
Spinning hemp and flax	Andrew Caldwell	Lexington, Ky.	Aug. 20, 1835
Spinning hemp and other fibrous materials	Charles W. Brown	Roxbury, Mass.	July 16, 1839
Spinning hemp, flax†	Moses Day	Roxbury, Mass.	June 2, 1836
Spinning hemp, flax	Moses Day	Roxbury, Mass.	June 24, 1839
Spinning, hook spinner and twister, whirling and rotary	John Thorp	N. Wrentham, Mass	Sept. 27, 1844
Spinning jenny	Cyrus Greenwood	Winchester, N. H.	Feb. 13, 1830
Spinning jenny and billy	Ebenezer Smith	Paris, N. Y.	Mar. 23, 1814
Spinning jenny, vertical	James Matthews	Schenectady, N. Y.	May 2, 1826
Spinning machine	Jac. Alricks	Wilmington, Del.	Oct. 11, 1809
Spinning machine	Daniel Read	Brookfield, N. Y.	Sept. 10, 1811
Spinning machine	Sylvanus Baldwin and Elisha Town	Vermont	May 6, 1812
Spinning machine	Alpheus Webster	Greene co., N. Y.	Dec. 21, 1812
Spinning machine	Burgess Allison	Burlington, N. J.	Mar. 3, 1813
Spinning machine	John Brown	Providence, R. I.	May 12, 1813
Spinning machine	John Brown	Providence, R. I.	Feb. 24, 1814
Spinning machine	Sylvanus Baldwin	Boston, Mass.	Aug. 18, 1815
Spinning machine	Zaccheus Wheeler	Richmond, N. H.	July 18, 1816
Spinning machine	John Brown	Providence, R. I.	Aug. 11, 1821
Spinning machine	C. Merrill, C. Batchellor, & S. King, jr.	Lowville, N. Y.	July 3, 1824
Spinning machine	D. Pool & A. Copeland	Philadelphia, Pa.	Dec. 24, 1824
Spinning machine	H. Hunt & C. Bradish	Lowville, N. Y.	Dec. 31, 1824
Spinning machine	Sidney White	Wrentham, Mass.	Dec. 24, 1824
Spinning machine	Samuel Slater	Middletown, Vt.	April 4, 1825
Spinning machine	J. R. & J. B. Wheeler	Kingsbury, N. Y.	May 26, 1825
Spinning machine	J. R. & J. B. Wheeler	Galway, N. Y.	Nov. 3, 1826
Spinning machine	Nathaniel Remington	Geneva, N. Y.	April 21, 1827
Spinning machine	Henry Wilson	Pomfret, N. Y.	July 13, 1827
Spinning machine	John Thorpe	Providence, R. I.	Dec. 31, 1828
Spinning machine	John Thorpe	Providence, R. I.	Jan. 23, 1829
Spinning machine‡	John Thorpe	Providence, R. I.	Nov. 25, 1828
Spinning machine	John Thorpe	Providence, R. I.	June 13, 1829
Spinning machine	Warren Allen	New Haven, N. Y.	Aug. 15, 1829
Spinning machine	Joseph B. Wheeler	Galway, N. Y.	Dec. 30, 1829
Spinning machine	John Brown	Providence, R. I.	May 20, 1830
Spinning machine	James Church, jr.	Hartford, Ct	May 22, 1830
Spinning machine	John Pearce	Yorkshire, N. Y.	June 30, 1830
Spinning machine	Ethan Bowen	Providence, R. I.	July 13, 1830

*Reissued July 8, 1813. †Reissued Oct. 22, 1839. ‡Reissued April 3, 1829.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Spinning machine	William Clarke	Poultney, N. Y.	Oct. 1, 1830
Spinning machine	John Morgan	Manayunk, Pa.	May 14, 1836
Spinning machine, domestic	Eb. Herrick	Albany, N. Y.	Aug. 17, 1810
Spinning machine, domestic	Elias Wood	Lowville, N. Y.	Sept. 3, 1824
Spinning machine, domestic	Lafford Totten	Schoharie, N. Y.	Nov. 22, 1826
Spinning machine, domestic	Edward Penny	Adams, N. Y.	June 27, 1828
*Spinning machine, domestic	Hiram F. Wheeler	Springfield, Pa.	April 25, 1838
Spinning machine, family	J. Watt, F. A. Priest, and G. Freeman	Jefferson co., Ohio	May 20, 1826
Spinning machine, family	William Jones	Thornville, Ohio	July 27, 1827
Spinning machine, family, and bobbin winder	John Gill	Plumb towns'p, N.Y	Feb. 19, 1825
Spinning machine, family, cotton	John G. Baxter	Philadelphia, Pa.	June 22, 1811
Spinning machine, family, and factory	Richard Woolsey	Kortwright, N. Y.	May 13, 1825
Spinning machine, family, wool	W. Ayres & J. Cochran	Durham, Vt	Oct. 6, 1815
Spinning machine, horizontal	J. S. and B. J. Billings	Moreau, N. Y.	Jan. 16, 1826
Spinning machine, horizontal	D. Hunt & S. Wheeler	Knox, N. Y.	May 2, 1826
Spinning machine, portable	Burgess Allison	Philadelphia, Pa.	April 27, 1812
Spinning machine, portable	Burgess Allison	Burlington, N. J.	June 28, 1814
Spinning machine, and receiving rolls of wool	Gilbert Brewster	Norwich, Conn	Mar. 13, 1824
Spinning machine, stop motion of the drawing frames	Lewis Cutting	Lowell, Mass.	May 15, 1834
Spinning machine, substitute for flier	O. G. & N. Rogers	Whitestown, N. Y.	Aug. 28, 1824
Spinning mule, carriage for cotton	William Haworth	Providence t'wn'p Pa	June 2, 1824
Spinning mule, cotton	Thomas Walker	Chester county, Pa.	June 26, 1828
Spinning mule, drums	J. Butterworth	Philadelphia, Pa.	Dec. 30, 1828
Spinning mule, head	Henry Hopkins	Providence, R. I.	Feb. 22, 1833
Spinning mule, self acting*	James Smith	Perth, Scotland	June 27, 1838
Spinning mule, self operating	Ira and A. Gay	Dunstable, N. H.	April 10, 1829
Spinning, mule, self-acting for	Dan'l Lapham, adm'r of Benj. Lapham, dec'd	Adams, Mass.	Sept. 25, 1840
Spinning, mule, self-acting for	William Mason	Taunton, Mass.	Oct. 8, 1840
Spinning, mule, self-acting, billeys, &c†	Richard Roberts	Manchester, England	Oct. 11, 1841
Spinning and quilling, with heads	Emory Russell	Long Meadow, Mass	April 18, 1814
Spinning railway, drawing head for	William B. Leonard	Fishkill, N. Y.	Sept. 16, 1833
Spinning, regulating the drag of the yarn in the operation of‡	Jesse Whitehead	Manchester, Va.	June 18, 1842
Spinning reel	Samuel McCawley	Fallston, Pa.	Dec. 2, 1834
Spinning and reeling	Caleb Shilliday & Geo. McCaston	Shelbyville, Ky.	Oct. 24, 1816
Spinning and reeling	Joseph Woodhull	Chester, N. Y.	Nov. 14, 1826
Spinning, ring spinner	David Hunter	Laurel factory, Md.	July 23, 1841
Spinning, roping	Gideon Cornell	Rensselaer co., N.Y.	July 22, 1812
Spinning, roping, cotton	William Bryant	Davidson, co., Tenn.	April 29, 1816
Spinning, roping, cotton	Paul Moody	Boston, Mass.	Jan. 19, 1821
Spinning, roping, cotton	Paul Moody	Boston, Mass.	Feb. 19, 1821
Spinning, roping, cotton	SilasShepard & C.Dean	Taunton, Mass.	Mar. 23, 1821
Spinning, roping, cotton‖	Asa Arnold	N. Providence, R. I.	Jan. 21, 1823
Spinning, roping, cotton	Gilbert Brewster	Poughkeepsie, N. Y.	Mar. 28, 1827
Spinning, roping, cotton	Asa Whitman and Joel Baker	Walpole, Mass.	July 20, 1831
Spinning, roping, cotton	John A. Bradshaw	Foxborough, Mass.	Dec. 8, 1832
Spinning, roping, cotton	Lucillius H. Moseley	Lisbon, Conn.	Nov. 19, 1833
Spinning, roping, cotton	Lewis Brewster, adm'r of Gilbert Brewster	Poughkeepsie, N. Y.	Dec. 17, 1834
Spinning, roping, cotton	William Fowler	Fishkill, N. Y.	Mar. 23, 1836
Spinning, roping, cotton	Charles Danforth	Patterson, N. J.	Feb. 18, 1841
Spinning, roping, cotton, &c	Sidney Whiting	Franklin, Mass.	Nov. 17, 1824

* Antedated Feb. 20, '34. † Antedated Dec. 16, '40. ‡ Add'l improv't Dec. 21, '42. ‖ Reissued Aug. 10, '36.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Spinning, roping, cotton, &c., by hand	John Brown	Providence, R. I.	Jan. 23, 1821
Spinning, roping, cotton and wool	John Brown	Providence, R. I.	Aug. 8, 1812
Spinning, roping, cotton and wool	William Whitehead	Patterson, N. J.	April 11, 1825
Spinning, roping, and doubling cotton, silk	James Jones	Manchester, England	May 16, 1835
Spinning, roping, flax and hemp	George Brown	Scahticoke, N. Y.	June 19, 1806
Spinning, roping, flax & hemp, &c.	Daniel Treadwell	Boston, Mass.	Feb. 3, 1834
Spinning, roping, or slubbing, woollen	Austin Steele	Waterbury, Conn.	April 1, 1830
Spinning, roping, & twisting cotton	William Whitehead, jr.	Patterson, N. J.	June 14, 1826
Spinning, roping, & twisting, from speeders.	Wm. Fowler & Rich. M. Germond	Union Vale, N. Y.	Nov. 24, 1824
Spinning, roping, and winding cotton	David Grieve	Providence, R. I.	Sept. 18, 1818
Spinning, roping, wool	Samuel Lerned	Watertown, Mass.	Aug. 3, 1815
Spinning, roping, wool	J. R. & J. B. Wheeler	Galway, N. Y.	Aug. 28, 1826
Spinning, roping, wool and cotton	Oliver Barret, jr.	Scahticoke, N. Y.	Dec. 3, 1811
Spinning, roping, wool and cotton	John Brown	Providence, R. I.	July 22, 1819
Spinning, roping, wool and cotton	Z. Knox & W. Haskins	Lowville, N. Y.	Aug. 16, 1824
Spinning, roping, wool and cotton	A. Patterson and F. Burdock	Delaware co., N. Y.	Sept. 29, 1824
Spinning, roping, wool and cotton	Francis Burdick	Kortwright, N. Y.	May 30, 1825
Spinning, roping, wool and cotton	William Carmichael	Sandlake, N. Y.	June 10, 1826
Spinning, roving	Samuel Comstock and Moses Pike	Harrisburg, Pa.	April 15, 1813
Spinning, silk, &c	George Addison and L. S. Stevens	New York	Oct. 10, 1829
Spinning silk, &c	Adam Brooks	Scituate, Mass.	June 29, 1833
*Spinning silk, &c	Harrison Holland	Northampton, Mass.	Oct. 10, 1838
Spinning silk, doubling & twisting	Jonathan Dennis, jr.	Portsmouth, R. I.	Dec. 28, 1838
Spinning silk from cocoons, machinery for	George Heritage	Chestertown, Md.	Dec. 19, 1840
Spinning, speeder for cotton roping counter-twist*	Jesse Whitehead	Manchester, Va.	May 29, 1841
Spinning, speeder, cotton	Luman Parmelee	Poughkeepsie, N. Y.	Aug. 29, 1833
Spinning speeder, cotton roving†	Samuel P. Mason	Leesville, Conn.	June 24, 1830
*Spinning, speeder, cotton, roving	William Mason	Taunton, Mass.	May 4, 1838
Spinning, speeder, counter-twist'g	George Danforth	Morton, Mass	Sept. 2, 1824
Spinning, speeder, double	Paul Moody	Boston, Mass.	April 3, 1819
Spinning, speeder, double, No. 1.	Jonathan Fish	Medway, Mass.	Dec. 7, 1820
Spinning, speeder, double, No. 2.	Jonathan Fish	Medway, Mass.	Dec. 7, 1820
Spinning, speeder, double, No. 3.	Jonathan Fish	Medway, Mass.	Dec. 7, 1820
Spinning, speeder, double, No. 4.	Jonathan Fish	Medway, Mass.	Dec. 7, 1820
Spnning, speeder, double, No. 5.	Jonathan Fish	Medway, Mass.	Dec. 7, 1820
Spinning, speeder, double,	Paul Moody	Waltham, Mass.	Dec. 30, 1820
Spinning, speeder, double,	Paul Moody	Boston, Mass.	Feb. 19, 1821
Spinning, speeder, double	William Field	N. Providence, R. I.	Oct. 6, 1835
Spinning, speeder, double combination	Jonathan Fish	Medway, Mass.	Dec. 7, 1820
Spinning, speeder, double, winding cotton	William Hines	Coventry, R. I.	Feb. 6, 1819
Spinning, speeder, double, eclipse, for cotton roping	Gilbert Brewster	Poughkeepsie, N. Y.	April 18, 1829
Spinning, speeder, flier	Peleg Arnold	Killingly Centre, Ct.	Oct. 6, 1830
Spinning, speeder, twisting	Joseph C. Dyer	Manchester, Eng.	Oct. 1, 1830
Spinning, spindle	Asa Jillson	Dorchester, Mass.	May 27, 1815
Spinning, spindle, and bobbin, for cotton	Wm. B. Leonard	Fishkill, N. Y.	Jan. 9, 1819
Spinning, spindle, cotton	Benjamin Brundred	Oldham, N. J.	July 14, 1827
Spinning, spindle, cotton	Nathaniel Rider	Dudley, Mass.	Nov. 3, 1832
Spinning, spindle, dead	Henry G. Davis	Northborough, Mass	Sept. 9, 1835
Spinning, spindle, diminishing friction	R. R. Livingston	Clermont, N. Y	Aug. 4, 1791

* Additional improvements Oct. 11, 1841. † Reissued Dec. 29, 1830.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Spinning, spindle, and flier	Asa Jillson	Roxbury, Mass	July 17, 1815
Spinning, spindle, and flier	W. T. Eddy	Ithaca, N. Y	Feb. 10, 1836
Spinning, spindle, flier and bobbin	Thomas Godden	Saddle River t'p, N.J	Feb. 11, 1833
Spinning, spindle, preventing friction	J. G. Sholtz	Pickaway town'p, O.	July 6, 1827
Spinning, spindle, rotary and stationary.	C. Jackson, St. S. Potter, & John Miller	Providence, R. I	April 2, 1835
Spinning, spindle, still and can, roping	John Irwin	Coventry, R. I	Mar. 26, 1830
Spinning, spindle, wool	Russel Phelps	Andover, Mass	Dec. 21, 1830
Spinning, splicing cotton & woollen rolls	Gardner Barton, jr	Shaftsbury, Vt	April 22, 1826
Spinning thread, of wool	William Bell	Fayette co., Ky	June 1, 1825
Spinning, throstle	Samuel Blydenburg	New York	Nov. 10, 1829
Spinning, throstle	Charles Danforth	Patterson, N. J	April 1, 1830
Spinning, throstle, bobbin & spool	Thomas Van Riper	Patterson, N. J	Aug. 16, 1826
Spinning, throstle, cotton spinner	Benjamin Brundred	Mamaroneck, N. Y	Jan. 17, 1824
Spinning, throstle frame	Henry Ruggles	New York	Nov. 24, 1829
Spinning, throstle frame, and bobbin regulator.	John Brown and John Standish.	Providence & Cranston, R. I	June 13, 1831
Spinning, throstle frame, & spinning cotton	Seth Simmons	Providence, R. I	Jan. 16, 1832
Spinning, throstle, spindle	C. Lewis & C. Taylor	Poughkeepsie, N. Y	June 26, 1822
Spinning, throstle, spindle	Gilbert Brewster	Norwich, Ct	Mar. 13, 1824
Spinning, throstle, spindle frame	Benjamin Brundred	Oldham, N. J	May 7, 1830
Spinning, throstle, wool, &c	Stephen Shallcross	New York	Jan. 21, 1814
Spinning and twisting cotton	John Thorpe	Providence, R. I	Nov. 20, 1828
Spinning, twisting, & kinking hair	Hiram Burnham	New York, N. Y	June 22, 1842
Spinning and twisting, machine for	Charles Danforth	Patterson, N. J	May 4, 1841
Spinning and twisting straw, hay, &c.	Philo G. Sheldon	Winchester, Ct	April 8, 1835
Spinning and twisting thread	Obadiah Herbert	Mt. Pleasant, N. J	Jan. 28, 1792
Spinning wheel	Amos Miner	Marcellus, N. Y	Nov. 16, 1803
Spinning wheel	Tim. Cruttenden	Poultney, Va	April 6, 1808
Spinning wheel	Ob. Seely		Aug. 6, 1808
Spinning wheel	William Drury	Brookfield, Mass	Mar. 19, 1810
Spinning wheel	James Shaw	Herkimer, N. Y	April 27, 1812
Spinning wheel	Daniel Hurlbutt	Aurelius, N. Y	Aug. 4, 1813
Spinning wheel	Harvey Wright & O. Roberts	Bristol, Ct	Mar. 26, 1814
Spinning wheel	Elias B. Sanford	Newton, Ct	April 11, 1816
Spinning wheel	James Wright	Campbell co., Ky	Feb. 28, 1817
Spinning wheel	Timothy Cruttenden	New York	May 12, 1817
Spinning wheel	Zalmon T. Bradley	Gt. Barrington, Mass	April 21, 1818
Spinning wheel	John Brown	Providence, R. I	June 12, 1818
Spinning wheel	Henry Wilson	Mendon, N. Y	Dec. 29, 1818
Spinning wheel	Chas. F. Schaffle	Lewisburg, Pa	Feb. 28, 1824
Spinning wheel	Guy Brooks	Athol, N. Y	April 2, 1824
Spinning wheel, cordage	William B. Dyer	Baltimore, Md	Feb. 27, 1808
Spinning wheel, heads	Amos Miner	Marcellus, N. Y	April 11, 1810
Spinning wheel, heads	Archelaus Putnam	Philadelphia, Pa	July 30, 1811
Spinning wheel, heads	William H. Peabody	Woodbury, Ct	Dec. 14, 1812
Spinning wheel, heads	Eli Church	Homer, N. Y	Mar. 18, 1813
Spinning wheel, heads	David Loring	Canandaigua, N. Y	Dec. 31, 1813
Spinning wheel, heads	Emory Russell	Long Meadow, Mass	April 18, 1814
Spinning wheel, heads	David Lee	Guilford, Ct	May 6, 1816
Spinning wheel, heads	I. Mudge & M. Hatch	Sherburne, N. Y	April 10, 1819
Spinning wheel, heads, accelerat'g	Diana H. Tuttle	Williamson, N. Y	May 17, 1824
Spinning wheel, heads, linen	Brown Smith & Chas. Stewart	Truxton, N. J	Dec. 8, 1814
Spinning wheel, heads, linen	Jared S. Stewart	Springfield, N. Y	April 19, 1821
Spinning wheel, improvement in	Hiram F. Wheeler	Springfield, Va	Dec. 15, 1846
Spinning wheel, linen	Benjamin Simmons	Paris, N. Y	July 20, 1820

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Spinning wheel, small	Nathan Lewis	Canandaigua, N. Y	Mar. 29, 1817
Spinning wheel, wool	Gilbert Brewster	Norwich, Ct	Feb. 27, 1824
Spinning wicks	George Dickinson	New York	Feb. 21, 1826
Spinning wool	John Griggs, jr	Ashford, Ct	Dec. 30, 1824
Spinning wool	J. Corrill and Wm. P. Rogers	Harpersfield, Ohio	June 15, 1826
Spinning wool	Benjamin Lapham	Queensbury, N. Y	June 29, 1827
Spinning wool	John Orndorff	Russelville, Ky	Nov. 10, 1829
Spinning wool	David S. Wooster	Sheldon, N. Y	Feb. 14, 1831
Spinning wool	Wm. W. Calvert, R. Southwick, & Alfred Messenger	Lowell, Mass	Mar. 31, 1832
Spinning wool*	Wm. Sykes and Geo. M. Conradt	Fredericktown, Md.	Mar. 10, 1834
Spinning wool	Asa Campbell	Kingston, Pa	June 19, 1834
Spinning wool	J. Withered	Baltimore, Md	Mar. 30, 1836
Spinning wool†	Isaac B. Hartwell	Northfield, Vt	June 7, 1839
Spinning wool by continued rotary motion	Gilbert Brewster	Norwich, Ct	Mar. 13, 1824
Spinning wool and cotton	Peter Paddleford	Lyman, N. H	May 18, 1816
Spinning wool and cotton	Jac. Sprinkel	Wythe, Va	Aug. 23, 1816
Spinning wool and cotton	Jac. Richardson	Scipio, N. Y	Oct. 16, 1816
Spinning wool and cotton	Wm. Brushnell and J. Altoffer	Harrisburg, Va	Aug. 30, 1821
Spinning wool and cotton	Francis Price	New York	Oct. 5, 1824
Spinning wool and cotton	A. S. Wiltse and Joel Farnham	Tioga, N. Y	June 28, 1825
Spinning wool and cotton	Seth Boyden	Foxborough, Mass.	Dec. 7, 1826
Spinning wool and cotton	Seth Boyden	Foxborough, Mass.	Dec. 29, 1826
Spinning wool and cotton	William Church	Birmingham, Eng	June 11, 1827
Spinning wool and cotton	Arthur Critchfield	Union township, O.	April 24, 1828
Spinning wool and cotton	David Newbrough	Riley township, O.	April 27, 1832
Spinning wool and cotton by hand	George W. Robinson	Providence, R. I	Mar. 16, 1826
Spinning wool and cotton by hand	Nathaniel Harris	Fairfield co., Ohio	Jan. 21, 1829
Spinning wool and cotton, & hemp	Theodore T. Abbott	Greenland, N. H	Feb. 26, 1828
Spinning wool and cotton from the roll	William R. McCall	Vincennes, Ind	May 12, 1828
Spinning wool, and drawing	William Humphreys	Humphreysville, Ct.	Oct. 4, 1811
Spinning wool, domestic	Lafford Totten	Schoharie, N. Y	Nov. 13, 1824
Spinning, wool spinner, domestic	John Nelson	Jefferson, Ohio	Jan. 27, 1841
Spinning wool and yarn	John Sharp	Whitestown, N. Y.	Mar. 13, 1822
Spinning woollen roving	Edgar M. Titcomb	Andover, Mass	July 29, 1837
Spinning woollen slubbing	Charles Atwood	Middletown, Ct	Mar. 10, 1830
Spools and bobbins	William Clegg	Norwich, Ct	Feb. 24, 1830
Spools and bobbins	Simeon Presbrey, jr	Canton, Mass	July 26, 1832
Spools, frame	Elihu Robinson	Augusta, Mass	Mar. 16, 1816
Stamping or painting on fabrics, design for ‡	Spurkman & Kelsey	New York, N. Y	July 25, 1846
Straw bonnets, pressing	Preston Whiting	Hopkins, Mass	June 11, 1819
Straw bonnets, pressing	Eleazer Smith	Walpole, Mass	July 15, 1820
Straw bonnets, pressing	Simon Pettee	Foxborough, Mass.	Sept. 14, 1825
Straw or chip hats, pressing	Samuel Prince	New York	Aug. 31, 1808
Straw and Leghorn bonnets, &c., pressing	Otis Plimpton	Foxborough, Mass	Dec. 28, 1832
Straw, plait, cleaning.—*See Class* 4.			
Straw, plait, trimming & dressing	Daniel Atherton	Providence, R. I	April 26, 1811
Straw, weaving, with silk or thread	Mary Kies	Killingly, Ct	May 5, 1809
Straw, whitening.—*See Class* 4.			
Straw, wove plait	William Pond	Wrentham, Mass	Feb. 28, 1811
Stuffs, in which the fibres of various materials are united with adhesive mixtures, machinery for the manufacture of.	Thos. R. Williams	Newport, R. I.; now in London	April 24, 1840

* Reissued March 30, 1836. † Antedated Feb. 22, 1839. ‡ Antedated March 23, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Threads or cords, worsted or other, dressing or finishing.	Benjamin B. Tilt and James Skinner	Roxbury, Mass.	July 8, 1843
Tenter bars, circular.	Stephen R. Parkhurst	Meriden, R. I.	Dec. 2, 1834
Tenter bars, circular.	Stephen R. Parkhurst	Worcester, Mass.	Oct. 28, 1835
Thread, packing.	Reuben Landon	Hartford, Conn.	June 20, 1821
*Thread, preventing from waste	John Golding	Dedham, Mass.	Aug. 15, 1837
Thread, waste, reducing to cotton, wool.	Ogden Griswold	Hartford, Conn.	July 17, 1837
Thread, waste, reducing to cotton, wool.	William Gray	Hebron, Conn.	July 29, 1837
Throstle for spinning	Benjamin Brundred	Patterson, N. J.	Sept. 9, 1845
Tow line.—*See Class* 7.			
Twine or small cord, machinery for making.	Hugh McCubbin	Petersburg, Va.	Aug. 17, 1843
Twine, tarring and spooling	Israel Decker	Boston, Mass.	April 3, 1819
Twisting, reeling, and doubling machine.	H. E. and J. Haight	New York	Aug. 30, 1813
Twisting, self-supplying machine.	Walter Hunt	New York	June 11, 1829
Wadding, pelisse, improvement in the manufacture of.	Darius Goff	Rehoboth, Mass.	Jan. 15, 1846
Warp, net fabrics.	G. W. Heard, assignee of J. S. Glover	Ipswich, Mass.	June 27, 1846
Weaver's harness.	Kassimer Vogel	Lowell, Mass.	Dec. 10, 1846
Weavers' or bowline knots, machinery for tying.	Peter Moulton	New Rochelle, N. Y.	Aug. 24, 1846
Whipper, cotton	William Hopkins	Plainfield, Conn.	March 6, 1823
Whipper, cotton, and cleaning	Samuel P. Mason	Killingly, Conn.	July 8, 1834
Whipper, cotton, cylindrical grate	James S. Simmons	Scituate, R. I.	Oct. 1, 1830
Whipper, cotton, oblique	Lucien Osgood	Abbington P. O., Ct.	Oct. 27, 1835
Whipper, cotton, revolving	Elisha Baker	Warwick, R. I.	June 4, 1830
Winding cotton	David Brown, jr	Warren, R. I.	Feb. 5, 1807
Winding quills	Levi Ruggles	Boston, Mass.	Aug. 16, 1810
Winding quills	Francis Jones	New York	May 23, 1821
Winding slubbing from the card, conical spool	Charles Atwood	Middletown, Conn.	Nov. 1, 1830
Winding spooling cotton, roving.	William H. Elliott	Leicester, Mass.	Dec. 28, 1833
Winding, spooling, and weaving.	Eb. Stowell	Middlebury, Vt.	Feb. 28, 1815
Winding spools and bobbins	Walter Janes	Ashford, Conn.	Aug. 20, 1810
Winding spools and bobbins	Augustus Sherwood		Oct. 18, 1814
Winding spools and bobbins	Cal. Flag and O. Wright	Hudson, N. Y.	June 29, 1816
Winding spool yarn	Paul Moody	Boston, Mass.	March 9, 1816
Winder, socket, bobbin	John Thorp and Silas Shepperd	Taunton, Mass.	Oct. 14, 1816
Winding, spooling wool from the breaker carding machine.	Zachariah Allen	Providence, R. I.	Sept. 10, 1839
Wool burring.	Henry Concklin	Poughkeepsie, N. Y.	July 6, 1839
Wool, burring and cleaning.	Theodore Ely	New York	May 16, 1845
Wool, cleaning burs from	Theodore Ely	Poughkeepsie, N. Y.	Sept. 17, 1838
Wool, cleaning burs from, on the skin	Lewis S. Miller	Rochester, N. Y.	Jan. 31, 1831
Wool cleaning	Samuel Couillard, jr.	Boston, Mass.	Mar. 30, 1833
Wool cleaning	Michael S. Simpson	Boston, Mass.	July 7, 1835
Wool cleaning	J. Wolcott and C. W. Brown	Roxbury, Mass.	Oct. 18, 1837
Wool, cleaning burs from	Erastus Tracy	Poughkeepsie, N. Y.	Dec. 20, 1837
Wool, cleansing from burs, &c., and ginning cotton.	Milton D. Whipple	East Douglass, Mass.	Oct. 28, 1840
*Wool, combing.	The New England Company, ass'ee of Whitwell, Bond, and Seaver, assignees of Michael H. Simpson, assig'ee of Samuel Couillard, jr.*	Massachusetts	July 7, 1835

* Reissued June 16, 1836. July 6, 1839.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Wool, combing, &c., combing and preparing.	Francis A. Calvert	Lowell, Mass.	Oct. 9, 1841
Wool combing, machine for	Charles G. Sargent	Lowell, Mass.	Oct. 7, 1842
Wool, combing.	Francis A. Calvert	New York, N. Y.	Dec. 27, 1843
Wool, combing*	George E. Donisthorpe	Bradford, England	Sept. 11, 1844
Wool, combing.	Ezra Gould	Patterson, N. J.	Oct. 9, 1844
Wool, composition to start the oil	John Goulding	Dedham, Mass.	Aug. 24, 1827
Wool, cotton, &c., cleaning from burs.	William W. Calvert and Alanson Crane	Chelmsford, Mass.	July 16, 1841
Wool and cotton, ginning, burring	Francis A. Calvert	Lowell, Mass.	Nov. 25, 1841
*Wool, cotton, &c., picking and opening.†	George C. Kellogg and Phineas Gillett	New Hartford, Conn.	April 30, 1840
Wool, cotton, cleaning rollers	Samuel Sawyer	Boston, Mass.	Mar. 30, 1833
Wool or flax, comber	William W. Calvert	Lowell, Mass.	July 2, 1836
*Wool or flax, to brush into teeth‡	George W. Lyman, assignee of William W. Calvert	Boston, Mass.	Sept. 18, 1835
Wool, hair, &c., forming web without spinning.	J. Arnold and G. G. Bishop	Norwalk, Conn.	Oct. 20, 1836
Wool, manufacturing‖	John Goulding	Dedham, Mass.	Dec. 15, 1826
Wool, manufacturing	John Goulding	Dedham, Mass.	April 27, 1827
Wool, manufacturing	John Goulding	Dedham, Mass.	July 10, 1827
Wool, manufacturing	John Goulding	Dedham, Mass.	Feb. 16, 1829
Wool, manufacturing	John Goulding	Dedham, Mass.	Feb. 16, 1829
Wool, manufacturing	John Goulding	Dedham, Mass.	June 11, 1829
Wool, manufacturing	John Goulding	Dedham, Mass.	July 21, 1829
Wool, picking, and separating burs	Francis A. Calvert	New York, N. Y.	June 3, 1843
Wool, preparing for worsted	Joseph Banford	Philadelphia, Pa.	Mar. 18, 1813
Wool, washing, on the sheep	Charles Harris	Snowhill, Ohio	Oct. 1, 1830
Wringing dyes from cloth	William Nelson	Batavia, N. Y.	Nov. 13, 1828
Yarn, cotton, without the aid of twist.	Erastus Wolcott	Newport, N. Y.	Dec. 11, 1821
Yarn, drawing, and forming into readies.	Robert Graves	Boston, Mass.	Nov. 22, 1820
Yarn drawing, frame for regulating	Jos. Pray and C. Stafford	East Killingly, Conn.	Nov. 12, 1846
Yarn, dressing, preparatory to weaving.	Samuel Batchelder	Saco, Maine	June 22, 1832
Yarn doubling, twisting and reeling	George Levan	Gap, Pa.	July 20, 1846
Yarn, equalizing the strain upon	Robert Graves	Boston, Mass.	Nov. 22, 1820
Yarn, preparing for weaving	H. P. Franklin and W. B. Windsor	Providence, R. I.	Aug. 8, 1817
Yarn, rolls, forming on the shuttle, bobbin.	John Thorpe	Providence, R. I.	Nov. 20, 1819
Yarn, sizing, by steam	Hannibal Fletcher	Shelburne, Vt.	July 8, 1843
Yarn, tarring	John Thursby	Rushwick, N. Y.	May 2, 1843
Yarn, washing and cleaning	Sands Olcott	Philadelphia, Pa.	April 11, 1840
Yarn, woollen	William B. Walker	Hillsborough Bridge, N. H.	July 1, 1836

* Eng. pat. Nov. 25, '43. † Antedated October 30, '39. ‡ Reissued Sept. 9, 43. ‖ Reissued July 29, '36.

Appendix B

Chronological List of Textile Patent Models in the Smithsonian Collections, 1819–1910

There are more than four thousand patent models in the collection of the National Museum of American History's Division of Textiles. Most of these models were selected by Dr. Frederick Lewton in 1926 when the Patent Office disposed of its collection. Prior to 1880, a model, along with the inventor's written specification and drawing, was required to obtain a patent. Even after the model requirement was dropped in 1880, inventors continued to submit models.

The Patent Office fire of 1836 destroyed all of the models that had accumulated up to that time. Shortly thereafter, the Patent Office undertook a restoration program to replace the most important drawings and models. This restoration program continued until 1849, during which time several thousand drawings and models were restored.

The listing does not include sewing machine patent models and attachments (approximately 1600). For a complete history of sewing machines and a guide to the Division of Textile's collection, Grace Cooper's book, *The Sewing Machine: Its Invention and Development*, is suggested as a reference.

This listing is part of a special computerization project, carried out by the author, to compile a database on the estimated 10,000 models in the National Museum of American History. The textile patent model list spans the years 1819 through 1910.

The following information is given for each patent: patent number, inventor, type of invention, and year of patent issuance. Other items not shown here but included in the database are names of additional inventors, month and day of patent, city and state residence of inventor, assignee, Smithsonian division in which model is kept, Smithsonian catalog number and photographic negative number (if available). The database computer project is ongoing and will continue to evolve as new information becomes available. As is generally true of computerized databases, it is possible to select and sort records by any of the information categories listed above. Should researchers be interested in further information concerning the patent model collection of the Smithsonian National Museum of American History, they should contact the author. The Division of Textiles is interested in learning more about our patent models and would welcome additional information.

Patent	Invention	Inventor	Year
3082x	Cloth Shearing Machine	Parsons, Seth	1819
5193x	Loom, Power, Check & Plaid	Burt, Enoch	1828
8191x	Cloth Shearing Machine	Daniels, Reuben	1834
18952½x	Combing Machine, Wool	Couillard, Jr., Samuel	1835
9098x	Combing Machine, Wool & Flax	Calvert, William W.	1835
9743x	Spinning & Twisting Silk Machine	Brooks, Adams	1836
162	Loom Shuttle Tongue	Thorp, Comfort B.	1837
291	Loom Temple, Self Adjusting	Mason, Samuel P.	1837
350	Cloth Napping Machine	Swazey, Benjamin	1837
352	Doubling & Twisting Machine, Thread	Golding, John	1837
490	Loom, Hair Cloth	Harvey, Charles	1837
491	Loom, Fancy Power	Crompton, William	1837
544	Loom Heddle, Metallic	Hartford, Benjamin	1837
546	Loom, Knotted Counterpane	Bigelow, Erastus B.	1838
595	Loom, Power	Fairman, Elijah	1838
596	Cordage Machine	Day, Moses	1838
710	Spinning Wheel, Domestic	Wheeler, Hiram F.	1838
724	Speeder For Roving Cotton	Mason, William	1838
758	Loom Let Off & Take Up	Kimball, Stephen	1838
781	Spindle & Flyer	Yerkers, Richard E.	1838
823	Printing Machine, Calico	Sibley, Alden	1838
863	Card, Hand	Faber, George	1838
977	Spinning & Doubling Thread Machine	Holland, Harrison	1838
987	Loom Temple	Angell, Emory A.	1838
1015	Cloth Shearing Machine	Parsons, Seth	1838
1028	Carpet	Humphries, John	1838
1043	Spindle & Flyer	Howarth, John	1838
1051	Loom Harness	Thorp, John	1838
1080	Loom Temple	Gibbs, Kendall	1839
1228	Cordage Machine	Hathaway, Alfred	1839
1367	Reeling, Spinning & Twisting Silk	Pratt, Jacob	1839
1421	Knitting Machine	Walker, Richard	1839
1485	Loom Shuttle	Baldwin, James	1840
1498	Loom Heddle	Thorp, John	1840
1563	Loom Heddle, Metallic	Strong, Charles	1840
1575	Picking Machine, Wool & Cotton	Kellogg, George	1840
1782	Rag Dressing Machine	Smith, Emory	1840
1834	Knitting Machine, Circular	Hutchinson, Benjamin	1840
1838	Loom Temple, Rotary	Draper, George	1840
1902	Cloth Stretching Machine	Tillson, John	1840
1962	Carding Machine	Crane, Ebenezer	1841
1983	Spinning, Cotton Roving	Danforth, Charles	1841
1984	Braid Trimming Machine, Straw	Robbins, Henry H.	1841
2108	Speeder, Trostle & Cap	Whitehead, Jesse	1841
2175	Wool & Cotton Cleaner	Calvert, William	1841
2184	Spinning Machine, Ring	Hunter, David	1841
2230	Cloth Folding & Measuring Machine	Spaulding, Joel	1841
2255	Fulling Machine, Felt Cloth	Wells, Henry A.	1841
2262	Hair Seating, Figured Damask	Ross, Samuel	1841
2278	Combing Machine, Wool	Calvert, Francis A.	1841
2373	Cotton Gin	Calvert, Francis A.	1841
2377	Loom Temple	Craig, William	1841
2458	Silk Reeling Machine	Jones, William H.	1842
2464	Loom Temple, Rotary	Draper, George	1842
2489	Loom Shuttle	Coburn, John H.	1842
2493	Knitting Machine	French, Arasmus	1842
2511	Carding & Spinning Machine	Chase, Moses	1842
2574	Loom, Power	Nield, James	1842
2576	Spinning Frame, Cap	Danforth, Charles	1842
2605	Cloth Napping Machine	Taylor, John	1842

Patent	Invention	Inventor	Year
2616	Loom	Hendrick, Benjamin W.	1842
2625	Loom, Carpet	Bigelow, Erastus B.	1842
2639	Loom, Carpet	Bigelow, Erastus B.	1842
2680	Spinning, Twisting & Kinking Hair	Burnham, Hiram	1842
2696	Loom, Jacquard, Carpet	Flint, Thomas	1842
2741	Loom, Power, Counterpane	Bigelow, Erastus B.	1842
2744	Loom, Power, Counterpane	Bigelow, Erastus B.	1842
2755	Loom Shuttle	Leavitt, Daniel	1842
2798	Loom, Fish Net	Hoesen, Levi Vaughn	1842
2805	Combing Machine, Wool	Sargent, Charles G.	1842
2935	Loom, Power	Downing, Frederick	1843
3005	Loom, Power	Sanford, George S.	1843
3062	Loom Shuttle Motion	Cunningham, Robert P.	1843
3075	Spinning Machine, Cotton & Wool	Wilcox, Amander N.	1843
3089	Speeder, Double	Davoll, William C.	1843
3094	Carding Machine Rollers	Barbour, Horace	1843
3155	Thread Dressing & Finishing Machine	Tilt, Benjamin	1843
3174	Carding Machine	Boynton, John	1843
3250	Spinning, Cotton Roving	Graves, Jacob	1843
3275	Knitting Machine, Stocking	Burt, Henry	1843
3397	Loom Let Off	Brayton, William H.	1844
3436	Knitting Machine, Straight	Walker, Richard	1844
3452	Spinning, Hemp	Montgomery, William	1844
3469	Cloth Folding & Measuring Machine	Durgin, Silas C.	1844
3511	Loom Temple	Lane, Isaac C.	1844
3553	Spindle & Flyer	Stevens, Phineas	1844
3599	Loom, Power	Nield, James	1844
3684	Silk Reel	Harris, James S.	1844
3766	Spinning Machine, Ring & Hook	Thorp, John	1844
3785	Combing Machine, Wool	Gould, Ezra	1844
3843	Carding Machine, Self Stripping	Barbour, Horace	1844
3912	Cotton Cleaning Machine	McCarthy, Fones	1845
3925	Loom Temple	Bigelow, Erastus B.	1845
3926	Speeder Flyer	Bigelow, Erastus B.	1845
3934	Rope Making Machine	Townsend, Edward S.	1845
3948	Loom Let Off & Take Up	Bigelow, Erastus B.	1845
3954	Loom, Power	Nield, James	1845
3955	Loom Stop Motion	Nield, James	1845
4033	Hat Nap Polishing Machine	Loudon, John	1845
4039	Knitting Machine, Netting	Cornelius, John	1845
4215	Spinning Bobbin Driver	Baxter, William	1845
4277	Roving, Laying In Cans	Tatham, John	1845
4281	Spindle Tube, Live	Anderson, Alexander	1845
4372	Cotton Wadding Machine	Essex, Jeremiah	1846
4379	Loom Temple	Palmer, Arnold	1846
4514	Picker Rivet	Holbrook, Benjamin A.	1846
4562	Spinning Machine, Cap	Peters, Jacob	1846
4608	Net Making Machine	McMullen, John	1846
4644	Loom, Carpet	Sherwood, William	1846
4645	Loom Treadle Cam, Twill	Garsed, Richard	1846
4649	Doubling, Twisting & Reeling Yarn	Levan, George	1846
4683	Bobbin, Flyer & Spindle	Walcott, Alexander S.	1846
4696	Loom, Carpet	Bigelow, Erastus B.	1846
4707	Net Making Machine	Moulton, Peter	1846
4714	Rope Making Machine, Wire	Newall, Robert S.	1846
4881	Loom Harness & Heddle	Vogal, Kasimer	1846
4892	Spinning Wheel	Wheeler, Hiram F.	1846
4993	Cloth Machine Fold & Measure	Woodman, Elbridge G.	1847
4999	Cotton Cleaning Machine	Livingston, Robert M.	1847

Patent	Invention	Inventor	Year
5008	Cotton Cleaning Machine	Needham, Rozell	1847
5018	Combing Machine, Wool	Sargent, Charles G.	1847
5020	Loom, Carpet	Bigelow, Erastus B.	1847
5023	Knitting Machine	Vickerstaff, Joseph	1847
5085	Spinning Machine Drawing Attachment	Evans, John	1847
5280	Spinning Machine	Obenchain, Matthew W.	1847
5318	Loom	Collins, Richard	1847
5337	Roving, Laying In Cans	Strange, Joseph W.	1847
5346	Rope Making Machine, Wire	Townsend, Edward S.	1847
5378	Spinning Machine	Dodge, George H.	1847
5379	Loom Shuttle Box Motion, Power	Nield, James	1847
5450	Loom	Norfolk, Edward	1848
5484	Picker, Wool	Kellogg, George C.	1848
5628	Loom Shuttle	Lawson, Peter	1848
5754	Cloth Stretching & Drying Apparatus	Bigelow, Erastus B.	1848
5797	Loom Temple	Peck, Benjamin	1848
5851	Doubling & Twisting Machine, Yarn	Lyle, Thomas	1848
5891	Loom Treadle Harness Motion	Haworth, James	1848
6008	Shears, Tailor	Warner, Benjamin J.	1849
6014	Drawing Frame Stop Motion	Danforth, Charles	1849
6082	Rope Making Machine, Wire	Roebling, John A.	1849
6084	Spinning Machine, Hemp	Pedrick, William	1849
6143	Loom Temple	Day, Lewis	1849
6144	Loom, Brussels Carpet	Draper, George	1849
6153	Loom, Brussels Carpet	Bigelow, Erastus B.	1849
6157	Loom Take Up	Boyd, Amos H.	1849
6159	Loom Let Off, Positive	Meyers, Jeremiah	1849
6170	Loom Shuttle Motion	Goodyear, Robert B.	1849
6176	Rope Making Machine	Morrison, Benjamin	1849
6186	Loom, Brussels Carpet	Bigelow, Erastus B.	1849
6229	Warping Guide	Hayden, Whiting	1849
6316	Loom, Pile Fabric, Narrow	Faulkner, Augustus	1849
6344	Spinning Machine Spindle	Eastman, Arthur M.	1849
6388	Spinning Machine, Hemp	Hibbard, William G.	1849
6412	Rug Making Machine	Hodgman, Daniel	1849
6435	Spooling Machine, Yarn	Dodge, George H.	1849
6441	Rope Laying Machine	Guild, Martin	1849
6487	Loom, Power	Wilson, John	1849
6539	Carding Machine	McCarty, John	1849
6570	Spinning Mule, Self Acting Regulator	Sanger, Ebenezer C.	1849
6572	Spindle & Flyer	MacLardy, William	1849
6691	Loom Harness Weaving Machine	Holton, Jr., Simeon	1849
6785	Lapping Machine	Campbell, Samuel	1849
6797	Loom, Figured Fabric	Reynolds, Joseph	1849
6813	Loom	Faulkner, Augustus	1849
6823	Loom	Bachofner Henry	1849
6832	Loom, Bat Wing Pick	Lightbrown, Roger	1849
6845	Loom, Figured Fabric	Garsed, Richard	1849
6911	Fringe Twisting Machine, Shawl	Whipple, Milton D.	1849
6928	Spinning Machine, Hemp	Van Riper, Garret	1849
6938	Spinning Head	Jenks, Alfred	1849
6939	Loom, Figured Fabric	Marshall, Moses	1849
6942	Cord Making Machine	Nichols, William E.	1849
6986	Loom Shuttle Box, Power	Goodyear, Robert	1850
7028	Spinning Machine Spindle & Bobbin	Reed, Josiah G.	1850
7058	Spinning Machine Bobbin Driver	Pearl, Oliver	1850
7072	Carding Machine, Wool	Jackson, Charles	1850
7112	Loom Cloth Measuring Attachment	Webster, John G.	1850
7130	Rope Making Machine	Whipple, Cullen	1850
7137	Loom, Figured Fabric	Eccles, Samuel	1850
7165	Spinning Machine Drawing Regulator	Hayden, Whiting	1850
7168	Loom, Pile Fabric	Johnson, John	1850

Patent	Invention	Inventor	Year
7180	Loom, Pile Fabric	Bryant, Mertoun C.	1850
7228	Printing, Floor Oil Cloth	Powers, Nathaniel B.	1850
7314	Cloth Measuring Instrument	Whitin, E.F.	1850
7370	Buckle, Suspender	Scarlett, William	1850
7387	Loom, Power	Shuttleworth,John	1850
7417	Loom Shuttle Motion	Kelly, Oliver A.	1850
7452	Loom, Pile Fabric	Bryant, Mertoun C.	1850
7502	Cloth Folding Machine	Allen, Zachariah	1850
7509	Knitting Machine	Hollen, Joseph	1850
7614	Spinning Machine, Hand	Current, David	1850
7664	Rope Making Machine	Evans, Henry	1850
7687	Loom Shuttle	Murkland, William	1850
7714	Loom, Figured Fabric	Babbett, Avery	1850
7717	Loom Let Off & Take Up	Boyd, Amos H.	1850
7759	Spinning, Bobbin & Cop Builder	Rouse, Wanton	1850
7803	Loom Shuttle Motion	Wilcox, Thomas T.	1850
7876	Loom, Seamless Bag	Northrop, Sheldon	1851
7884	Loom, Tapestry Carpet	Bigelow, Erastus B.	1851
7898	Loom, Pile Carpet	Bigelow, Erastus B.	1851
7925	Loom Shuttle Box, Revolving	Burt, Enoch	1851
7939	Loom Heddle	Judkins, Charles T.	1851
7982	Loom, Carpet	Bigelow, Erastus B.	1851
7983	Loom, Jacquard, Pile Fabric	Bigelow, Erastus B.	1851
7988	Loom Cylinder For Figuring	Hastings, Eliakim M.	1851
8172	Knitting Machine	Pepper, John	1851
8240	Cloth Folding Machine	Ambrose, D. R.	1851
8368	Loom Temple, Self Acting	Jillson, Arnold	1851
8371	Picker, Waste	Sargent, Charles G.	1851
8390	Loom Shuttle	Litchfield, Laroy	1851
8424	Fringe Machine	Nesmith, John	1851
8506	Loom Shuttle Motion	Perry, George W.	1851
8539	Loom, Pile Carpet	Bigelow, Erastus B.	1851
8553	Loom, Bag	Baldwin, Cyrus	1851
8563	Cloth Stretching & Drying Apparatus	Barrows, Thomas	1851
8586	Loom Temple	Dutcher, Elihu	1851
8649	Cloth Cutting Apparatus, Pile	Johnson, John	1852
8656	Loom, Pile Fabric	Maxwell, Charles A.	1852
8778	Printing Machine, Floor Cloth	Savage, Simeon	1852
8798	Carpet	Crossley, Thomas	1852
8807	Spinning Machine Spindle Washer	Robbins, Horace T.	1852
8810	Loom Pattern Card, Jacquard	Thomas, Samuel	1852
8825	Cordage Machine	Joslin, William	1852
8874	Loom, Fancy	Jenks, Barton	1852
8875	Reeling Machine	Macy, Elias	1852
8902	Loom Shuttle, Hair Cloth	Dewey, Daniel S.	1852
8997	Spinning Frame, Cop	Dodge, George H.	1852
9040	Cordage Machine	Perry, David	1852
9101	Cordage Machine	Peer, John W.	1852
9162	Loom Harness Motion	Blanchard, Charles W.	1852
9168	Loom, Figured Fabric	Eccles, Samuel	1852
9188	Loom, Pile Fabric	Richardson, Samuel	1852
9257	Clothes Pin	Aldrich, Samuel	1852
9263	Loom Shuttle Guide	Robbins, Horace T.	1852
9377	Loom Harness, Counterbalancing	Greenhalgh, James	1852
9387	Loom, Seamless Bag	Mendenhall, Stephen C.	1852
9388	Loom, Hand	Mendenhall, Stephen C.	1852
9401	Loom, Carpet	Van Riper, John A.	1852
9414	Cordage Machine	Jennings, Hezekiah T.	1852
9417	Loom Pincer, Pile Fabric	Faulkner, Augustus	1852
9496	Cloth Measure	Woodworth, William H.	1852
9507	Loom Shuttle	Tucker, William	1852
9545	Loom, Jacquard	Everett, Edward	1853

Patent	Invention	Inventor	Year
9603	Loom	Townshend, William	1853
9626	Knitting Machine, Straight	Mansfield, William	1853
9670	Picker & Willower Feed Motion	Calvert, Francis A.	1853
9718	Knitting Machine	Mee, John	1853
9795	Loom, Jacquard	Elder, John A.	1853
9814	Bobbin	Clark, Horatio	1853
10096	Loom, Coach Lace	Murrill, James H.	1853
10135	Loom, Power	Mason, William	1853
10173	Loom Harness	Vogal, Kasimer	1853
10205	Loom Harness Motion	Greenhalgh, Jr., James	1853
10206	Loom Temple	Greene, Jerome B.	1853
10222	Loom, Pile Fabric, Wire Shifting	Bigelow, Erastus B.	1853
10241	Loom	Townshend, William	1853
10252	Loom Shuttle Box Mechanism	Kelly, Oliver A.	1853
10290	Loom, Power	Baird, William	1853
10298	Carding Machine, Cleaning Cards	Wellman, George	1853
10311	Clothes Pin	Hotchkiss, F.S.	1853
10335	Loom Shuttle	Carroll, David	1853
10382	Loom, Power	Shuttleworth, John	1854
10453	Cloth Fulling Machine	Jennings, James	1854
10484	Carpet Bag	Thring, Frederick J.	1854
10545	Cloth Stretching & Drying Apparatus	Stearns, Daniel	1854
10578	Cotton Picker Cylinder	Pitts, James	1854
10599	Reeling Machine	Levan, George	1854
10866	Rope Making Machine	Robinson, Jr., William	1854
10876	Flax Dressing Machine	Norfolk, E.L.	1854
10910	Knitting Machine	Hopkins, Israel M.	1854
10913	Combing Machine, Wool	Sargent, Charles G.	1854
10980	Knitting Machine	Barsantee, John H.	1854
10986	Cloth Cutting Machine	Harraday, John	1854
11038	Carpet, Cut Pile	Crossley, Thomas	1854
11070	Carding Machine Teeth	Montgomery, William	1854
11106	Spinning Machine	Victory, Edmund	1854
11118	Printing, Woolen & Other Goods	Crossley, Thomas	1854
11120	Cloth, Double	Fay, Samuel	1854
11145	Cloth Folding & Measuring Machine	Wright, William C.	1854
11199	Cotton Combing Machine	Noble, James	1854
11202	Cordage Machine	Tyler, Philos B.	1854
11279	Spinning Mule, Self Acting	Wright, George	1854
11342	Winding Machine, Rope or Yarn	Tyler, Philos B.	1854
11434	Card Teeth Sticking Machine	Coats, G. W.	1854
11436	Warping & Dressing Yarn	Thomas, Samuel	1854
11448	Carding Machine, Cleaning Cards	Woodman, Horace	1854
11475	Speeder Stop Motion	Cutting, Lewis	1854
11512	Braiding Machine	Bazin, James A.	1854
11534	Combing Machine, Wool	Sargent, Charles G.	1854
11554	Knitting Machine	Jackson, George	1854
11564	Carpet, Two Ply	Crossley, Thomas	1854
11643	Ribbon, Velvet	Eastman, Augustus M.	1854
11719	Loom Harness Clasp	Copeland, George	1854
11720	Knitting Machine	Corwin, Joseph A.	1854
11775	Spinning Machine, Rope&Cordage	Carpenter, Jesse	1854
11790	Loom	Mendenhall, Stephen C.	1854
11833	Loom	Jenks, Barton H.	1854
11834	Carpet Manufacture, Chenille	McNair, John G.	1854
11865	Cotton Picker	Kitson, Richard	1854
11919	Loom Beam	Thomas, Samuel T.	1854
11995	Knitting Machine	Hollen, Joseph	1854
12012	Washing Machine	Wheeler, William	1854
12016	Rope & Cordage Making Machine	Woodworth II, Arad	1854
12040	Yarn Making Machine	Taylor, James	1854

Patent	Invention	Inventor	Year
12050	Loom	Bonelli, Gaetan	1854
12055	Spinning Machine, Throstle, Cotton	Danforth, Charles	1854
12120	Loom	Brigham, Abram	1855
12138	Roving Size Regulator	Pearson, Jr., Samuel	1855
12236	Loom Temple	Allen, John H.	1855
12457	Loom, Buttonhole	Gee, William V.	1855
12532	Spinning Machine, Wool	Stoddard, F.S.	1855
12565	Loom, Gauze	Van Riper, Lewis	1855
12581	Spinning Machine, Wool	Bigelow, Augustus E.	1855
12582	Roving Frame Throstle & Cap	Bigelow, Augustus E.	1855
12596	Loom Shedding Motion	Irish, William S.	1855
12635	Cotton Gin	Mell, J.B.	1855
12668	Cord Winding Machine	Boardman, Byron	1855
12780	Loom Shuttle	Litchfield, Laroy	1855
12781	Loom Shuttle	Marble, Ezra P.	1855
12879	Loom Temple	Tilton, Jeremiah C.	1855
12889	Rope Making Machine	Woodworth III, Arad	1855
12896	Knitting Machine Stop Motion	Cushman, Robert	1855
13022	Loom	Whiteside, William	1855
13152	Loom Harness Making Machine	Senneff, Jacob	1855
13165	Knitting Machine	Fowler, Thomas	1855
13267	Thread Twisting Machine, Sewing	Kelsea, Harold	1855
13284	Loom Picker Stick Check	Wood, Edward	1855
13289	Knitting Machine	Pepper, John	1855
13290	Wool Preparation for Cleaning	Reinhardt, Albert	1855
13309	Rope Making Machine	Harris, John	1855
13391	Braiding Machine	Hull, Liveras	1855
13413	Loom Temple	Smith, James	1855
13462	Engraving Machine, Calico Roller	Hope, John	1855
13543	Cloth Machine, Fold & Measure	Elliot, Joseph D.	1855
13564	Cotton Cleaning Machine	Brown, Samuel W.	1855
13571	Loom, Suspender Webbing	Gee, William V.	1855
13578	Picking & Combing Machine	Kitson, Richard	1855
13621	Knitting Machine	Powell, Joseph	1855
13693	Knitting Machine	Doolittle, John H.	1855
13724	Loom	Leach, James O.	1855
13726	Spinning Frame, Ring & Traveler	Luther, Henry	1855
13752	Spinning Mule, Self Acting	Harris, John	1855
13795	Spinning Frame, Throstle	Morse, Joseph	1855
13818	Yarn Dyeing & Cloth Printing Machine	Henderson, Thomas	1855
13862	Loom Attachment, Pile Fabric	Bigelow, Erastus B.	1855
13898	Cotton Gin Opener & Feeder	Clarke, Major V.	1855
13936	Loom, Pile Fabric	Bigelow, Erastus B.	1855
13954	Spindle Step, Mill	Parker, Isaac N.	1855
13970	Fabric, Woven	Healey, John	1855
14000	Loom, Wire	Smith, George W.	1855
14222	Loom Let Off, Power	Bigelow, Erastus B.	1856
14262	Clothes Pin	Towers, William H.	1856
14285	Loom, Pile Fabric	Johnson, John	1856
14292	Loom Temple	Reynolds, Rensselaer	1856
14401	Hat Pressing Machine	Kinsman, Samuel A.	1856
14463	Winding Frame Cone Tubes	McCrone, John	1856
14481	Carding Machine	Wellman, George	1856
14590	Loom	Bigelow, Erastus B.	1856
14725	Cotton Gin	Kinyon, James H.	1856
14815	Felted Yarns Manufacture	Johnson, Moses A.	1856
14938	Rope & Cordage Making Machine	Dutcher, William R.	1856
15008	Hat Felting Machine	Gray, Sylvester H.	1856
15016	Carding Machine, Wool	Nowell, Foster	1856
15186	Loom	Knowles, Lucius J.	1856

Patent	Invention	Inventor	Year
15291	Loom, Jacquard	Goulding, John	1856
15295	Loom	Horstmann, William J.	1856
15313	Carding Machine Top Flats	Woodman, Horace	1856
15484	Knitting Machine	Goffe, Augustus J.	1856
15492	Knitting Machine	Park, Sidney	1856
15717	Loom, Jacquard	Cook, James C.	1856
15767	Carpet, Ingrain	Kerr, David B.	1856
15781	Carding Machine	Shattuck, A.D.	1856
15929	Hat Sizing	McCracken, Joseph	1856
16028	Spinning Machine, Throstle	Smith, Joel	1856
16037	Loom, Carpet	Smith, Alexander	1856
16196	Carding Machine Top Flats	Walton, William H.	1856
16248	Loom, Shade Cord	Nelson, Thomas	1856
16370	Loom, Pile Fabric	Bigelow, Erastus B.	1857
16405	Loom Let Off	Bartlett, Stephen	1857
16437	Carpet, Double Pile	Goulding, John	1857
16463	Speeder	Brown, James S.	1857
16657	Spinning Machine Flyer	Sawtell, John N.	1857
16685	Gig Mill, Napping Cloth	Gesner, Ernest	1857
16734	Loom Shuttle	Knowles, Lucius J.	1857
16744	Card Cylinder, Machine Grinding	Parker, Jonathan	1857
16824	Loom Picker Motion, Power	Cheney, John L.	1857
16842	Rope Manufacture	Johnson, Michael H.	1857
16858	Rope Unmaking Machine	Wood, Joseph	1857
16864	Combing Machine, Wool	Simpson, Michael H.	1857
16865	Combing Machine	Whipple, Milton D.	1857
16867	Cordage Machine	Arnold, James P.	1857
16934	Yarn Dyeing & Scouring Preparing	Pratt, Lucien E.	1857
16970	Basket, Grain	Ellis, Joel A.H.	1857
16977	Fringe Cutting Machine	Horstmann, William J.	1857
17094	Carding Machine	Houghton, H.	1857
17115	Hat Felting Machine	Randall, Henry L.	1857
17120	Bobbin Winding Machine	Tompkins, C.	1857
17189	Loom, Pile Fabric	Bigelow, Erastus B.	1857
17244	Combing Machine, Wool	Whipple, Cullen	1857
17267	Loom Temple	Dutcher, Warren W.	1857
17323	Loom Shuttle Motion	Ferguson, Levi	1857
17353	Loom	Carney, Nathaniel B.	1857
17375	Loom Temple	Howard, William H.	1857
17379	Reel, Yarn or Thread	Knauer, Christian	1857
17404	Loom, Narrow Ware	Painter, Franklin	1857
17420	Fiber Preparing Machine	Burke, Francis	1857
17468	Loom Picker	Mayall, Thomas J.	1857
17496	Rope Making Machine	Dutcher, William R.	1857
17559	Loom Temple, Roller	Dutcher, Warren W.	1857
17787	Rope Making Machine	Guile, Ezekiel	1857
17929	Bobbin, Roving	Hayden, Isaac	1857
18190	Paper Pulp Making from Ivory	Clark, William N.	1857
18208	Loom Harness	Matoon, George	1857
18313	Cloth Measuring Machine	Wythes, William W.	1857
18320	Loom, Wire Cloth	Bigelow, Erastus B.	1857
18454	Cotton Cleaning Machine	Johnson, Jesse	1857
18529	Spinning Machine, Flax & Hemp	Whipple, Milton D.	1857
18564	Burring Machine, Wool Pelt	Waterhouse, John	1857
18620	Warp Dressing Machine	Campbell, Samuel	1857
18725	Knitting Machine, Straight	Aiken, Walter	1857
18888	Spinning, Preparing Slivers for	Apperly, James	1857
19073	Loom Let Off, Power	Colvin, Stephen O.	1858
19394	Drawing Cotton	Whipple, Cullen	1858

Patent	Invention	Inventor	Year
19531	Spinning Machine Roving Regulator	Winslow, John B.	1858
19623	Calender Rolls	Clark, Gardner G.	1858
19647	Spinning Bobbin	Nichols, Alfred E.	1858
19657	Felting, Silk Preparing	Taylor, Anson	1858
19698	Loom, Ribbon	Horstmann, William J.	1858
19719	Loom Stop Motion, Hair Cloth	Stafford, R.J.	1858
19740	Knitting Machine	Vickerstaff, J.	1858
20044	Loom	Crompton, George	1858
20263	Fabric, Tucked	France, Thomas	1858
20267	Fabric, Woven	Gujer, John	1858
20364	Clothes Pin	Pierce, Dexter	1858
20690	Cordage Machine	Bazin, James A.	1858
20766	Drawing Roller	Spencer, Seth P.	1858
20827	Fiber Treatment, Tampico Hemp	Staufen, Werner	1858
20854	Knitting Machine Stop Motion	Aiken, N.P.	1858
20920	Spinning Frame	Houghton, A.	1858
21068	Loom Shuttle Cop Tube	Eaton, James	1858
21164	Felting Machinery, Forming Bats	Butler, Thomas B.	1858
21238	Rope Making Machine	Adams, Newton	1858
21312	Loom, Fringe	Beck, James	1858
21333	Spinning Machine Top Roller	Green, Charles	1858
21448	Loom	Scott, E.M.	1858
21488	Warp Dressing Guide	Corey, Alfred B.	1858
21515	Loom Temple	Pilson, Robert	1858
21538	Drawing & Twisting Machine, Wool	Kennedy, John	1858
21556	Silk Thread Sorting Machine	Dimock, Ira	1858
21568	Cotton Gin Brush Cylinder	Lanpher, A.M.	1858
21716	Trademark Stamping Machine	Wright, Algernon S.	1858
21932	Combing Machine, Cotton	Whipple, Milton D.	1858
21988	Drawing & Evening Wool	Smith, Waterman	1858
22042	Loom, Fringe	Walker, Samuel	1858
22100	Braiding Machine	Clemons, Andrew B.	1858
22135	Knitting Machine	Schott, Frederick	1858
22262	Spindle, Throstle Spinning	Brown, Cyriel E.	1858
22594	Loom Temple	Tilton, Jeremiah C.	1859
22769	Knitting Machine Stop Motion	Hiller, Jonathan	1859
23446	Loom, Power	Cheetham, Jr., William H.	1859
23486	Rope Making Machine	Peer, John W.	1859
23539	Thread Gauge	Atwood, J.E.	1859
23732	Combing Fibrous Materials	Whipple, Cullen	1859
23934	Hat Feld Manufacture	Monach, James	1859
24270	Printing, Oil Cloth	Albro, James	1859
24272	Washing Machine	Ayers, Daniel S.	1859
24280	Burring, Wool, & Ginning, Cotton, Machine	Sargent, Charles G.	1859
24306	Loom Temple	Howard, William H.	1859
24378	Loom, Pile Fabric	Crossley, Charles	1859
24615	Thread Trebling Machine	Celerier, Michel	1859
24723	Basket, Fruit	Cook, David	1859
24782	Thread Winding Machine, Skeins	Ring, Asa T.	1859
24916	Knitting Machine	Aiken, Jonas B.	1859
25067	Knitting Machine	Waterhouse, James F.	1859
25450	Thimble	Steirly, James C.R.	1859
25796	Loom, Jacquard	Babbitt, Avery	1859
25827	Knitting Machine	Hollen, Joseph	1859
26031	Drawing & Evening Machine	Hale, Noah E.	1859
26075	Printing, Floor Cloth	Albro, James	1859
26231	Knitting Machine, Circular	Goffe, Augustus	1859
26320	Roving Can Bottom	Bradley, George	1859
26636	Spindle & Flyer	Brown, Cyriel E.	1859
26887	Cotton Cleaner, Wire Screen	Crane, John E.	1860

Patent	Invention	Inventor	Year
26895	Cloth Finishing Machine, Cotton	Davis, Caleb S.	1860
26955	Shears	Smith, Joseph	1860
27889	Loom	Conant, Hezekiah	1860
28043	Loom Temple	Woodward, J.H.	1860
28133	Knitting Machine	Tiffany, Eli	1860
28161	Spinning Machine	Crowell, J.E.	1860
28185	Hat Felting Machine	Lemmann, Martin R.	1860
28220	Spinning Machine	Victory, Edmund	1860
28256	Lap Winding Machine	Cheney, John L.	1860
28270	Loom Harness & Heddle	Greenhalgh, Sr., James	1860
28290	Knitting Machine	NcNary, William H.	1860
28297	Reel, Silk	Palmer, Sidney W.	1860
28332	Engraving Machine Roller	Shields, William	1860
28453	Loom	Clifton, Joseph H.	1860
28484	Fabric, Pile Manufacture	Hill, Noble	1860
29174	Thread Polishing Machine	Ives, Lawson C.	1860
29283	Loom Pattern Chain	Jenks, Barton H.	1860
29450	Knitting Machine	Aiken, Walter	1860
29527	Spindle Driving Mechanism	Slade, Norman	1860
29690	Thread Dressing & Finishing	Hall, Origin	1860
29873	Loom, Power	Furbush, Merrill	1860
30543	Warp Dressing Machine	Pilson, Robern	1860
30642	Swift	Pearson, Charles W.	1860
30652	Loom, Hair Cloth	Angell, Isaac	1860
30824	Thread Dressing Machine	Ives, Lawson	1860
30867	Swift	Benedict, Newton	1860
30891	Shirring Machine	Solis, Richard	1860
30896	Loom Temple	Tilton, Jeremiah C.	1860
31042	Knitting Machine	Terrell, John	1861
31176	Loom Harness Motion	Knowles, Benjamin F.	1861
31324	Loom Shuttle Box Motion	Murkland, William	1861
31398	Drawing Head Stop Motion	Paige, Benjamin O.	1861
31425	Carding Machine	Davis, Joseph	1861
31617	Loom	Peabody, Francis	1861
31776	Loom Picker	Boorn, Samuel	1861
31948	Loom Picker	Boorn, Samuel	1861
31953	Reel	Carnes, Caroline H.	1861
31972	Spinning Machine Lubricator	Hardy, Charles	1861
31974	Loom Temple	Hoffman, Charles	1861
31992	Loom, Hair Cloth	Noblit, John	1861
32059	Spinning Machine	Goulding, George	1861
32068	Loom, Power	King, Thomas	1861
32236	Loom	Shinn, John	1861
32245	Loom	Frey, Alexander	1861
32393	Drawing Frame Stop Motion	Williams, Harrison G.	1861
32611	Felting Machine	Bishop, G.G.	1861
32756	Silk Twisting Machine	DeManiquet, J.A.	1861
32770	Loom Picker	Holbrook, Albert	1861
32784	Combing Machine, Wool	Rawson, Henry	1861
33000	Loom Temple	Levally, Benjamin	1861
33037	Spinning Machine Stop Motion	Hillard, James P.	1861
33106	Basket, Splint	Sherman, S.M.	1861
33141	Thread Dressing, Sewing	Hall, Gardner, Jr.	1861
33222	Yarn Dressing Machine	Whitehill, Hugh	1861
33333	Vegetable Fiber Cleaning Machine	Brody, Charles	1861
33356	Spinning Machine Flyer	Maynard, J.F.	1861
33374	Spinning Machine, Wool	Bloodgood, J.H.	1861
33510	Belting, Endless Woven	Baker, S.W.	1861
33569	Braiding Machine	Cady, Henry	1861
33707	Needle Making Machine	Kaiser, Charles	1861
33866	Flyer	Clark, J.B.	1861
33948	Loom Heddle Varnishing Apparatus	Lairdieson, J.L.	1861

Patent	Invention	Inventor	Year
33972	Carding Machine	Davis, Joseph	1861
34088	Basket, Splint, Grain	Marble, Lansing	1862
34141	Loom, Power	Graichen, William	1862
34221	Spindle Bolster	Steere, E.N.	1862
34271	Loom Shuttle	Schoefield, John F.	1862
34451	Loom Let Off, Positive	Stockwell, Albert	1862
34494	Yarn, Action Of Liquids	Hielmann, Paul	1862
34619	Flax & Hemp Treatment	Comly, John P.	1862
34753	Roving Frame Throstle	Higgins, James	1862
34792	Basket, Fruit	Stray, M.L.	1862
35084	Thread Dressing Machine, Sewing	Daniels, Horace	1862
35145	Spindle	Eaton, James	1862
35229	Loom	Garretson, J.C.	1862
35602	Loom Shuttle	Frink, C.L.	1862
35708	Hackling Machine	Sanford, Gelston	1862
35969	Chenille Making Machine	Canter, William	1862
36166	Loom Harness	Parsons, Henry	1862
36177	Spinning Machine Bobbin Throstle	Stanley, James C.	1862
36199	Knitting Machine	Wilson, Joseph G.	1862
36377	Loom, Wire Cloth	Waters, Charles H.	1862
36394	Clothes Pin	Cone, E.A.	1862
36499	Net Making Machine, Seine	Arnold, Benjamin	1862
36550	Gig Mill	Millar, John C.	1862
36697	Loom Harness Motion, Power	Ayer, D.M.	1862
36727	Wool Cleaning Machine	Platt, John	1862
36782	Bobbin	Hussey, Daniel	1862
36986	Spinning Frame Bolster	Bartlett, Stephen S.	1862
37138	Fabric Manufacture, Palm Leaf	Perrin, Franklin	1862
37385	Chenille Making Machine	Comings, George	1863
37541	Braid Manufacture	Boyd, Amos H.	1863
37577	Loom Skipper Lever	Hathway, G.W.	1863
37702	Spinning Machine Flyer	Pearl, Oliver	1863
37759	Hat Adapter, Head Sizer	Klein, John F.	1863
37954	Loom Temple, Roller	Dutcher, Warren W.	1863
37993	Hat Forming Die	Wilde, Robert	1863
38265	Loom	Smith, O.C.	1863
38358	Embroidering Machine	Heaven, Alfred	1863
38363	Mark Holder for Bales & Etc.	Fitch, Porter	1863
39187	Carding Machine	Whitin, John C.	1863
39190	Bolster, Self Lubricating	Wilmarth, Moses P.	1863
39197	Loom, Circular	Darker, Jr., William	1863
39469	Loom Let Off	Draper, George	1863
39557	Spinning Machine Spindle	Eaton, James	1863
39681	Bobbin	Saunders, Benjamin	1863
39714	Loom Picker	Cady, John	1863
39723	Loom Stop Motion	Draper, George	1863
39742	Picking & Burring Machine	Nesmith, R.D.	1863
39759	Loom, Pile Fabric	Skinner, Halcyon	1863
39868	Netting Stretching & Folding	Van Riper, Jacob A.	1863
40049	Cotton Picker	Kitson, Richard	1863
40109	Labeling Bales	Locke, Edward A.	1863
40169	Spinning Machine Flyer	Hussey, Daniel	1863
40685	Loom	Drummond, John W.	1863
40698	Loom, Jacquard	Mann, Bela A.	1863
41218	Fabric, Knitted	Harwood, George S.	1864
41227	Cloth Napping Machine	Marble, Edwin T.	1864
41268	Spinning Machine Flyer	Aldrich, John H.	1864
41297	Flyer Guide, Manufacturing Machine	Hill, David L.	1864
41333	Spinning Machine Roller	Weild, William	1864
41731	Cotton Treating Machine	Wanklyn, William	1864
42048	Spinning Mule, Self Acting	Lakin, Robert	1864

Patent	Invention	Inventor	Year
42326	Vegetable Fur Manufacture	Baumgras, Peter	1864
42335	Loom, Trimming	Valetton, Louis D.	1864
42661	Spinning Wheel Head	Hotchkiss, T.D.	1864
42663	Braiding Machine Thread	Hull, Liverus	1864
42812	Loom	Wright, Edward	1864
42860	Cotton Bale Tag	Locke, Edward A.	1864
42982	Loom, Hair Cloth	Winsor, Joseph S.	1864
43182	Loom Shuttle	Clark, Augustus D.	1864
43252	Loom Heddle Knitting Shuttle	Brown, Darius	1864
43287	Wash Boiler Bottom	Burnham, Charles	1864
43467	Spinning & Reeling Machine	Albright, George	1864
43474	Spool Filling Machine	Breitenstein, William	1864
43556	Loom Shuttle Filler	Ingraham, Thomas	1864
43583	Loom Harness Motion	Holcroft, Henry	1864
43777	Loom Harness Dressing Machine	Kendrick, John	1864
43846	Spinning Machine, Throstle	Gilman, Albert	1864
43868	Loom Take Up Motion	Shaw, L.L.	1864
43877	Loom Shuttle	Wilder, Warren	1864
43888	Loom, Fish Net	Jouannin, Jean	1864
43940	Loom Shuttle	Wilder, Warren	1864
44004	Silk Stretching & Glossing Machine	Leigh, Lewis	1864
44016	Bobbin	Reynolds, Charles H.	1864
44052	Cotton Spooling Machine	Ermen, Godfrey	1864
44186	Loom Harness Weaving Machine	Harris, William	1864
44271	Loom, Jacquard	Wolf, Frederick M.	1864
44280	Basket, Fruit	Carpenter, Henry	1864
44283	Spinning Machine	Cleveland, E.C.	1864
44604	Loom Shuttle	Clark, Thomas	1864
44791	Card, Hand	Ells, Edgar	1864
44808	Loom, Hair Cloth	Lindsley, Isaac	1864
45047	Burring Machine, Wool	Jones, Daniel	1864
45107	Loom, Hair Cloth	Lindsley, Isaac	1864
45108	Spindle, Lubricating	Marshall, James	1864
45119	Clothes Pin	Greenwood, Jeremiah	1864
45300	Spinning Machine Flyer Bearing	Sampson, Blaney E.	1864
45629	Loom, Circular, Cord Covering	Palmer, Isaac E.	1864
45682	Loom Shuttle	Tunstill, William	1864
45718	Spinning Machine Thread Guide	Hurst, E.D.	1865
45953	Thread Winding Apparatus	Crutchett, James	1865
45969	Loom Shuttle Motion	Breitenstein, William	1865
46040	Loom Shuttle	Wilder, Warren	1865
46057	Cord Making Machine	Mathien, Jules O.	1865
46381	Warp Dressing Reed	Nichols, Ambrose J.	1865
46397	Combs For Wool, Flax, Cotton & Etc.	Siccardi, John	1865
46433	Loom, Pile Fabric	Joyot, Jr., Pierre	1865
46552	Hat Napping & Pouncing Machine	Eickemeyer, Rudolf	1865
46588	Spinning Machine	Rich, John	1865
46754	Loom, Pile Fabric	Holt, Samuel	1865
46921	Roving Frame Flyer	Mayor, Thomas	1865
47151	Loom, Buttonhole	Connor, John	1865
47195	Spinning Frame Spindle Bearing	Drake, Mexworth D.	1865
47223	Clothes Pin	Sargeant, Jr., Henry W.	1865
47271	Spindle Bolster, Self Lubricating	Bartlett, Stephen S.	1865
47278	Spindle Bearing, Self Lubricating	Briggs, George W.	1865
47301	Vegetable Fiber, Separating	Heaton, Charles	1865
47547	Spinning Mule & Jack	Goulding, John	1865
47658	Spinning Bobbin	Parks, Levi N.	1865
47687	Loom	Tunstill, William	1865
47852	Knitting Machine Needle	Otis, John	1865
48057	Loom Heddle Frame	Finkle, Milton	1865
48154	Loom Shuttle	Coburn, John H.	1865
48662	Seam Ripper	Converse, F.B.	1865

Patent	Invention	Inventor	Year
48878	Knitting Machine, Shoe Lace	Westcott, Nataniel	1865
48917	Spinning Machine Throstle & Cap	Eberhard, William	1865
49131	Fabric, Felt	McCracken, Edwin D.	1865
49178	Shears, Flower	Valentine, Samuel W.	1865
49280	Silk Cleaning & Finishing Machine	Kohn, Tobias	1865
49582	Bobbin Winding Machine	Bradford, George S.	1865
49643	Bobbin Shuttle	Mendenhall, Stephen C.	1865
49679	Carding Cylinder Cleaning Machine	Hawley, A.A.	1865
49774	Basket, Grain	Lyman, E.B.	1865
49825	Cord Covering Machine	Buser, John	1865
49860	Spinning Mule, Self Acting	Cumnock, Alexander G.	1865
49861	Spinning Mule, Self Acting	Cumnock, Alexander G.	1865
49865	Cotton Combing Machine	Dimock, Ira	1865
49950	Loom Let Off	Estes, Samuel	1865
50024	Spinning Jack	Moulton, H.J.	1865
50041	Loom, Hand	Seaman, John	1865
50116	Spinning Bobbin	Goulding, John	1865
50156	Loom Let Off	Phillips, Job	1865
50204	Paper Tube Making Machine, Spinning	Innis, William J.	1865
50211	Carding Machine	Leigh, Evan	1865
50240	Spinning Bobbin Holder	Goulding, John	1865
50241	Spinning Bobbin Holder	Goulding, John	1865
50311	Spinning Bobbin Holder	Wright, Edward	1865
50369	Knitting Machine	Lamb, Issac W.	1865
50392	Spool, Yarn Winding & Beaming	Saunders, Benjamin	1865
50575	Thread Spooling Machine	Glover, A.B.	1865
50764	Loom, Lappet	Aspinall, William	1865
51038	Spooling Machine, Tape Loom	Gibbs, J.	1865
51047	Darning Last	Holden, Delia E.	1865
51082	Warp Dressing Machine	Potter, William	1865
51095	Loom, Embroidered Fabric	Spitzli, J.G.	1865
51333	Carding Machine	Marsden, Harry	1865
51340	Spinning Bobbin	Murdock, William	1865
51436	Cloth, Weft of Hair, Grass, Etc.	Downie, James	1865
51577	Knitting Machine Needle	Fifield, Levi W.	1865
51618	Knitting Machine	Pepper, John	1865
51668	Embroidery, Imitation	Muller, Bernhard	1865
51794	Loom Harness	Brown, D.C.	1866
51887	Spinning Bobbin	Wilbur, Benjamin	1866
51891	Wool Oiling Machine	Campbell, Thomas A.	1866
51900	Washing Machine, Wool	Murkland, William	1866
51907	Thread Winding Machine	Weild, William	1866
51915	Rope Making Machine	Blackie, John	1866
51930	Spinning Mule, Self Acting	Dam, Lorenzo	1866
51977	Washing Machine	Stafford, A.J.	1866
52192	Loom, Narrow Ware	Oldfield, Benjamin	1866
52306	Loom, Hand	McDowell, C.L.	1866
52378	Cloth Measuring Machine	Benham, James I.	1866
52382	Cord Winding Machine	Brown, Edward	1866
52506	Spinning Machine, Flax	Skeels, Levi	1866
52718	Weaving Whip Handle Coverings	Hull, Liveras	1866
52780	Loom Let Off	Wright, Edward	1866
52825	Carpet	Crossley, Thomas	1866
52914	Basket, Grain	Van Rider, G.Z.	1866
53350	Loom Shuttle Motion	Schottenfels, Julius	1866
53398	Loom, Hand	Branson, James L.	1866
53423	Loom Temple, Roller	Dutcher, Warren W.	1866
53449	Spinning Machine Flyer	Hyde, Charles	1866
53530	Knitting Machine	Goodman, Joseph	1866
53665	Bobbin, Weft	Pearl, Oliver	1866
53746	Winding Machine, Yarn	Orr, Jr., William	1866
53892	Loom Picker Staff Motion	Sherman, Peleg	1866

Patent	Invention	Inventor	Year
54066	Loom Let Off	Estes, Samuel	1866
54067	Spinning Machine Roller	Fuller, Jim B.	1866
54269	Loom Temple, Roller	Dornbirn, J. Mathis	1866
54271	Thread Preparation, Printing	Vigoreux, Stanislas	1866
54445	Loom Shuttle & Bobbin	Unverzagt, Clemens	1866
54465	Spinning Bobbin	Ferguson, Levi	1866
54493	Spinning Machine, Vertical Hand	Blayney, James	1866
54661	Loom Harness Motion	Anderson, A.L.	1866
54704	Spinning Machine	Eberhard, William	1866
54742	Loom, Narrow Ware	Knowles, Lucius J.	1866
54870	Fabric, Pile Process	Crossley, James W.	1866
55010	Loom Heddle	Jenks, Barton	1866
55103	Knitting Machine, Straight	Hinkley, Jonas	1866
55239	Braiding Yarn Delivery Apparatus	Chambers, George I.	1866
55308	Knitting Machine Stop Motion	Kay, Edward	1866
55434	Knitting Machine	Wilson, James G.	1866
55580	Braiding Machine Carrier	Drown, Otis E.	1866
55959	Loom Picker Motion	Paterson, George W.	1866
55968	Knitting Machine, Circular	Williams, H.L.	1866
56077	Loom Harness Motion	McGregor, W.W.	1866
56081	Bag, Woven	Moore, Sr., Charles	1866
56220	Rope Making Machine, Wire	Hazzard, F.	1866
56258	Twisting & Winding Machine	Parmelee, Homer	1866
56372	Cordage Machine	Cobb, Charles	1866
56532	Spinning Jack	Dawson, Gilbreth	1866
56612	Securing Buttons To Garments	Roberts, John W.	1866
56829	Spinning Mule, Self Acting	Sutherland, James	1866
56913	Loom Picker	Elliott, Hosea	1866
56922	Spinning Mule & Jack	Goulding, John	1866
56928	Scissors	Grier, W. W.	1866
57065	Spinning Flyer	Bailey, B.A.	1866
57201	Braiding Machine	Sloan, Thomas J.	1866
57226	Loom, Hand	Walker, W.B.	1866
57300	Loom Shuttle Binder	Duckworth, Christopher	1866
57330	Cop Winding Machine	Jenks, Barton H.	1866
57336	Spinning Machine, Domestic	Koeller, H.	1866
57444	Loom Harness Motion	Scofield, Levi	1866
57659	Fabric, Woven	Baker, Seth W.	1866
57938	Roving Frame Flyer	Mayor, Thomas	1866
58015	Spinning Machine, Hand	Wilson, Dickson	1866
58024	Loom	Kershaw, John B.	1866
58046	Spinning Frame Spindle	Atwood, John E.	1866
58391	Hat Making	Doubleday, William E.	1866
58434	Silk Twisting & Stretching Machine	Kohn, Tobias	1866
58464	Loom, Narrow Ware	Oldfield, Benjamin	1866
58497	Floor Covering Manufacture	Spencer, James H.	1866
58611	Warp Dressing Frame	Damon, Alexander M.	1866
58865	Loom, Hand	Mendenhall, Daniel	1866
59024	Loom Let Off	Hussey, Daniel	1866
59040	Hook Pins, Wearing Apparel	Lindsay, Alexander	1866
59106	Spinning Direct From Carding	Welham, Thomas	1866
59120	Fishing Line Making Machine	Brooks, Peter	1866
59132	Loom Harness Motion, Hand	Mendenhall, Stephen	1866
59259	Cotton Preparing Machine	Pilson, Robert	1866
59613	Loom, Narrow Weave	Knowles, L.J.	1866
59801	Reel	McLean, Daniel H.	1866
59959	Piano-Forte Cover, Ornamenting	Burgess, J.F.	1866
59973	Spinning Machine	Crowfoot, Joseph	1866
59987	Loom Shedding Motion	Ellis, Henry A.	1866

Patent	Invention	Inventor	Year
60103	Yarn Drying Machine	Whitehill, Hugh	1866
60202	Spinning Machine, Hand	Leach, William J.	1866
60305	Loom, Hand	Whitehead, John	1866
60386	Carding Machine Oiling Apparatus	Kirk, P.C.	1866
60407	Tatting Shuttle Winder	Moore, James	1866
60627	Clothes Pin	Goble, T.L.	1866
60704	Spinning Machine Spindle & Bolster	Draper, George	1867
60802	Spindle, Ring	Sterry, Francis A.	1867
61010	Spindle Bolster, Self Lubricating	Jenks, Barton H.	1867
61050	Loom Temple	Chapman, Nathan	1867
61376	Cloth Napping Machine	Zschille, Anton	1867
61439	Loom Stop Motion	Loiseau, Alphonse J.	1867
61518	Spinning Frame Spindle Bolster	Cottrell, Jesse D.	1867
61520	Cloth Finishing Process	Crossley, Thomas	1867
61535	Loom Shuttle, Narrow Ware	Hamilton, John Y.	1867
61588	Coverlet	Wettstein, Henry	1867
61630	Knitting Machine Needle	Miller, Job	1867
61665	Silk Thread Cleaning Apparatus	Jeannotat, Jules	1867
61754	Loom Picker Staff Mechanism	Mortimer, Samuel	1867
61767	Loom	Schofield, James	1867
61915	Spindle & Top Roller Oiler	Barber, Samuel H.	1867
62087	Loom Picker Cushion	Thorn, William J.	1867
62168	Loom Let Off	Walker, Richard	1867
62239	Knitting Machine Take Up	Ward, Samuel	1867
62240	Clothes Pin	Ward, W.G.	1867
62370	Warp Dressing Machine	Saunders, Benjamin	1867
62398	Indicator, Rope & Cloth	Couse, Charles	1867
62791	Loom	Weber, John R.	1867
62917	Carding Machine Stop Motion	Ainsworth, W.E.	1867
63143	Loom, Hand	Deen, J.M.	1867
63261	Hat Pouncing Machine	Lubiaux, John L.	1867
63353	Loom Picker Motion, Parallel	Zwicki, Caspar	1867
63372	Loom Temple	Dutcher, Warren W.	1867
63393	Clothes Pin	Johnson, Charles C.	1867
63408	Rope Making Machine	Maxson, Horace	1867
63561	Spindle, Self Oiling	Rabbeth, F.J.	1867
63622	Loom, Power	Earnshaw, John	1867
63631	Loom, Pile Fabric	Hartley, William G.	1867
63759	Clothes Pin	Smith, David M.	1867
63813	Spinning Bobbin, Metallic	Rice, William B.	1867
63872	Loom Temple	Dutcher, Warren	1867
64004	Card, Hand	Ells, George F.	1867
64147	Loom Let Off	Richardson, George	1867
64241	Knitting Machine	McNary, William H.	1867
64438	Spinning Machine, Hand	Mendenhall, Nathan	1867
64466	Cloth Folding Machine	Wheeler, Jr., Walter	1867
64525	Loom	Graham, John	1867
64572	Knitting Machine, Rotary	Roberts, Mark L.	1867
64800	Spinning Machine Spindle	Catteau, Joseph M.R.	1867
64900	Knitting Machine, Straight	Paget, Arthur	1867
64944	Loom Heddle, Wire	Brown, Darius	1867
65530	Spinning Machine Lubricator	Bancroft, Joseph B.	1867
65576	Tatting Shuttle Winder	Jones, H.P.	1867
66017	Spinning Machine Spindle	Gilman, Albert H.	1867
66091	Spinning Machine Spindle Bearing	Jenks, Barton H.	1867
66523	Clothes Pin	Seaver, Ebenezer	1867
66574	Loom, Jacquard, Needle	Earnshaw, John	1867
66827	Loom Harness Motion	Gebhart, John F.	1867
66996	Loom Picker	Smith, Owen B.	1867
67081	Spindle Step	Sterry, Francis A.	1867
67100	Clothes Pin	Brinkerhoff, A.W.	1867
67263	Knitting Machine	Carey, Augustus C.	1867

Patent	Invention	Inventor	Year
67559	Fiber Cleaning & Bleaching Machine	Loiseau, A.J.	1867
67821	Spindle Lubricator	Underwood, R.P.	1867
68185	Spinning, Ring	Hall, Henry G.	1867
68245	Cloth Measuring Instrument	Shinn, Thornton A.	1867
68425	Knitting Machine	Essick, S.V.	1867
68429	Needle Making Machine	Fowler, Taddeus	1867
68438	Swift	Haskell, Almore	1867
68464	Carding Machine Condenser Roll	Stafford, Edwin	1867
68831	Reel	Balch, F.A.	1867
68969	Loom, Hand	Dugdale, Thomas A.	1867
69002	Spinning Machine	Lazier, John	1867
69021	Clothes Hook	Putnam, Silas S.	1867
69047	Loom, Hand	Thompson, T.G.	1867
69098	Dyeing & Embossing Table Cover	Jack, Alexander	1867
69101	Winding & Delivering, Yarn	Kershaw, Robert	1867
69159	Thread Finishing Machine	Barbour, Samuel	1867
69167	Spinning Machine, Hand	Blackwood, John	1867
69188	Spinning Mule, Self Acting	Crossman, Horace	1867
69205	Carding Machine Condenser Tube	Germain, William	1867
69211	Spinning Machine	Hoover, George	1867
69277	Hat Pouncing Machine	Vail, P.W.	1867
69320	Loom	Cottrell, Jesse D.	1867
69398	Clothes Pin	Britton, R.G.	1867
69472	Loom Picker	Nichols, Bradword W.	1867
69515	Loom, Hand	Very, A.O.	1867
69579	Reel	Palmer, Josiah Foreman	1867
69673	Loom, Hand	Hunt, Henry	1867
69728	Spinning Machine, Domestic	Voegtli, Franz	1867
69990	Spinning Machine, Hand	Hart, James M.	1867
70026	Loom Shuttle	Sawyer, F.W.	1867
70171	Loom Shuttle	Crandall, George L.	1867
70186	Loom, Hand	Firestone, G.W.	1867
70253	Loom Tension Regulator	Painter, Frank	1867
70308	Loom Picker	Wright, Edward	1867
70402	Spinning Jack	Briggs, H.B.	1867
70466	Rope Making Machine	Perkins, Howard	1867
70622	Spinning Wheel	Rowe, Jonas H.	1867
70623	Loom, Rotary Cam	Sargent, Ransom	1867
70685	Rope Laying And Twisting Machine	Bazine, Stephen	1867
70853	Reel And Swift	Hutson, Ezra	1867
71001	Carding Machine Feeder	Harwood, George S.	1867
71127	Spindle Bolster	Brown, John E.	1867
71299	Loom	Hainsworth, William	1867
71369	Roving Machine Belt Shifter	Edwards, James	1867
71371	Bobbin	Fiske, Charles H.	1867
71413	Loom Shuttle Threading Mechanism	Ripley, Lewis	1867
71541	Loom Temple	Shaw, Edgar F.	1867
71809	Spindle Bolster	Sterry, Francis A.	1867
71852	Loom, Palm Leaf	Chandler, George W.	1867
71897	Spinning Wheel	Miller, Henry	1867
72005	Fabric, Woven	Earnshaw, John	1867
72115	Knitting Machine Take Up	Teachout, James	1867
72296	Knitting Machine, Circular	Hollen, W.H.H.	1867
72457	Loom Shuttle	Crompton, George	1867
72531	Spindle Step	Noble, George H.	1867
72800	Swift	Coffin, Eben M.	1867
72967	Loom Harness	Brown, Darius C.	1868
72987	Loom Let Off, Automatic	Draper, George	1868
73044	Hat Pouncing Machine	Richardson, John C.	1868
73131	Braiding Machine, Whip	Slayton, Phineas L.	1868
73160	Sluice Blanket	Block, Abraham	1868
73185	Bobbin	Holmes, A.P.	1868

Patent	Invention	Inventor	Year
73266	Loom, Hand	Strong, Oliver	1868
73267	Roving Frame	Thompson, William H.	1868
73269	Thread Polishing Machine	Trapp, William W.	1868
73353	Loom Let Off	Marden, Jeremiah A.	1868
73512	Carpet Manufacture	Crossley, Thomas	1868
73727	Fabric, Felt	Johnson, Moses A.	1868
73852	Loom, Hand	Unverzagt, Clemens	1868
73955	Loom Shuttle	Cross, E.	1868
73962	Loom Cloth Indicator	Fellows, Alfred	1868
74013	Loom Shuttle	Scofield, Levi	1868
74266	Knitting Machine	Abel, William H.	1868
74402	Spinning Bobbin	Morse, Cyrus B.	1868
74416	Spinning Machine, Throstle	Pearl, Oliver	1868
74585	Spinning Mule	Paley, John	1868
74636	Cloth Creasing Frame	Todd, A.W.	1868
74644	Silk Cleaner	Watson, W.G.	1868
74819	Loom Harness Motion	Greenhalgh, Sr., James	1868
74832	Thread Polishing Machine	Kerr, Peter	1868
74853	Card Setting Machine	Russell, James	1868
74874	Carding Cylinder Stripper	Abbott, F.M.	1868
75063	Spinning Machine, Hand	Silvis, Anthony W.	1868
75122	Fulling Machine, Hat Bodies	Gattaneo, Angelo	1868
75169	Cotton Lapper Brake	Kitson, Richard	1868
75259	Printing Machine, Yarn	Forrest, John	1868
75290	Carding Machine Rack	Monroe, Lang	1868
75305	Loom Pick, Overhead	Shaw, James	1868
75522	Loom Shuttle	Chase, Daniel G.	1868
75545	Loom Shuttle Binder	Haskins, Franklin	1868
75610	Spinning Machine, Ring & Traveler	Wattles, Joseph W.	1868
76036	Loom Harness Motion	Bachelder, John	1868
76042	Yarn Manufacture, Clouded	Bentley, John W.	1868
76043	Reel	Bradway, George	1868
76090	Loom Shuttle	Marble, Ezra P.	1868
76109	Silk Cleaning Knife	Singleton, George	1868
76111	Card, Hand	Sprague, E.L.	1868
76299	Spinning Machine	Burdge, J.E.	1868
76406	Loom Shedding Motion	Crompton, George	1868
76476	Loom, Hair Cloth	Lindsley, Isaac	1868
76547	Clothes Pin	Taylor, A.L.	1868
76604	Loom Shuttle	Chase, Silas E.	1868
76636	Loom Let Off	Hussey, Daniel	1868
76783	Fabric, Floor Matting	Lindsley, Isaac	1868
76798	Spinning Frame	Morse, Cyrus B.	1868
76854	Knitting Machine	Ward, Benjamin	1868
76895	Card Stripping Machine Cam	Crockett, Seldon	1868
77030	Butter Tub	Gilbert, D.A.	1868
77228	Chair Seat	Watkins, G.A.	1868
77424	Tag Fastener	Weeden, William N.	1868
77446	Loom Harness	Brown, Darius C.	1868
77498	Loom, Garment	Leather, Samuel	1868
77566	Spindle	Atwood, Eugene	1868
77619	Loom, Needle	Jackson, W.H.	1868
77713	Loom Heddle Making Machine, Wire	Brown, Darius	1868
78013	Spindle Bearing	Richards, John	1868
78085	Spinning Frame	Haythorn, Frederick	1868
78229	Loom Shuttle	Paine, Elias A.	1868
78399	Cloth Measure	Shotwell, Caleb L.	1868
78411	Braiding Machine Carrier	Avery, Dexter	1868
78441	Loom Temple	Dutcher, Warren W.	1868
78453	Warping Frame	Howard, C.H.	1868
78660	Fulling Mill	Gessner, Ernst	1868
78779	Loom, Jacquard	Wolf, Moritz	1868

Patent	Invention	Inventor	Year
78968	Drawing & Twisting Head	Houghtaling, Ambrose L.	1868
79483	Loom Shuttle	Laflin, Perley	1868
79490	Loom Shuttle	Metcalf, James A.	1868
79556	Loom Shuttle	Damon, Alexander H.	1868
79557	Loom Shuttle	Damon, Alexander H.	1868
79687	Bobbin	Ramsdell, W.H.	1868
79908	Loom	Humaston, John P.	1868
79923	Loom, Palm Leaf	Smith, John C.	1868
80099	Knitting Machine	Wade, Alfred J.	1868
80121	Knitting Machine	Bickford, Dana	1868
80134	Chenille Making Machine	Canter, William	1868
80529	Loom Beam	Bailey, Benjamin A.	1868
80586	Carding Machine Tooth Removal	Baham, John A.	1868
80781	Tatting Shuttle	Goodwin, Lizzie C.	1868
80783	Fly Frame Flyer	Streeter, James S.	1868
80810	Loom	Crompton, George	1868
80863	Spinning Machine	Hooper, James	1868
80866	Knitting Machine, Circular	Larkin, Samuel	1868
80876	Loom Harness Mechanism	Plummer, Osgood	1868
80885	Loom Stop Motion	Switzer, John J.	1868
80949	Spinning Machine	Harris, Charles J.	1868
80965	Knitting Machine	Johnstone, George	1868
81201	Spindle Step	Pattee, Samuel L.	1868
81344	Loom Shuttle	Clark, Augustus D.	1868
81347	Loom Shedding Motion	Crompton, George	1868
81443	Loom, Pile Carpet	Weild, William	1868
81464	Punch, Leather or Cloth	Bedford, Alma	1868
81465	Punch, Rotary	Bedford, Alma	1868
81577	Cord Covering Machine	Bachelder, John	1868
81578	Loom Shuttle	Baggett, Edward	1868
81702	Vegetable Fiber, Hair Substitute	Staufen, Werner	1868
81753	Rope Making Machine	Clark, Charles	1868
81826	Warp Dressing Machine	Saunders, Benjamin	1868
81834	Braid	Smith, J. Hunt	1868
81845	Cord Covering Machine	Turner, John	1868
81865	Loom Shuttle Box Motion	Ashworth, John	1868
82090	Loom Shuttle	Clough, Nathan	1868
82114	Clothes Pin	Haigney, John	1868
82335	Pinking Tool	McIntosh, John L.	1868
82661	Thread Polishing	Trapp, William W.	1868
82684	Loom Temple	Briggs, Lucius	1868
83019	Cloth, Wire	Baggoth, Thomas	1868
83179	Card Clothing Manufacture	Lawrence, Edwin S.	1868
83267	Loom Filling Fork	Duce, William G.	1868
83270	Reel	Fenner, John S.	1868
83331	Loom Shuttle Spindle	Smith, Charles E.	1868
83354	Spinning Bobbin & Thread Holder	Luders, Thomas L.	1868
83375	Spinning Machine	Goulding, John	1868
83395	Fabric Singeing Machine	McEwen, Peter	1868
83436	Speeder Flyer	Aldrich, John H.	1868
83559	Loom Shuttle	Smith, Charles E.	1868
83635	Bobbin	Hubbard, Horace J.	1868
83723	Burring Machine, Wool	Nichols, John	1868
83970	Spinning Machine, Hand	Johnson, James	1868
84261	Spinning Wheel	Cole, Charles L.	1868
84423	Loom	Jenks, Barton H.	1868
84424	Reeling Machine	Jenks, Barton H.	1868
84483	Cloth Napping Machine	Earnshaw, John	1868
84506	Cord Covering Machine	Palmer, Jr., William H.	1868
84578	Cloth Cutting, Parceling	Raynard, Joseph H.	1868
84599	Hat Felting Machine	Whipple, Milton D.	1868
84753	Loom, Lappet	Newton, Frederick W.	1868

Patent	Invention	Inventor	Year
84764	Bobbin Winder, Reverse Motion	Richardson, George	1868
84793	Warp Dressing, Dresser Capper	Boyden, W.H.	1868
85427	Scissors	Bull, James	1868
85546	Knitting Machine	Tangeman, William A.	1869
85765	Knitting Machine	Reiff, Jacob D.	1869
85969	Loom Shuttle	Simpson, Augustus	1869
86078	Burring Machine, Wool	Jones, Daniel	1869
86156	Spinning Machine, Self Acting	Holcroft, Henry	1869
86211	Carding Machine	Cleveland, Edwin C.	1869
86233	Loom, Wire Cloth	Kittinger, Levi	1869
86445	Carpet Rag Looper	Price, George L.	1869
86483	Loom Shuttle	Williams, Norman A.	1869
86642	Braiding Machine	Butler, James D.	1869
86651	Loom, Pile Fabric	Davis, Ezekiel K.	1869
86719	Drawing Frame Regulator	Whitton, Samuel J.	1869
86805	Loom, Power	Bigelow, Erastus B.	1869
86806	Loom, Ingrain Carpet	Bigelow, Erastus B.	1869
86973	Yarn Guide and Cleaner	Dakin, A.C.	1869
87005	Thread Polishing & Dressing	Semple, Jr., Samuel	1869
87113	Reel And Swift	Ricker, Wentworth	1869
87138	Spinning Jack	Brothers, Oliver	1869
87377	Spinning Machine	Speight, John	1869
87616	Loom Shuttle Mechanism	Ashworth, John	1869
87620	Fringe Twisting Machine	Barton, Edwin	1869
87763	Felting Machine	Eickemeyer, Rudolf	1869
87764	Felting Machine	Eickemeyer, Rudolf	1869
87877	Spinning Machine	Sayles, Albert L.	1869
88027	Knitting Machine	Franz, William	1869
88322	Loom Stop Motion	Milroy, George E.	1869
88365	Loom Take Up	Carstaedt, Hugo	1869
88390	Clothes Pin	Johnson, Peter	1869
88503	Loom	Oldfield, Benjamin	1869
88556	Spinning Machine Spindle Step	Draper, George	1869
88576	Braiding Machine	Mason, George	1869
88742	Burring Cylinder	Sargent, Charles G.	1869
88845	Loom Picker	Carroll, A.H.	1869
88897	Loom Shuttle Holder	Parmenter, Charles H.	1869
88996	Spinning Ring & Traveler	Welham, Thomas	1869
89011	Loom	Bigelow, Erastus B.	1869
89012	Loom Stop Mechanism	Bigelow, Erastus B.	1869
89017	Spinning Frame	Briggs, H. Beaumont	1869
89035	Copying Press	Gage, George	1869
89290	Twisting & Drawing Heads	Chabot, Cyprien	1869
89420	Washing Machine, Wool	McNaught, John	1869
89548	Spinning Machine Spindle Step	Blake, Ezekiel	1869
89561	Loom Weft Stop	Cottrell, Jesse D.	1869
89807	Spinning Mule	Stockwell, Albert	1869
89854	Yarn Doubling Stop Mechanism	Clark, Isaac W.	1869
89984	Spinning Machine, Hand	Grant, Bellville A.	1869
90085	Loom Harness Motion, Fancy	Duckworth, John C.	1869
90133	Loom Temple, Lubricating	Stimpson, Edward S.	1869
90378	Roving Frame	Morgan, Eustis P.	1869
90633	Felting Machine	Brisco, Harvey	1869
91032	Fly Frame	Luscomb, Job G.	1869
91050	Loom Stop Motion	Switzer, John J.	1869
91214	Knitting Machine, Straight	Crane, Thomas	1869
91229	Combing Cotton Feeding Device	Hadley, Charles F.	1869
91431	Loom Harness Mechanism	Gebhart, John F.	1869
91498	Cord Covering Machine	Turner, John	1869
91653	Twine Making Machine	McIntire, James	1869
91729	Felting Machine	Eickemeyer, Rudolf	1869

Patent	Invention	Inventor	Year
91730	Hat Stretching Machine	Eickemeyer, Rudolf	1869
91822	Indicator, Cloth Manufacturing, Etc.	Brown, William H.	1869
91888	Loom Reed	Whitcomb, Benjamin F.	1869
92167	Knitting Machine, Circular	Cole, Charles G.	1869
92189	Speeder Bobbin Skewer	Harris, Cyrus	1869
92218	Yarn Evener	Smith, George S.	1869
92328	Thread Holder, Doffing	Luders, Thomas L.	1869
92432	Spool	Doran, Michael F.	1869
92523	Loom	Gadd, William	1869
92647	Spindle Bolster	Richards, Isaac P.	1869
92784	Warp Dressing Machine	Boyden, William H.	1869
92830	Spindle Stopping Device	Huret, Eugene	1869
92856	Loom Shuttle Box Motion	Marsden, John	1869
92859	Speeder, Spinning & Twisting	Mayor, Thomas	1869
92870	Rope Making Machine, Wire	Morgan, Charles H.	1869
92890	Loom Temple	Simpson, Joseph	1869
92940	Spinning Bobbin	Crowell, John H.	1869
92944	Silk Winding Stop Motion	Dunham, P.	1869
92958	Spinning Mule	Greene, C.J.	1869
92960	Cord Making Machine	Guest, William	1869
92995	Knitting Machine, Lace	Osborne, George	1869
93008	Knitting Machine	Roberts, Mark L.	1869
93254	Thread Spooling Machine	Wade, Asel M.	1869
93441	Loom Take Up	Holmes, George H.	1869
93539	Loom, Galloon	Kemper, Jacob	1869
93608	Loom Shuttle	Fiske, Charles H.	1869
93633	Spindle & Bobbin Tube	McFarland, Alexander	1869
93799	Loom Harness Shedding Mechanism	Bigelow, Erastus B.	1869
93800	Loom, Pile Fabric	Bigelow, Erastus B.	1869
93836	Hat Pouncing Machine	Richardson, John C.	1869
94166	Cloth Tentering & Drying Machine	Avery, Andre	1869
94218	Knitting Machine Stop Motion	Kennedy, John	1869
94571	Loom Shedding Motion	Crompton, George	1869
94640	Spindle & Flyer	Pirrard, Jean Joseph J.	1869
94752	Drawing Frame	Hussey, Oliver P.	1869
94873	Loom Shedding Motion	Crompton, George	1869
94939	Felting Machine	Blackham, Job W.	1869
95034	Bobbin Winding Machine	Morrill, Franklin H.	1869
95112	Braiding Let Off & Tension	Horstman, William J.	1869
95145	Loom, Fringe	Roth, George	1869
95186	Embroidering Machine	Berger, Hermann	1869
95198	Loom Harness & Heddle	Corey, Alfred B.	1869
95221	Loom Harness Mechanism	Gibboney, A.F.	1869
95314	Loom Temple, Roller Jaw	Burns, William H.	1869
95456	Spinning Machine Spindle Bearing	Fuller, Jim B.	1869
95632	Reel	Barker, James H.	1869
95767	Drawing Frame Stop Motion	Casey, James S.	1869
95775	Carpet	Crossley, Thomas	1869
95776	Carpet, Felted Fabric	Crossley, Thomas	1869
96202	Cotton Cleaning Machine	Clement, Lewis T.	1869
96238	Loom, Hand	Jones, Abraham	1869
96310	Thread Holder & Cutter	Cleary, John	1869
96556	Carding Machine	Dempster, James	1869
96564	Loom, Tape	Duckworth, James	1869
96619	Spinning Machine, Hand	Rice, James	1869
96646	Mangle	Westwick, James B.	1869
96676	Loom Shuttle	Crompton, George	1869
96677	Loom Shuttle	Crompton, George	1869
96937	Spinning Machine, Hand	Matheny, Chelton	1869
97041	Wood Pulp Machine	Burghardt, Frederick	1869
97106	Loom, Ingrain Carpet	Murkland, William	1869
97147	Loom Shuttle Spindle	Allen, N.L.	1869

Patent	Invention	Inventor	Year
97158	Loom	Branson, Jessie L.	1869
97175	Loom	Duckworth, George	1869
97178	Hat Pouncing Machine	Eickemeyer, Rudolf	1869
97256	Loom Shuttle Spindle	Wheeler, Henry H.	1869
97434	Fabric, Method of Weaving	Owens, John	1869
97721	Pleating Machine	Sterns, Simon	1869
97836	Basket, Reticule Wicker	Venet, Joseph	1869
97882	Loom Shuttle	Coburn, John H.	1869
97895	Loom Temple	Dutcher, Warren W.	1869
98133	Bolster Lubricator	Wattles, Joseph	1869
98135	Spinning Machine, Hair & Flax	Wisdom, Philip	1869
98188	Loom Shuttle Check	Pickman, David	1869
98254	Spinning Jack Register	Greenwood, Henry	1869
98491	Rope Making Machine	Hale, Bernice	1870
98500	Knitting Machine	House, Henry A.	1870
98507	Card Clothing Clamp	Lewis, Joshua O.	1870
98738	Loom, Circular	Bryant, Nertoun C.	1870
98822	Loom Shuttle	Webendorfer, Rudolf	1870
98966	Combing & Preparing Wool	Holden, Edward	1870
99055	Spinning Machine	Branwell, Paul	1870
99111	Bobbin Holder	Salisbury, John	1870
99152	Loom Shuttle	Burns, W.H.	1870
99154	Rag Rug Making Implement	Cady, B.F.	1870
99177	Loom Harness Mechanism	Faulkner, George S.	1870
99203	Spinning Frame, Ring	Jenks, Barton H.	1870
99223	Loom, Jacquard, Narrow Ware	Muller, T.H.	1870
99287	Loom Temple, Roller Jaw	Burns, William H.	1870
99458	Hat Shaping Machine	Marlot, Jean P.	1870
99511	Spinning Mule, Self Acting	Wright, Edward	1870
99534	Spindle Step & Bolster	Chapman, Charles H.	1870
99641	Cotton Combing Machine	Conant, Hezekiah	1870
99699	Cotton Picker	Palmer, George F.	1870
99843	Warping Machine	Campbell, Samuel	1870
100070	Warping Machine	Reynolds, Roscoe C.	1870
100317	Loom Shuttle	Paine, Elias A.	1870
100377	Carpet	Cochrane, Jr., John	1870
100548	Button Hole Twist, Preparing	Morrison, Robert	1870
100596	Braiding Let Off & Tension	Butler, James D.	1870
100675	Spooling Machine Stop Motion	Semple, Jr., Samuel	1870
100754	Bobbin, Strengthening Method	Hallowell, Albert	1870
100794	Loom Tappet Chain	Nuthall, James	1870
100798	Knitting Machine	Philip, Frank	1870
101006	Loom, Irregular Fabric	Goullioud, Alphonse	1870
101088	Loom Shedding Motion	Bigelow, Erastus B.	1870
101089	Crushing Machine, Ramie	Bigelow, Erastus B.	1870
101109	Spindle Step	Dougherty, Eliphalet	1870
101110	Warping Machine Drop Wire	Downes, Isaac	1870
101220	Shears	Booth, James	1870
101875	Knitting Machine	Hinkley, Jonas	1870
101878	Knitting Machine	House, Henry A.	1870
101989	Loom, Jacquard	Field, Albert R.	1870
102039	Loom	Ramel, Pierre	1870
102256	Washing Machine, Yarn	Haeffely, Edward	1870
102368	Loom Shuttle	Burrows, Edmund F.	1870
102514	Spindle Step, Cap	Draper, William	1870
102772	Spinning Bobbin	Carmichel, Alexander	1870
102898	Cordage Machine Band	Whitton, Samuel J.	1870
102989	Loom Warp Stand	Tifft, Philancy D.	1870
103018	Hair Cloth, Imitation	Comstock, James J.	1870
103051	Silk Stretching Machine	Kennedy, George R.	1870
103193	Spool, Jack	James, B.	1870

Patent	Invention	Inventor	Year
103332	Knitting Machine	Hill, Warren S.	1870
103400	Loom Shuttle	Wells, Horace	1870
103415	Loom Let Off	Bigelow, Erastus B.	1870
103506	Washer & Dryer, Wool	Sargent, Charles G.	1870
103570	Basket, Fruit	Colby, Eastman	1870
103600	Loom Shedding Motion	Gilbert, Charles W.	1870
103616	Loom Temple	Howard, William H.	1870
103757	Loom Shuttle	Lofvendahl, Joseph	1870
103787	Hat Blocking Machine	Sheldon, Julius	1870
103880	Loom	Herbert, John J.	1870
103906	Spinning Machine, Hand	Main, William H.	1870
103973	Chair Seat	Bulgin, William G.	1870
103996	Spinning Machine Spindle	Dougherty, George W.	1870
104115	Spindle Oil Cup & Bearing	Convers, Eugene	1870
104137	Loom Temple	Gilman, Albert H.	1870
104232	Carpet	Wallace, William	1870
104329	Warping Machine	Mather, Colin	1870
104381	Net Making Machine	Vivarttas, Aloha	1870
104654	Clothes Pin	Searles, Irving W.	1870
104949	Loom Let Off	Fletcher, Lewis N.	1870
105812	Spinning Mule, Self Acting	Kent, Prentiss	1870
105815	Spinning Machine	LaBanister, William	1870
105905	Swift & Reel	Clark, Charles H.	1870
106038	Loom Temple	Dutcher, Warren W.	1870
106106	Cloth Shearing Machine, Hair	Arnold, Olney	1870
106130	Drawing Frame, Hemp & Cotton	Davis, George	1870
106306	Loom Harness Mechanism	Ashworth, John	1870
106334	Loom Shedding Motion	Davis, Hilas D.	1870
106466	Spinning Machine, Flax & Hemp	Chapin, Henry A.	1870
106468	Printing Block, Carpet	Crossley, Thomas	1870
106477	Loom, Rattan	Fitts, Samuel L.	1870
106499	Knitting Machine	Morse, Edward	1870
106571	Loom Harness Mechanism	Field, Albert R.	1870
106774	Loom Shuttle Stopping Device	Bosshard, Theodore	1870
106797	Loom Temple, Roller	Dutcher, Warren W.	1870
106809	Loom	Gilbert, Lucien M.	1870
107136	Chair Seat	Watkins, Gardner A.	1870
107168	Loom Temple	Dutcher, Warren W.	1870
107220	Loom Shuttle	Carstaedt, Hugo	1870
107236	Carpet Rag Cutter	Eberhard, William	1870
107248	Cloth Cutting Machine	Goodfellow, John H.	1870
107750	Knitting Machine	Appleton, Charles J.	1870
107890	Carding Machine Weighting Attachment	Evans, Philip	1870
107922	Cotton Opener	Kitson, Richard	1870
108003	Knitting Machine	Burson, W.W.	1870
108233	Spinning Machine, Flax & Hemp	Bazin, Ernest	1870
108356	Spinning Machine	Huse, Warren D.	1870
108387	Rope Making Machine	Pike, William G.	1870
108409	Loom Shuttle	Towle, Hamilton E.	1870
108680	Reeling Machine	Briggs, John	1870
108709	Spinning, Drawing & Twisting Head	Lawrence, Samuel W.	1870
108758	Thread Winding Machine	Church, Dwight M.	1870
109502	Winding Machine	Eccles, Samuel	1870
109580	Clothes Pin	Bradley, George	1870
109583	Loom Temple, Roller	Burns, William H.	1870
110000	Loom Let Off & Tension	Bigelow, Erastus B.	1870
110012	Fabric, Fringe	Cocker, Peter	1870
110050	Loom, Hair Cloth	Laycock, William S.	1870
110146	Loom Shuttle Box Mechanism	Knowles, Lucius J.	1870
110225	Warping Machine	Furrer, Jacob	1870
110617	Spinning Machine Flyer	Abbot, Theodore T.	1871

Patent	Invention	Inventor	Year
110640	Loom Shedding Motion	Elliott, Robert	1871
110795	Warping Machine	Singleton, Thomas	1871
110904	Loom Harness Motion	Davis, Hilas D.	1871
111002	Loom Let Off	Remington, Horatio A.	1871
111004	Burring Machine, Wool	Richardson, William	1871
111278	Loom Shedding Motion	Towle, Hamilton E.	1871
111343	Loom, Cane, Slats, Straw	Hastings, Emory B.	1871
111378	Loom Picker	Parker, Jerome M.	1871
111523	Warping Machine	Draper, George	1871
111595	Loom Picker	Whitten, Henry	1871
111674	Carding Machine Feeder	Pettitt, Edwin	1871
111977	Carpet Rag Looper & Slitter	Russell, Daniel A.	1871
111991	Spinning Wheel	Voegtli, Franz	1871
112391	Cotton, Method of Treating	Simpson, Michael H.	1871
112478	Loom Take Up Mechanism	Michna, John	1871
112643	Loom Shuttle	Smith, Charles E.	1871
112677	Hat Pressing Machine	Beatty, Samuel	1871
112785	Loom, Lappet	Clough, Joseph	1871
113028	Warping Machine Stop Motion	Cummings, Edwin	1871
113059	Basket, Stave	Jones, Horace C.	1871
113213	Hose Repairing Machine	Shedlock, Alfred	1871
113313	Clothes Pin	Lipsey, Andrew B.	1871
113325	Bobbin Winding Machine	Morrill, Franklin H.	1871
113380	Spindle Bearing	Wilson, Charles F.	1871
113445	Spinning Mule, Self Acting	Parkinson, Charles	1871
113575	Spinning Machine, Ring	Sawyer, Jacob H.	1871
113594	Spinning Wheel	Strain, Joseph	1871
113784	Spinning Jack, Self Acting	McGovern, Peter	1871
113814	Spinning Mule, Self Acting	Sutherland, James	1871
114008	Tatting Shuttle & Crochet Needle	Hingher, Constantine	1871
114048	Wool Oiling Machine	Sargent, Charles G.	1871
114064	Drawing Frame	Taft, Gustavus E.	1871
114114	Thread Measuring Apparatus	Dimock, Lucius	1871
114155	Loom Shuttle	Kuttner, Julius	1871
114167	Loom Shuttle	Marble, Ezra W.	1871
114274	Spinning Mule, Self Acting	Dodd, John	1871
114307	Loom Weft Fork	Knowles, Jacob H.	1871
114524	Spinning Flyer	Brown, James S.	1871
114535	Rope Making Machine, Straw	Donnellan, Charles E.	1871
114536	Spindle Step	Draper, George	1871
114562	Fringe Twisting Machine	Howard, Hiland	1871
114570	Spindle Step	Draper, George	1871
114606	Loom Take Up	Rouse, Wanton	1871
114929	Loom	Crowley, Jeremiah	1871
115006	Loom Shuttle	Wright, Daniel	1871
115191	Spinning Machine	Goulding, John	1871
115233	Spinning Machine Spindle Step	Pearl, Oliver	1871
115264	Bobbin Winding Machine	Adams, Judson	1871
115355	Washing Machine	Putnam, Leonard	1871
115508	Loom	Nimmo, Archibald	1871
115614	Loom Shuttle	Isherwood, Thomas	1871
115676	Spinning Machine	Ballard, Seth R.	1871
115938	Loom	Davies, John S.	1871
116125	Warp Coloring Apparatus	White, Nelson D.	1871
116168	Bobbin Holder	Draper, George	1871
116374	Basket	Tuthill, Benjamin F.	1871
116435	Loom Shuttle	Graham, Edmund H.	1871
116481	Spinning Machine, Sizing Cop Coil	Pearson, Alfred	1871
116482	Warp Creel Bracket	Peck, Napoleon B.	1871
116609	Loom Shuttle	Lyall, James	1871
116840	Cotton Lapper Feed Regulator	Kitson, Richard	1871
116841	Picker, Waste	Kitson, Richard	1871

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116881	Spinning Machine Flyer	Stibbs, Thomas	1871
117098	Drawing Frame	Moon, Benjamin	1871
117183	Loom Shuttle	Lofvendahl, Joseph	1871
117218	Twisting Machine, Skein	Stibbs, Thomas	1871
117220	Loom Shuttle	Thissell, Earl A.	1871
117231	Spinning Mule, Self Acting	Wright, Edward	1871
117324	Needle Wrapper	Pitzler, James	1871
117443	Cloth Measuring Machine	Mills, Isaac	1871
117523	Loom Shuttle Box Mechanism	Dyson, John	1871
117556	Loom Shuttle Spindle	Morton, Albert	1871
117672	Loom, Narrow Ware	Oldfield, Edwin	1871
117837	Loom Shuttle, Wire Cloth	Waters, Charles	1871
117934	Spinning Ring Fastening	Sawyer, Jacob H.	1871
118338	Loom, Brussels Carpet	Buzzell, John P.	1871
118405	Loom Shuttle	Tucker, Frederic O.	1871
118408	Cord & Band Making Machine	Unsworth, Thomas	1871
118422	Spinning Frame Spindle	Austin, Clark L.	1871
118426	Cord Making Machine	Boardman, Harris	1871
118536	Twisting Machine, Yarn	Jackson, John H.	1871
118763	Spinning Machine Spindle Step	Westcott, Asa A.	1871
118969	Loom Harness Mechanism	Plummer, Osgood	1871
119032	Spinning Machine Spindle	Hussey, Daniel	1871
119201	Loom Shuttle	Tucker, Frederick O.	1871
119276	Loom, Hair Cloth	Lindsley, Isaac	1871
119277	Loom, Hair Cloth	Lindsley, Isaac	1871
119283	Spinning Machine Spindle Bearing	Sawyer, Jacob H.	1871
119311	Clothes Pin	Burling, Benjamin	1871
119459	Loom Harness Mechanism	Goodyear, Robert B.	1871
119938	Clothes Pin	Mellish, Henry	1871
120209	Roving Frame	Morgan, Eustis	1871
120474	Knitting Machine, Lace	Williamson, Henry	1871
120510	Loom, Needle	Gee, William V.	1871
120782	Braiding Machine, Whip	Sizer, Emerson	1871
120843	Loom Let Off	Woodman, Andrew J.	1871
121045	Felting Machine	Eickemeyer, Rudolf	1871
121124	Carpet Rag Looper & Slitter	Palmer, Leeman C.	1871
121127	Ironing Table & Clothes Dryer	Power, Martin	1871
121258	Loom Harness	Sladdin, Joseph	1871
121262	Loom Shuttle	Tucker, Frederick O.	1871
121268	Saddle Girth	Baker, Seth W.	1871
121303	Clothes Pin	Wattles, Hiram J.	1871
121359	Loom Picker	Gove, Elijah D.	1871
121415	Flock Cutting Machine, Reversible	Pitts, James	1871
121758	Basket	Cole, Elisha B.	1871
121830	Loom Shuttle	Waters, Charles H.	1871
121838	Loom Shuttle Box Mechanism	Ashworth, John	1871
121842	Loom Shedding Motion	Booth, James	1871
121907	Loom Shuttle Box Mechanism	Stone, Joseph M.	1871
122236	Thread Measuring Machine	Dunn, Leonard F.	1871
122607	Fluting Machine	Hayen, Jacob F.	1872
122705	Spinning Machine Spindle Bearing	Cheetam, Linneus	1872
122984	Basket, Fruit	Bartlet, Roland S.	1872
123037	Loom Shuttle Motion, Positive	Murkland, William	1872
123184	Loom Shuttle	Martin, Joseph	1872
123358	Spinning Machine Spindle Bearing	Pierce, Horatio L.	1872
123545	Knitting Machine	Appleton, Charles J.	1872
123568	Spinning Machine Spindle Step	Lothrop, Henry O.	1872
123601	Loom Heddle	Whipple, Cullen	1872
123826	Drawing Frame Stop Motion	Hayden, Daniel W.	1872
123895	Yarn Drying Machine	Hartman, Richard	1872
123952	Loom Picker	Terrell, Enoch T.	1872
123978	Loom Shuttle	Carstaedt, Hugo	1872

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124004	Loom Temple	Murkland, William	1872
124051	Fringe	Gillespie, James E.	1872
124071	Clothes Pin	Lipsey, Andrew B.	1872
124180	Cloth Cutting Machine	Warth, Albin	1872
124231	Basket	Tower, Hercy E.	1872
124290	Spinning Machine Spindle	Sawyer, Jacob H.	1872
124882	Braiding Machine	Butler, James D.	1872
124903	Flock Grinder	Marble, Edwin T.	1872
124955	Clothes Pin	Huston, Robert W.	1872
124967	Loom Shuttle	Miller, Felix	1872
124989	Winding Machine Stop Motion	Unsworth, Thomas	1872
125253	Clothes Pin	Ball, Thomas C.	1872
125467	Cord Covering Machine Stop Motion	Lewis, Reuben	1872
125543	Knitting Machine	Comstock, Francis M.	1872
125564	Bobbin Winding Machine	Gee, William V.	1872
125687	Spinning Machine Spindle Bearing	Perry, Francis H.	1872
125688	Doubling & Twisting Machine Yarn	Perry, Francis H.	1872
125689	Warping Machine Stop Motion	Perry, Francis H.	1872
126119	Loom Shuttle	Whitehill, Robert	1872
126387	Card Stripping Machine	Foss, John F.	1872
126569	Loom Shuttle	Northrop, Louis L.	1872
127159	Spinning Machine Spindle	Draper, George	1872
127566	Carding Machine	Chase, Frederick	1872
127748	Spinning Machine	Draper, George	1872
128274	Knitting Machine Needle	Baldwin, Nathan H.	1872
128480	Loom Shedding Motion	Foss, John F.	1872
128694	Loom	Wyman, Horace	1872
128774	Carpet Rag Looper	Ansley, George W.	1872
128857	Carpet Rag Looper & Cutter	Converse, Lyman P.	1872
128951	Thread Winding Machine, Spool	Clark, William	1872
129216	Loom	Day, William	1872
129285	Cloth Cutting Machine	Koch, Frederick	1872
129394	Bobbin Winder, Automatic	Church, Dwight M.	1872
129529	Knitting Machine, Circular	Christoffers, Martin	1872
129602	Loom Shuttle Motion	Short, James	1872
129692	Loom Shuttle	Thissell, Earl A.	1872
129722	Loom Heddle Frame	Dyson, John	1872
129816	Rope & Cable Making Machine	Greenway, Henry	1872
129829	Carpet	Hunter, Samuel	1872
129903	Spinning Machine Spindle Bearing	Richardson, George	1872
129915	Loom Let Off	Woodward, Andrew J.	1872
130058	Spooling & Winding Machine Guide	Laflin, Perley	1872
130135	Basket	Jones, Horace C.	1872
130136	Basket	Jones, Horace C.	1872
130137	Basket	Jones, Horace C.	1872
130148	Spindle Step	Parmenter, Samuel W.	1872
130343	Cloth Cutting Machine	Warth, Albin	1872
130672	Cards For Wrapping Thread	Sutro, Hugo	1872
130860	Spindle	Osgood, Enoch	1872
130866	Knitting Machine	Ramsdell, William H.	1872
130966	Spinning Machine Bobbin Holder	Youngman, William L.	1872
131185	Card Cylinder Cleaners	Smith, James H.	1872
131205	Yarn Beaming Machine	Arms, James C.	1872
131420	Carpet Rag Looper	Bollinger, William	1872
131491	Loom Temple	Allen, Nicholas J.	1872
131657	Spinning Wheel	Bryce, John	1872
131761	Loom Shuttle Check	Kingston, Jonathan N.	1872
131851	Basket, Fruit	Conover, Stephen B.	1872
131906	Fabric	Roder, Conrad	1872
132014	Loom, Hair Cloth	Laycock, William S.	1872
132546	Die, Collar Making	Snow, George K.	1872

Patent	Invention	Inventor	Year
132627	Clothes Pin	Bullock, Laban	1872
132959	Warping Machine	Fries, John W.	1872
132986	Spinning Machine Spindle & Bobbin	Roper, James	1872
133065	Spinning Machine	Stell, Michael	1872
133080	Cotton Gin	Clough, Jefferson M.	1872
133493	Loom Picker	Smith, Charles E.	1872
133676	Loom, Pile Fabric	Shinn, John	1872
133868	Loom Shuttle Motion	Lyall, James	1872
133941	Basket	Jones, Horace C.	1872
134057	Warp Setting Frame	Higgins, John H.	1872
134067	Spinning Frame Spindle	Jenks, Barton H.	1872
134069	Loom Shuttle Box Motion	Jenks, Barton H.	1872
134074	Loom Shuttle	Ladd, James E.	1872
134075	Loom Shuttle	Lambert, Peter A.	1872
134535	Spinning Machine Spindle & Bobbin	Garsed, Richard	1873
134712	Spinning Ring	Tully, Frank	1873
134848	Loom Shuttle	Bryant, H.H.	1873
134863	Spindle Bolster & Step	Draper, George	1873
134864	Spinning Frame	Draper, George	1873
134935	Dyeing & Washing Fiber Machine	Sargent, Charles G.	1873
134964	Yarn Sizing Machine	Abbott, Thomas	1873
134971	Loom Shuttle	Blanding, Francis	1873
134992	Loom	Knowles, Lucius J.	1873
135015	Carding Machine Condenser Tube	Skinner, Alexander W.	1873
135033	Hat Stretching Machine	Eickemeyer, Rudolf	1873
135190	Spinning Machine Spindle Bolster	Wilson, Charles F.	1873
135253	Loom Picker	Taylor, William	1873
135428	Hat Pressing Machine	Hastings, Emory B.	1873
135446	Loom Shuttle	Sawyer, Caleb K.	1873
135501	Clothes Pin	Wellington, William	1873
135619	Warping Machine	Bancroft, Joseph B.	1873
135652	Loom Shuttle	Martin, Thomas	1873
135748	Loom Shuttle Box Motion	Atkinson, William	1873
135939	Spinning Machine Spindle	Rice, David H.	1873
135960	Spindle Bolster	Barnes, James	1873
136065	Rag Ripper & Looper	John, Harley M.	1873
136133	Loom	Canis, Augustus	1873
136384	Loom Shuttle Binder	Rea, Francis	1873
136480	Knitting Machine, Circular	Armour, John M.	1873
136504	Spindle Lubricator	Goulding, J.	1873
136633	Carpet Rag Looper & Cutter	Whitten, Seth M.	1873
136644	Loom Temple	Dutcher, Frank J.	1873
136715	Loom Shuttle	Field, David C.G.	1873
137077	Loom Shuttle Motion	Kane, Charles J.	1873
137239	Spindle Bolster	Richardson, George	1873
137252	Loom Shedding Motion	Shinn, John	1873
137326	Combing Machine	Smith, Isaac	1873
137368	Basket	Higgins, William C.	1873
137386	Spinning Mule, Self Acting	Paul, Archibald	1873
137443	Spindle Step	Henry, J.J.	1873
137518	Cloth Folding Machine	Warth, Albin	1873
137605	Warping Machine Stop Mechanism	Follensbee, George S.	1873
137846	Basket, Grain	Jones, Horace C.	1873
137898	Loom	Duckworth, John C.	1873
137962	Printing Machine, Oil Cloth	Rommel, Charles	1873
138511	Spinning Mule, Self Acting	McGovern, Peter	1873
138929	Spinning Machine Spindle Stop	Potter, Henry T.	1873
139051	Spinning Mule	Dewey, John J.	1873
139251	Loom Filling Fork	Knowles, Jacob H.	1873
139384	Loom Shuttle Box Mechanism	Goodyear, Robert B.	1873
139447	Drawing Frame Stop Motion	Wright, Pliny J.	1873
139558	Bobbin	Earl, Anthony I.	1873

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139616	Cloth Cutting Machine, Webbing	Rice, William A.	1873
139652	Spinning Machine Quill Bobbin	Bass, Jr., David	1873
139884	Loom Temple	Dutcher, Warren W.	1873
139929	Loom Temple	Stimpson, Edward S.	1873
139930	Spooling Machine	Stone, Joseph M.	1873
140013	Loom Temple	Chapman, N.	1873
140056	Spinning Frame Twist Regulator	Martin, Celestin	1873
140098	Loom Shuttle	Tucker, William	1873
140215	Thread Evener	Meldrum, John B.	1873
140320	Cloth Napping Machine, Knit	Tomkins, Clark	1873
140322	Flyer, Covering Bonnet Wire	Tyler, Erastus H.	1873
140757	Spinning Ring, Adjustable	Bancroft, Joseph B.	1873
140800	Knitting Machine	Tripp, Othniel F.	1873
140889	Carpet Rag Looper	Clayton, Jr., William	1873
140903	Hat Stretching Machine	Eickemeyer, Rudolf	1873
141262	Loom	Davis, Hilas D.	1873
141337	Hat Stretching Machine	Eickemeyer, Rudolf	1873
141338	Hat Block, Expansible	Eickemeyer, Rudolf	1873
141339	Hat Lustering Machine	Eickemeyer, Rudolf	1873
141434	Bobbin Winding Machine	Goodyear, James	1873
141440	Spinning Machine Spindle Bolster	Jenks, Barton H.	1873
141575	Bobbin	McLaughlin, Thomas G.	1873
141725	Beetling Woven Fabric Machine	Patterson, John	1873
141740	Clothes Pin	Urso, Vincent D.	1873
141751	Spinning Machine Spindle Bolster	Birkenhead, John	1873
141803	Loom Shuttle	McIntyre, Thomas K.	1873
142101	Cotton Opener, Feed Regulator	Harding, David	1873
142177	Reel, Skeining Silk	Simon, Robert	1873
142188	Bobbin Winding Machine	Atkinson, William	1873
142245	Spinning Machine Bobbin	Laflin, Perley	1873
142342	Basket, Grain	Jones, Horace C.	1873
142373	Loom Shuttle	Brown, Joseph	1873
142439	Carpet Manufacture	Clark, Henry A.	1873
142681	Carpet	Dornan, John	1873
143024	Clothes Pin	Mellish, Henry	1873
143218	Loom Picker	Boorn, Samuel	1873
143257	Loom Picker	Ross, Lester E.	1873
143508	Spinning Machine Condensation Tube	Good, J.	1873
143743	Band, Endless	Binns, Leedham	1873
143785	Spindle Bolster	Richardson, George	1873
143927	Loom Shuttle	Pfefferkorn, Carl L.	1873
143976	Loom Shuttle	Fields, M.F.	1873
144067	Spindle	Crocker, Lewis C.	1873
144077	Loom, Pile Fabric	Ellison, James C.	1873
144176	Loom Shedding Mechanism	Wilber, Isaac L.	1873
144507	Loom Temple	Chapman, Nathan	1873
144563	Basket, Rattan Ware	Penley, Sullivan H.	1873
144601	Spinning Machine Spindle	Carroll, William T.	1873
144610	Loom, Narrow Ware	Fowler, Rufus B.	1873
144620	Rod for Drawing in Warp Thread	Jordan, Mary S.	1873
144647	Loom Temple	Allen, Nichalos I.	1873
144657	Loom Shuttle	Chapman, Nathan D.	1873
144839	Cloth Napping Machine	Dobson, John	1873
144840	Drawing & Delivering Wool	Dobson, John	1873
144841	Fulling Mill	Eickemeyer, Rudolf	1873
145009	Spinning Machine Spindle	Perry, William G.	1873
145094	Carpet Rag Looper	Cooper, James F.	1873
145282	Loom Harness Making Machine	Crowell, John H.	1873
145316	Loom Shuttle Box, Drop	Thomas, Samuel T.	1873
145322	Spinning Machine	Williams, Chauncey	1873
145386	Band Making Machine, Endless	Binns, Leedham	1873

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145803	Carpet	Iskiyan, Gregory	1873
145831	Loom Shuttle	Ball, Edwin P.	1873
145905	Loom Picker	Sawyer, Orren A.	1873
146059	Spinning Machine Spindle Whirl	Furbush, Merrill A.	1873
146065	Chair Seat	Hale, Henry S.	1873
146077	Tatting Shuttle & Crochet Needle	Kellogg, Eugene	1873
146320	Dyeing Wool or Silk In Skeins	Cooke, James S.	1874
146362	Loom Shuttle	Rigby, John	1874
146391	Spindle Driving Mechanism	Hussey, Daniel	1874
146543	Loom Take Up	Murkland, William	1874
146544	Loom, Jacquard	Murkland, William	1874
146558	Swift & Reel	Totten, Andrew	1874
146564	Carpet Rag Looper	Almy, J. Eben	1874
146574	Loom Weft Stop	Comey, Willard	1874
146756	Spinning Machine Bobbin	Draper, William F.	1874
146757	Loom Temple	Dutcher, Warren W.	1874
146942	Shears	Nunan, Edward	1874
147062	Loom Shuttle	Murkland, William	1874
147075	Loom Shuttle	Spalding, Edwin G.	1874
147076	Loom Shuttle	Spalding, Edwin G.	1874
147200	Spinning Wheel	Voegth, Franz	1874
147372	Knitting Machine	Coltman, Thomas	1874
147453	Cloth Cutting Machine	Warth, Albin	1874
147550	Fringe Twisting Machine	Brooks, William	1874
147590	Spinning Mule, Self Acting	Bancroft, Nathan W.	1874
147657	Spinning & Doubling Stop Mechanism	Kraink, George	1874
147747	Die, Covering Spool Head	Darrow, Franklin E.	1874
147779	Carding Machine	Mills, Christopher D.	1874
148036	Loom Selvage Guard	Clayton, Joseph	1874
148088	Clothes Pin	Reed, Samuel	1874
148134	Loom Shuttle	Parker, William M.	1874
148135	Loom Shuttle	Parker, William M.	1874
148252	Loom Harness Making Machine	Sladdin, Joseph	1874
148388	Knitting Machine	Stevens, Benjamin C.	1874
148397	Spinning Mule, Self Acting	Wright, Edward	1874
148534	Spinning Machine Spindle & Bobbin	Whitman, George D.	1874
148625	Spinning Machine Spindle Bolster	Richardson, George	1874
148680	Hat Pouncing Machine	Eickemeyer, Rudolf	1874
148784	Basket	Van Ornum, Robert W.	1874
148936	Loom Picker	Crompton, George	1874
148937	Knitting Machine, Circular	Cummings, George W.	1874
149085	Wool Treating Machine	Wilkinson, Frederick	1874
149099	Loom Picker Staff Check	Bury, Benjamin	1874
149264	Basket	Stevens, Henry	1874
149292	Loom, Pile Fabric	Davis, Ezekiel K.	1874
149447	Loom Weft Stop	Cottrell, Jesse D.	1874
149448	Loom	Cottrell, Jesse D.	1874
149498	Speeder, Drawing & Twisting	Mayor, Thomas	1874
149815	Spinning Mule	Watts, James	1874
150073	Combing Machine	Mirfield, Matthew	1874
150174	Loom Shuttle	Maynard, Israel F.	1874
150240	Loom Shuttle	Hooper, Cyrus A.	1874
150424	Basket	Maynard, Sylvender F.	1874
150439	Clothes Pin	Smith, David M.	1874
150581	Silk Winding Machine	Jenkins, George E.	1874
150806	Loom Shuttle	Williams, Norman A.	1874
150925	Loom Shedding Mechanism	Williamson, Joseph	1874
150931	Loom Shuttle	Arnold, Jabez R.	1874
151384	Loom, Needle	Greenleaf, Joseph H.	1874
151385	Loom, Narrow Ware	Gregory, William	1874
151456	Cloth Cutting Machine	Warth, Albin	1874
151624	Carpet Rag Looper	Rowell, Franklin	1874

Patent	Invention	Inventor	Year
151697	Spinning Machine Roll Cleaner	Harris, James T.	1874
151729	Loom Weft Stop	Taylor, William	1874
151961	Loom Shedding Motion	Davis, Hilas D.	1874
152008	Spindle	Richardson, George	1874
152021	Knitting Machine	Tripp, Othniel F.	1874
152088	Loom, Carpet	Duckworth, William	1874
152219	Spinning Machine Bobbin	Draper, George	1874
152229	Loom Temple	Hirst, Joseph	1874
152367	Die, Cutting Gloves	Haag, Jacob	1874
152404	Dyeing Apparatus, Indigo	Oldroyd, John	1874
152419	Loom Shuttle	Sawyer, Caleb K.	1874
152443	Loom Shuttle	Washburn, Quincy A.	1874
152531	Loom, Wire	Taylor, William	1874
152654	Loom, Bag	Laird, Jr., John	1874
153025	Card Punching Machine	Upson, Lyman A.	1874
153320	Cord Making Machine	Defrees, William H.	1874
153417	Window Shade Weaving Machine	Baldwin, Jr., John	1874
153660	Cloth Napping Machine	Brown, Adna	1874
153693	Loom, Wire Cloth	Wickwire, Chester F.	1874
153711	Loom	Harriman, Moses	1874
154035	Loom, Corset	Gahren, Charles	1874
154466	Warping Machine Stop Mechanism	Entwistle, Thomas C.	1874
154483	Darning Machine, Stocking	Hosmer, Orin S.	1874
154600	Loom	Gee, William V.	1874
154601	Loom Filling Guide	Gee, William V.	1874
154736	Pinking Iron	Welch, Eliza P.	1874
154745	Loom, Tape	Chapman, Charles H.	1874
154766	Picking & Twisting Cows Hair	Pfanne, Charles	1874
154822	Washing Machine, Wool	Bachelder, John	1874
154837	Loom Temple	Chapman, Nathan	1874
154969	Spinning Wheel	Walker, Walter B.	1879
154996	Loom, Hair Cloth	Turpie, John	1874
155382	Spinning Machine Spindle	Mason, William	1874
155558	Spinning Machine Bobbin Holder	Wellens, Jules C.	1874
155749	Spinning Mule, Self Acting	Platt, Samuel	1874
156027	Loom Shuttle	Lear, Peter	1874
156205	Spindle Step	Chatterton, George	1874
156230	Spinning Wheel	McLeod, Murdock	1874
156337	Loom Shuttle	Dornan, John	1874
156403	Loom Weft Fork	Allen, Nicholas I.	1874
156413	Spool	Darrow, Franklin	1874
156459	Loom Picker	Garland, James G.	1874
156525	Spinning Frame, Silk	Atwood, John E.	1874
156526	Spinning Frame	Atwood, John E.	1874
156587	Loom Let Off & Take Up	Metcalf, Edward	1874
156610	Carpet	Wallace, William	1874
156630	Loom Shedding Motion	Crompton, George	1874
156667	Spindle Step	Hopkins, Addison S.	1874
156770	Spindle	Carter, Euclid D.	1874
157677	Loom	Crompton, George	1874
157845	Hat Measurer & Stretcher	Levering, Thomas J.	1874
157931	Rope, Wire	Roebling, Charles G.	1874
158027	Cloth Measure	Carlon, Hugh	1874
158202	Loom, Pile Fabric	Cochran, Jr., John	1874
158394	Loom Shuttle Box Mechanism	Wyman, Horace	1875
158413	Spinning Frame	Stone, Joseph M.	1874
158427	Thread Winding Guide	Manchester, Eugene L.	1875
158775	Loom Picker	Bean, Benjamin F.	1875
159050	Loom Temple	Stimpson, Edward S.	1875
159255	Loom Temple	Fuller, Albert D.	1875
159499	Spindle Lubricator	Buttrick, Charles G.	1875

Patent	Invention	Inventor	Year
159653	Loom	Dornan, John	1875
159750	Knitting Machine, Circular	Curtiss, Edward P.	1875
159764	Loom Shuttle	Lear, Peter	1875
159912	Hat Pouncing Machine	Eickemeyer, Rudolf	1875
159983	Loom Stop Mechanism	Bullough, James	1875
159984	Loom Stop Mechanism	Bullough, James	1875
159985	Loom Stop Mechanism	Bullough, James	1875
159986	Loom Stop Mechanism	Bullough, James	1875
159988	Cloth Folding Machine	Warth, Albin	1875
160001	Loom Shuttle	Blanding, Francis	1875
160058	Spooling Machine	Mathewson, Thomas A.	1875
160198	Braiding Machine	Hupplesberg, Friedrick W.	1875
160544	Loom Shuttle	Peasley, James H.	1875
160607	Cloth Cutting Apparatus, Bias	Mayer, Solomon	1875
160661	Clothes Pin	Farrington, George K.	1875
160749	Loom, Suspender Webbing	Chapman, Charles H.	1875
160825	Cloth Shearing Machine	Holmes, Isaac	1875
160843	Loom Shuttle	Safford, Mark	1875
161008	Knitting Machine, Straight	Curtiss, Edward P.	1875
161061	Loom Shuttle	Rollason, Alfred	1875
161101	Loom Shuttle	Crosby, John A.	1875
161138	Clothes Pin	Mayo, William H.	1875
161443	Loom Let Off	Rose, George	1875
161488	Loom Shuttle Box Mechanism	Crompton, George	1875
161545	Loom Shuttle	Porter, Roger W.	1875
161638	Warping Machine	Richard, Joseph S.	1875
161702	Loom Shuttle	Peckham, James M.	1875
161888	Spinning Machine Spindle	Le Moyne, Joel H.	1875
161972	Loom Shuttle	Le Moyne, Joel H.	1875
161996	Loom Let Off	Turner, John	1875
162093	Carpet Rag Looper	Naylor, George W.	1875
162188	Loom Beam	Oldfield, Edwin	1875
162191	Loom Heddle Frame	Pratt, Frederic S.	1875
162238	Loom Shedding Motion	Kenison, Orrin W.	1875
162246	Spinning Machine	Mattison, Charles Z.	1875
162385	Carpet	Horner, Jr., Samuel	1875
162390	Hat Brushing Machine	Joyce, Alexander S.	1875
162479	Cotton Cleaning Machine	Keene, Samuel D.	1875
163280	Cordage Finishing Machine	Tebow, Theodore	1875
163483	Spool, Jack	Guy, Henry M.	1875
163609	Loom Shuttle	Rigby, John	1875
163691	Loom Heddle Frame	Pike, Edwin S.	1875
163799	Loom Shuttle Box Mechanism	Norton, James Lee	1875
163887	Spinning Ring & Ring Rail	Richardson, George	1875
163959	Spool	Allen, Nicholas I.	1875
164026	Cloth Tentering Machine	Palmer, Jr., William H.	1875
164059	Spinning Machine Spindle	Wade, Asel M.	1875
164144	Loom Shuttle	Cheetham, Thomas	1875
164256	Spinning Ring & Gearing	Booth, John	1875
164492	Spinning Ring	Stearns, Willard W.	1875
164493	Loom Shuttle	Stevens, Edgar M.	1875
164716	Spinning Machine Top Roller	Card, Edward	1875
164740	Warp Holder	Houghton, Henry S.	1875
164751	Embroidering Machine	Michalet, Francois	1875
164796	Carding Machine, Lapping	Blamires, Thomas H.	1875
165045	Basket, Stave	Wheeler, Shepherd H.	1875
165197	Spinning Machine Top Roller	Atkinson, Edward	1875
165285	Basket, Stave	Wheeler, Roscoe B.	1875
165352	Speeder	Mayor, Thomas	1875
165416	Basket, Stave	Jones, Horace C.	1875
165417	Basket, Grain	Jones, Horace C.	1875

Patent	Invention	Inventor	Year
165419	Basket, Stave	Jones, Horace C.	1875
165433	Spinning Machine Spindle	Wade, Asel M.	1875
165636	Cloth Cutting Machine	Warth, Albin	1875
165657	Cloth Friezing Machine	Bishop, George G.	1875
165666	Loom Beam	Gould, John A.	1875
165777	Loom Shuttle	Willis, Newiel J.	1875
165807	Bobbin Winder	Dornan, John	1875
165941	Lace Machine	Malhere, Eugene	1875
166262	Fabric, Imitation Quilted	Corwin, Walter	1875
166316	Spinning Frame Building Mechanism	Stone, Joseph M.	1875
166366	Cloth Testing Machine	Hebdon, William	1875
166601	Carding Machine Condenser Mechanism	Furbush, Merrill A.	1875
166732	Loom, Hair Cloth	Turnpie, John	1875
166753	Rope Stretcher	Curtis, Charles C.	1875
166896	Coverlet	Schadewald, Henry	1875
167152	Loom, Pile Fabric	Bigelow, Erastus B.	1875
167176	Loom Shuttle Motion	Kane, Charles J.	1875
167310	Fabric, Felt	Davies, Henry	1875
167357	Loom Heddle Frame	Pike, Edwin S.	1875
167358	Rattan Measuring Machine	Richardson, Nathan H.	1875
167391	Hat Stretching Machine	Eickemeyer, Rudolf	1875
167418	Loom Take Up Pawl	Walker, Samuel S.	1875
167545	Loom, Matting	Kuh, Sol	1875
167563	Knitting Stockings, Method of	Polle, Sallie	1875
167673	Clothes Pin	Kniffen, George W.	1875
167678	Loom Shuttle Spindle	Logan, Thomas H.	1875
167707	Loom Picker Stop Check	Stevenson, William W.	1875
167753	Loom Shuttle	Edwards, Addison	1875
167823	Spindle Lubricator	Buttrick, Charles	1875
167965	Spinning Machine Spindle Whirl	Wilson, Jr., David	1875
168022	Spindle Step Securing Mechanism	Hopkins, Addison S.	1875
168066	Spooling Machine, Yarn	Wade, Asel M.	1875
168228	Loom Take Up	Carstaedt, Hugo	1875
168309	Doubling & Twisting Machine	Wicks, Joseph F.	1875
168512	Spinning Machine, Wool	Martin, Celestin	1875
168644	Spindle Bolster	Jenckes, Welcome	1875
168719	Temple Teeth Setting Machine	Chapman, Nathan	1875
169170	Spinning Machine	Hillard, James P.	1875
169248	Loom Shuttle	Fish, Joseph	1875
169315	Doubling Machine	Unsworth, Thomas	1875
169447	Basket, Stave	Jones, Horace C.	1875
169448	Basket, Stave	Jones, Horace C.	1875
169504	Loom Shuttle	Wright, Daniel	1875
169505	Loom Shuttle	Wright, Daniel	1875
169507	Spinning Frame	Atwood, John E.	1875
169546	Bobbin	Hubbard, Horace J.	1875
169568	Warper	Moulton, Oliver	1875
169608	Loom Pattern Chain	Wicks, Joseph F.	1875
169742	Cloth Napping Machine	Thackrah, Benjamin	1875
169749	Loom Temple	Walker, Samuel S.	1875
169837	Loom Shuttle	Porter, Roger W.	1875
169995	Loom Shuttle Check & Binder	Hurd, Seth T.	1875
170007	Loom Stop Motion Fork	McCaffery, Jr., John	1875
170214	Loom Shuttle & Shuttle Stop	Wolfender, James	1875
170323	Carpet Rag Looper	Wyckoff, William H. H.	1875
170458	Loom Harness Motion	Witter, Henry	1875
170572	Fabric,Elastic	Leonard, Moses H.	1875
170580	Loom Picker	McManus, Henry	1875
170630	Spinning Wheel	Kendall, John J.	1875
170922	Loom, Pile Fabric	Webster, William	1875
170929	Spinning Machine Spindle	Arnold, John C.	1875
171075	Card Grinding Machine	Wicks, Joseph F.	1875

Patent	Invention	Inventor	Year
171298	Spinning Machine	Marshall, Nathaniel	1875
171466	Knitting Machine, Circular	Appleton, Charles J.	1875
171520	Loom Picker Fastening	Labounty, Leonard G.	1875
171548	Twisting Machine	Capstack, Jonathan	1875
171598	Loom Shuttle Box Mechanism	Chandler, Isaac G.	1875
171788	Warping Machine	Follinsbee, George S.	1876
171808	Cloth Shearing Machine	Holmes, Isaac L.	1876
171943	Doubling Machine	Leigh, Lewis E.	1876
171989	Loom Shuttle Box Mechanism	Capron, Ariel B.	1876
172097	Loom Lay Motion	Duckworth, John C.	1876
172296	Loom, Carpet	Bigelow, Erastus B.	1876
172298	Winding Machine, Conical Bobbin	Campbell, George	1876
172510	Spindle Sheath & Cop tube	Simmons, George H.	1876
172681	Cotton Cleaning Machine	Wright, James	1876
172690	Cloth Napping & Calendering	Becker, Nicholas J.	1876
172937	Cotton Bale Check	Riethmuller, John C.	1876
172989	Knitting Machine, Circular	Franz, William	1876
173172	Cotton Opener & Picker	Kitson, Richard	1876
173391	Hat Brim Cutter	Cooke, George W.	1876
173646	Cotton Opener & Cleaner	Kenne, S.Davis	1876
173704	Felting & Napping Cloth Machine	Whipple, Lyman W.	1876
173922	Fulling Mill	Eickemeyer, Rudolf	1876
174345	Knitting Machine	Appleton, Charles J.	1876
174349	Spinning Mule	Brown, James S.	1876
174376	Loom Shuttle	Mills, Guy C.	1876
174505	Cop Tube	Essex, Jeremiah	1876
174763	Knitting Machine, Circular	Bickford, Dana	1876
174902	Temple Teeth Sorting Machine	Dutcher, Frank	1876
174918	Speeder & Fly Frame	Mayor, Thomas	1876
174947	Bobbin	Cundey, Isaac	1876
174999	Fluting Machine	Albrecht, Hermann	1876
175117	Loom Shuttle	Legare, Marcel S.	1876
175396	Loom Weft Fork	Warfield, Caleb H.	1876
175499	Carpet	Read, Charles A.	1876
175633	Loom Stop Motion Fork	Worthern, Charles H.	1876
175641	Fulling Mill	Baldwin, Joel M.	1876
175802	Spindle Step Lubricator	Whorwell, Henry	1876
175953	Hat Body Stretching Machine	Eickemeyer, Rudolf	1876
176171	Loom Temple, Roller	Dow, Albert F.	1876
176261	Knitting Machine, Circular	Appleton, Charles J.	1876
176314	Chair Seat & Back	Hunzinger, George	1876
176359	Spindle Bobbin	Sawyer, Jacob H.	1876
176467	Loom Shedding Mechanism	Goodyear, Robert B.	1876
176949	Loom, Corset	Gahren, Charles	1876
177162	Bobbin Winder	Schofield, Joseph	1876
177227	Loom Temple	Dutcher, William W.	1876
177323	Loom Stop Motion	Crompton, George	1876
177373	Loom Temple Bar	Chapman, Nathan	1876
177466	Card Clothing, Utilizing Old	Brummet, Frank E.	1876
177602	Cloth Napping Machine	Whitcomb, Marciene H.	1876
177641	Loom Picker	Holbrook, Albert	1876
177783	Basket, Grain	Amsden, Galen	1876
177841	Hose Goods	Hubbard, Henry G.	1876
177920	Loom, Pile Fabric	Bigelow, Erastus B.	1876
178167	Knitting Machine, Rotary	Langham, Thomas	1876
178259	Loom Temple	Arnold, Jabez R.	1876
178377	Loom Selvage Guard	Mills, John H.	1876
178599	Fulling Mill	Cooledge, Charles P.	1876
178987	Rope Making Machine	Binns, Leedham	1876
179043	Spinning Wheel	Mullins, John W.	1876
179118	Cotton Opener & Picker	Kitson, Richard	1876
179166	Loom Shedding & Shuttle Motion	Davis, Hylas D.	1876

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179334	Loom	Miller, Augustus H.	1876
179402	Loom Reed, Give Away	Cottrell, Jesse D.	1876
179463	Spindle Adjusting Device	Perry, William G.	1876
179488	Cop Winding Machine	Reid, William	1876
179510	Bobbin, Receiving Silk Cloth	Blauvelt, Jacob T.	1876
179575	Cloth Cutting, Ornamental	Lamb, Joseph	1876
179703	Hook, Web Drawing	Jordan, Mary S.	1876
179741	Spinning & Doubling Machine	Taylor, John	1876
179834	Carding Machine Attachment	Wright, James	1876
179848	Cotton Baling & Packing Apparatus	Drake, James A.	1876
179849	Cotton Baling & Packing Apparatus	Drake, James A.	1876
179855	Loom Harness Knitting Machine	Hodgkins, William A.	1876
179962	Carding Machine	Ryan, James C.	1876
180143	Spinning Machine, Ring	Mayor, Thomas	1876
180145	Bobbin	Mayor, Thomas	1876
180215	Thimble	Finger, Gilbert	1876
180250	Knitting Machine, Circular	Marshall, Moses	1876
180515	Carpet	Allinson, James	1876
180932	Wash Bench & Wringer	Rudel, Peter	1876
181107	Cloth Cutting Machine	Sanson, Robert B.	1876
181291	Loom Temple	Stimpson, Edward S.	1876
181321	Spooling Machine Yarn Guide	Draper, George	1876
181565	Spinning Regulator, Rope	Farthing, Isaiah	1876
181798	Loom Shuttle Threading Mechanism	Parker, Thomas S.	1876
181804	Spinning Machine Spindle	Stanley, James C.	1876
181861	Clothes Pin	Mihills, Uriah D.	1876
182051	Fabric, Double Woven	Baker, Seth W.	1876
182150	Loom Shuttle	Beatty, William	1876
182171	Cloth Folding Machine	Cottrell, Jesse D.	1876
182209	Wool Treating Apparatus	Mary, Nicholas	1876
182300	Spinning Frame	Chandler, Isaac	1876
182590	Fringe Twisting Machine	Mortimer, Samuel	1876
182892	Netting	Chase, John E.	1876
182908	Hat Pouncing Machine	Eickemeyer, Rudolf	1876
182909	Fulling Mill	Eickemeyer, Rudolf	1876
183169	Knitting Machine, Circular	Hollen, William H.H.	1876
183386	Spinning Frame Spindle & Bobbin	Essex, Jeremiah	1876
183432	Washing Machine	Stone, Columbus	1876
183517	Bobbin Winder, Yarn	Thomas, Samuel	1876
183619	Warping Machine	Ashworth, John J.	1876
183698	Spinning Frame Spindle	Myers, Henry	1876
184112	Loom Harness Eyes, Metallic	Sherman, William F.	1876
184404	Spinning Machine Bobbin	Mawson, John	1876
184569	Loom Picker	Avery, Sylvanus	1876
184637	Fringe Machine	Lincoln, Jesse B.	1876
184681	Loom Shedding Motion	Wicks, Joseph	1876
184689	Knitting Machine	Appleton, Charles J.	1876
184742	Spinning Frame Spindle Step	Whorwell, Henry	1876
184853	Twisting Hay For Fuel	Ford, Nathan	1876
185027	Loom, Jacquard	Halton, Thomas J.	1876
185041	Loom Shuttle	Moore, Albert M.	1876
185772	Combing Machine, Wool	Metcalf, Samuel	1876
185778	Wash Bench	Pond, Daniel B.	1876
185807	Spinning Spindle Cap	Weiler, Charles	1876
185847	Spindle or Bolster Fastening	Aldrich, Aaron	1877
185988	Burring Machine, Wool	Trombley, Edward	1877
186045	Bobbin Winding	Rice, Israel L.G.	1877
186108	Horse Blanket & Carriage Robe	Chase, Lucius C.	1877
186322	Spinning Frame, Ring	Draper, William F.	1877
186324	Spinning Frame, Ring	Draper, George	1877
186326	Spindle Tension Regulator	Draper, George	1877

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186486	Spinning Machine Bolster & Step	Luscomb, William S.	1877
186602	Loom, Tape, Automatic	Muller, Robert	1877
186643	Cloth Cutting Machine	Warth, Albin	1877
186661	Cloth Measuring Machine	Brown, Adna	1877
186674	Loom Shuttle	Hollowell, Albert	1877
186796	Spinning & Doubling Machine	Chapin, Henry A.	1877
187063	Loom Shuttle Spindle	Stevens, Edgar M.	1877
187281	Loom Shuttle Box Motion, Rotary	Hyde, James	1877
187369	Loom Shuttle, Narrow Ware	Fischer, George	1877
187538	Cotton Opener & Separater	Kitson, Richard	1877
187597	Yarn Sizing & Beaming Machine	Bullough, John	1877
187695	Basket, Stave	Jones, Horace C.	1877
187696	Knitting Machine	Abel, William H.	1877
187820	Fulling Mill	Colby, Charles T.	1877
188281	Loom Shuttle	Chamberlain, Dexter H.	1877
188321	Loom Picker	Walker, Samuel S.	1877
188385	Wool Cleaning Machine	Low, Oscar	1877
188441	Knitting Machine, Straight	Tiffany, Eli	1877
188460	Loom Shuttle	Anderson, Charles W.	1877
188489	Loom Shuttle	Wright, Augustus	1877
188538	Loom Temple	Porter, Alfred	1877
188784	Bobbin	Draper, William F.	1877
188825	Spinning Bobbin, Quill	Stanley, James C.	1877
188926	Loom Shuttle	Marbell, Ezra William	1877
189002	Loom Let Off	Widdup, Young	1877
189099	Rope Making Machine	Higby, Luther E.	1877
189195	Silk Dressing in Skeins Machine	Corron, Cesar	1877
189243	Bobbin	Mawson, John	1877
189353	Loom, Circular	Gillespie, James E.	1877
189515	Loom, Gimp	Stone, Robert	1877
189633	Loom Shuttle	Lewando, Charles	1877
189838	Warp Slasher	Briggs, Joseph	1877
190422	Drawing Frame Trumpet	Dawson, Patrick C.	1877
190525	Spinning Machine	Taft, Gustavus E.	1877
190566	Loom Shuttle	Dumas, Louis	1877
190694	Knitting Machine	Slack, James M.	1877
190710	Spinning Frame, Ring	Draper, William F.	1877
190745	Darning Last	Crowninshield, Mary B.	1877
190756	Spinning Machine Roll Support	Hardenbergh, Fayette	1877
190783	Loom Temple	Schlaf, Christain H.	1877
191255	Fabric, Metallic Thread	Posselt, Ernest	1877
191526	Loom Shuttle	Gilbert, Walter L.	1877
191581	Device Prevent Tape Unrolling	Gould, Arthur C.	1877
191697	Loom Stop Motion Fork Slide	McCaffery, Jr., John	1877
191907	Loom Temple	Waterbury, James E.	1877
192040	Loom Shedding Mechanism	Wolbold, Henry	1877
192064	Spinning Mule	George, Samuel	1877
192296	Loom Harness Making Machine	Sladdin, Joseph	1877
192315	Spinning Machine Top Roller	Whittemore, Samuel E.	1877
192317	Rope Making Machine	Whiton, David	1877
192352	Combing Machine, Wool	Smith, Leonard	1877
192391	Spinning Register & Stop Motion	Saunders, Benjamin	1877
192424	Spooling Machine Stop Motion	Fearon, Francis	1877
192473	Spindle	Whitman, Gilbert P.	1877
192493	Spindle & Bobbin	Draper, George	1877
192580	Loom Shuttle Box Mechanism	Hickey, Patrick	1877
192655	Bobbin & Holder	Nealon, Martin J.	1877
192659	Loom, Pile Fabric	Rothwell, John	1877
192669	Picker Teeth Making Machine	Aldrich, Robert	1877
192692	Loom Shuttle Spindle	Hanilton, James	1877
192897	Loom Temple	Burns, William H.	1877
192962	Cloth Measuring Machine	Baker, George P.	1877

Patent	Invention	Inventor	Year
193094	Cotton Opener & Cleaner	Kitson, Richard	1877
193106	Spooler Rock Shaft, Yarn	Bancroft, William	1877
193141	Spindle, Cordage Twisting	Brownell, Charles E.	1877
193143	Clothes Pin	Clearwater, Edwin F.	1877
193193	Cloth Finishing Machine	Springborn, Herrman	1877
193207	Thread Making Machine	Arnold, Andrew R.	1877
193782	Loom Shuttle Box Motion	Shinn, John	1877
193887	Spinning Mule	McGovern, Peter	1877
194269	Spinning Mule	Schon, Heinrich	1877
194517	Loom	Graham, Edmund H.	1877
195767	Loom Stop Mechanism	Megson, John	1877
195810	Fulling Mill	Eickemeyer, Rudolf	1877
195883	Loom Let Off	Buzzell, John P.	1877
195884	Cotton Batting Folding Machine	Catlow, Robert	1877
195887	Spinning Frame, Ring	Draper, George	1877
195906	Spinning Machine Cop Builder	Stone, Joseph M.	1877
196694	Loom	Oldfield, Edwin	1877
197131	Loom Shuttle	Higgins, Charles J.	1877
197236	Loom Temple	Wright, Daniel	1877
197374	Braiding Machine	James, George F.	1877
197548	Washing Machine, Wool Rinsing	Hall, Benjamin	1877
197732	Loom, Hair Cloth	Kenyon, Martin R.	1877
197912	Winding Machine, Yarn	Warburton, Howgate G.	1877
198230	Braiding Machine	Whelan, Frank	1877
198289	Basket	Fox, Abraham	1877
198440	Cloth Cutting Machine, Flock	Wilcox, Elijah	1877
198463	Cloth Finishing Machine	Leach, William	1877
198555	Loom Harness Mechanism	Wilber, Isaac L.	1877
198696	Basket	Sickler, Jacob W.	1877
198757	Knitting Machine, Straight	Tiffany, Eli	1878
198787	Fabric Guiding Machine	Birch, William	1878
198876	Hat Stretching Machine	Eickemeyer, Rudolf	1878
198956	Winding & Twisting Machine Stop Motion	Smith, Dexter	1878
199040	Spooling Machine Bobbin Holder	Doak, Horace	1878
199270	Felt Fabric Manufacturing, Ornamental	Daily, Parley A.	1878
200034	Hat Blocking & Banding Machine	Eickemeyer, Rudolf	1878
200086	Loom Temple	Pearson, Robert P.	1878
200268	Reel	Elliott, Sarah A.	1878
200299	Clothes Pin	Hotchkiss, Seymour L.	1878
200302	Cord Covering Machine	Huppelsberg, Friedrich W.	1878
200321	Speeder & Fly Frame Flyer	Macomber, William C.	1878
200503	Card Polishing & Finishing Machine	Buckton, William	1878
200706	Bobbin & Spool	Fay, Rimmon C.	1878
200745	Loom Shuttle	Mills, Guy C.	1878
200814	Loom Temple	Allen, Nicholas I.	1878
200965	Fabric, Tubular	Baker, Seth W.	1878
201130	Spinning Machine	Stanley, James C.	1878
201302	Spinning Ring	Trowbridge, Charles E.	1878
201414	Spindle Bobbin Socket	Hastings, Watson F.	1878
201424	Cotton Opener & Cleaner	Kitson, Richard	1878
201629	Knitting Machine Yarn Delivery	Paul, Archibald	1878
201763	Cop Tube	Essex, Jeremiah	1878
201802	Dynamometer, Test Yarn Strength	Lee, Mark	1878
201835	Tape Holder	Rice, Eliakim	1878
201847	Spinning Machine Spindle Step	Steele, William M.	1878
201940	Cotton Batting Making Machine	Norton, John L.	1878
202211	Plaiting Machine	Wilson, James E.	1878
202339	Loom Harness	Emmons, Thomas A.	1878
202448	Spindle, Silk	Martin, Elisha J.	1878
202529	Hat Pouncing Machine	Eickemeyer, Rudolf	1878
202549	Spooling Machine	Kershaw, Thomas	1878
202550	Doubling & Twisting Machine	Kershaw, Thomas	1878

Patent	Invention	Inventor	Year
202664	Loom Shuttle Bobbin	Porter, Roger W.	1878
202672	Wool & Cotton Separater	Slater, John Y.	1878
202675	Loom Picker Staff Strap	Stone, Edward S.	1878
202766	Fiber Making Machine	Summers, Lucius P.	1878
202900	Cloth Cutting Machine	Warth, Albin	1878
202929	Loom Shuttle Bobbin	Buzzell, John P.	1878
203139	Loom Picker	Gordon, Albert A.	1878
203142	Embroidering Machine	Grobli, Isaac	1878
203143	Embroidering Machine	Grobli, Isaac	1878
203183	Loom, Circular	Morris, Henry	1878
203195	Embroidering Machine	Grobli, Isaac	1878
203244	Spinning Mule Winder Regulator	Colbrook, Charles H.	1878
203355	Fulling Mill	Mase, Willard H.	1878
203401	Cotton Bale Tie	Battle, Curran	1878
203572	Loom Shuttle Motion	Widmer, Jacob	1878
203632	Spinning Machine	Mackie, James B.	1878
203653	Loom Shuttle	Schurheck, Charles J.	1878
203683	Spinning Ring	Wheat, Franklin H.	1878
203754	Spinning Bobbin, Mohair	Mitchell, Tom	1878
203857	Net Making Machine	Squire, Wilbur J.	1878
203895	Loom Cone Pick	Davis, Hilas D.	1878
204213	Loom Picker	Grilley, Charles T.	1878
204426	Knitting Machine Cam	Denzler, Frederick	1878
204495	Braid Holder	Lyon, John C.	1878
204523	Braid or Ribbon Clasp	Barrows, William E.	1878
204546	Carpet	Duckworth, John C.	1878
204717	Loom Shuttle Attachment	Doherty, William A.	1878
204801	Spoke Throating Machine	Cramer, George	1878
204832	Spinning Ring & Traveler	Lamphear, Edwin T.	1878
204951	Cotton Condenser	Cook, Emanuel	1878
205246	Bobbin	Crowley, John D.	1878
205281	Cloth Finishing Machine	Marble, Edwin	1878
205307	Warping Machine	Shaw, Lorenzo	1878
205355	Basket	Cole, Isaac J.	1878
205638	Carpet	Hardwick, Harry	1878
205794	Loom Shuttle Box Motion	Goodyear, Robert B.	1878
206068	Loom Shuttle Motion, Wire Cloth	Asbach, Joseph	1878
206155	Spinning Ring Holder	Wattles, Joseph W.	1878
206168	Hat Stretching Machine	Eickemeyer, Rudolf	1878
206192	Washing Machine, Wool	Pendleton, Frank	1878
206651	Cloth Cutting Machine	Warth, Albin	1878
206718	Cloth Pressing Machine	Gessner, Ernest	1878
207739	Loom Picker	Holbrook, Albert	1878
207796	Plaiting Machine	Bradley, Milton	1878
207912	Fabric Measureing & Marking Machine	Talcott, Samuel C.	1878
208774	Spindle & Bobbin Spool	Wait, Oscar E.	1878
208920	Cloth Cutting Machine	Muehling, Alexander	1878
209049	Cotton Gin	Hull, James B.	1878
209106	Rope Making Machine	Binns, Leedham	1878
209152	Fulling Mill	Arnold, Alonza C.	1878
209199	Spinning Machine Spindle	Stanley, James C.	1878
209229	Fulling Mill Measuring Attachment	Clark, Theodore W.	1878
209286	Disintegrating Stalks of Hops	Nordlinger, Isaac D.	1878
209317	Spinning Mule	Baldwin, Eben A.	1878
209318	Spinning Mule	Baldwin, Eben A.	1878
209376	Rag Picker Lag	Belser, James H.	1878
209419	Loom Temple	Pearson, Robert P.	1878
209489	Spinning Machine Spindle Bearing	Macomber, William C.	1878
209714	Loom Shuttle Box Motion	Renwick, Henry B.	1878
209727	Spinning Flyer Lock	Thorwarth, John B.	1878
209786	Crocheting Machine	Young, Charles	1878
209799	Loom Harness	Crowell, John H.	1878
209805	Fabric, Nap or Plush	Goodall, Thomas	1878

Patent	Invention	Inventor	Year
210222	Carding Cylinder Roller	Pendleton, Frank P.	1878
210292	Loom Shuttle	Briggs, Henrick P.	1878
210357	Spinning Machine Spindle	Rabbeth, Francis J.	1878
210358	Spinning Machine Spindle	Rabbeth, Francis J.	1878
210565	Burring Machine	Sargent, Frederick G.	1878
210670	Loom Shuttle Box Mechanism	Colvin, Stephen	1878
210678	Cotton Condenser	Donovan, John T.	1878
210736	Loom, Leno	Aldred, Thomas	1878
210770	Hat Pinning Out Stretcher	Eickemeyer, Rudolf	1878
210869	Fringe	Moll, August	1878
210930	Cotton Opener & Cleaner	Ellis, Harvey	1878
210977	Bobbin	Wait, Oscar E.	1878
211126	Loom Shuttle Box Motion	Barker, John	1879
211186	Card Setting Machine	Russell, James	1879
211215	Washing Machine	Bennett, Ethan	1879
211217	Loom Weft Fork	Brainard, Benjamin	1879
211218	Spindle Bearing	Buttrick, Charles G.	1879
211243	Loom Shuttle	Leary, Michael	1879
211444	Fourdrinier Wire Cloth	Van Houten, Corneluis	1879
211718	Loom, Power	Duckworth, John C.	1879
211903	Drawing Frame	Grayson, Henry C.	1879
212025	Loom, Circular	Marshall, Chester P.	1879
212102	Carding Machine Driving Mechanism	Mallison, George	1879
212120	Loom Reed	Adamson, Edward	1879
212202	Knitting Machine	Dow, Josiah	1879
212280	Loom Temple	Stamour, John B.	1879
212670	Spinning Machine Top Roller	Fenton, Hiram C.	1879
212707	Loom Shuttle Mechanism	Kane, Charles I.	1879
212725	Spinning Machine Spindle	Miller, Joseph A.	1879
212779	Spinning Machine	Wrigley, Thomas	1879
212790	Scissors & Shears	Clarke, Alfred	1879
212888	Winding Machine, Yarn	Boyd, John	1879
212893	Thread Spool Tension Device	Burgess, Richard O.	1879
212933	Spindle Driving Mechanism	Herrick, Charles E.	1879
213031	Loom Shuttle, Metallic	Beatty, William	1879
213196	Roving Frame Flyer	Hazard, George J.	1879
213207	Loom Shuttle	Kane, Charles J.	1879
213208	Loom Shedding Mechanism	Kenison, Orrin W.	1879
213876	Card Clothing	Cunningham, Herman E.	1879
214155	Loom Shuttle	Johnston, John	1879
214156	Loom Shuttle	Johnston, John	1879
214163	Cotton Press	Matthews, James H.	1879
214256	Cotton Bale Band Tightener	Logue, Francis M.	1879
214308	Knitting Machine	Nelson, John	1879
214317	Loom Shuttle	Roberts, Thomas E.	1879
214355	Spindle Driving Mechanism	Braunsdorf, Julius E.	1879
214356	Spindle Driving Mechanism	Braunsdorf, Julius E.	1879
214447	Loom Temple Burr Roll	Prouty, Joel	1879
214506	Loom	Hunt, Robert H.H.	1879
214522	Knitting Machine	Pepper, William H.	1879
214750	Spinning Machine Spindle & Bearing	Birkenhead, John	1879
214788	Plaiting Machine	Panse, Friedrich	1879
214794	Lapping Machine	Stafford, James	1879
214901	Spinning Machine, Hemp	Furst, Michael	1879
215142	Spinning Machine Spindle	Mayor, Thomas	1879
215239	Warper	Plummer, Richard H.	1879
215396	Loom Temple	Quackenboss, Philip P.	1879
215464	Spinning Machine Roller	Kelly, Robert	1879
215654	Cotton Gin Saw Cleaning Attachment	Mulkey, George H.	1879
215935	Spinning Machine Spindle	Kelly, Dennis	1879
215990	Spooling Guide	Sullivan, Cornelius	1879
215995	Doubling & Winding Machine	Unsworth, Thomas	1879

Patent	Invention	Inventor	Year
215999	Carpet	Wallace, William	1879
216125	Knitting Machine	Aiken, Walter	1879
216245	Cloth Cutting Machine	Warth, Albin	1879
216485	Reel, Rope	Mason, Alvin C.	1879
216508	Loom Shuttle Box Mechanism	Burton, Joseph	1879
216782	Jacquard Card Punching Machine	Crompton, George	1879
216839	Cop Tube	Essex, Jeremiah	1879
216947	Loom Shuttle Motion	Cuthburt, George	1879
216986	Felted Fabric Manufacture	Waite, Enoch	1879
216987	Spinning Frame, Ring	Wattles, Joseph W.	1879
217186	Spool	Woodbury, Seth H.	1879
217193	Yarn Inking Machine	Archibald, John	1879
217207	Warping Machine, Yarn	Gibson, Everett G.	1879
217247	Silk Cleaning Apparatus	Swift, William B.	1879
217354	Knitting Machine	Essick, Samuel	1879
217389	Spinning Frame, Ring	Lanphear, Edwin T.	1879
217520	Cotton Press	Farley, Robert	1879
217569	Knitting Machine, Straight	Aiken, Walter	1879
217572	Basket	Ballou, Elmer	1879
217589	Loom, Dobby	Crompton, George	1879
217769	Winding Machine, Yarn	Boyd, John	1879
218012	Loom	Gillespie, James E.	1879
218074	Loom Temple, Tubular Fabric	Simon, Gottlieb F.	1879
218279	Spinning Frame Stop Motion	Knowles, J.Henry	1879
218323	Twister, Wire	Sedgwick, Isham	1879
218428	Bobbin	Carroll, William T.	1879
218797	Spinning Machine, Rope	Todd, Joseph C.	1879
218823	Combing Machine, Wool	Metcalfe, Samuel	1879
218849	Spinning Mule & Jack	Abbott, John	1879
218969	Loom, Straw Matting	Hilton, William	1879
219159	Loom Shuttle	Johnston, John	1879
219259	Cotton Cleaning Machine	Hasie, Montague S.	1879
219561	Hat Flanging Machine	Yule, George	1879
219801	Carpet Rag Looper	Clements, David	1879
219963	Fabric Damping Apparatus	Mather, William	1879
220079	Spinning Machine	Locke, Harvey	1879
220130	Loom, Fringe	Cremerieux, Balthazard	1879
220158	Spinning Machine Spindle	Lanphear, Edwin T.	1879
220336	Cotton Gin Feeder	Brown, Israel F.	1879
220357	Spinning Machine Spindle & Bearing	Duffy, Joseph	1879
220362	Loom Shuttle Spindle	Eaton, Isaac	1879
220541	Cotton Bale Band Tying Machine	Matthews, James H.	1879
220579	Loom	Cottrell, Jesse D.	1879
220587	Spindle Band Tension Indicator	Draper, William F.	1879
220659	Loom Shuttle	Roberts, Adna B.	1879
220733	Washing Machine, Wool	Sargent, Frederick D.	1879
220847	Skiving Machine	Langmaid, Charles E.	1879
220931	Loom, Fringe	McDonald, Laurence J.	1879
220946	Spinning Machine	Saunders, Benjamin	1879
221159	Drawing Step Mechanism	Dawson, Patrick C.	1879
221191	Loom Shuttle Spindle	Richardson, Orville P.	1879
221237	Loom Shuttle Box Mechanism	Knowles, Lucius J.	1879
221268	Spooling Machine Thread Guide	Atwood, John E.	1879
221415	Loom Shuttle	Miller, Henry J.	1879
221431	Cotton Cleaning Machine	Thorn, Joseph W.	1879
221576	Fabric Guide & Delivering Machine	Kerr, James	1879
221772	Winding Machine, Yarn	Boyd, John	1879
221799	Warping Machine, Expanding Reed	Entwistle, Thomas C.	1879
222273	Chenille Cutting Machine	Havers, Robert G.	1879
222330	Spinning Frame	Taft, Gustavus E.	1879
222363	Washing Machine, Skeins	Morlot, George	1879
222366	Cotton Gin	Reid, Henry N.	1879

Patent	Invention	Inventor	Year
222401	Knitting Machine, Straight	Hitchcock, Marcena	1879
222410	Cotton Opener	Kitson, Richard	1879
222527	Fabric Cleaning, Starch	Palmer, Isaac E.	1879
222619	Knitting Machine, Straight	Young, Charles H.	1879
222844	Paper Box Making Machine	Simmons, Adolphus J.	1879
222937	Knitting Machine, Toy	Newcomb, James W.	1879
223223	Cloth Stamping Machine	Gibson, Everett G.	1880
223261	Silk Beating & Washing Machine	Urbahn, Alwill	1880
223393	Washing Machine, Wool	Sargent, Frederick G.	1880
223534	Loom, Tubular Fabric	Pont, Addie M.	1880
223544	Cloth Cutting Knife	Rubenstein, Nathan	1880
223710	Knitting Machine, Circular	Cornfield, Solomon	1880
223721	Cotton Gin	Ellis, Washington L.	1880
223748	Spinning Machine	Mitchell, Tom	1880
223801	Bobbin Fastener, Yarn	Cumnock, James W.	1880
223865	Spinning Machine	Schock, Henry	1880
223974	Loom Reed	Adamson, Edward	1880
223976	Loom Temple	Allen, Nicholas	1880
223998	Loom	Crompton, George	1880
224046	Knitting Machine, Circular	Shaw, Benjamin F.	1880
224058	Rope Twisting Machine	Van Houten, Cornelius	1880
224170	Paper From Pine Leaves Process	Fulton, Charles	1880
224201	Plaiting Machine	Maybee, M. Addie	1880
224216	Spinning Machine Spindle	Noble, George H.	1880
224344	Spinning Frame, Ring	Mayor, Thomas	1880
224428	Combing Machine	Duncommum, Paul	1880
224438	Chenille	Hupplesburg, Frederick W.	1880
224545	Picker Lag	Jones, Josiah N.	1880
224700	Spinning Machine	Keisling, Samuel	1880
224790	Loom Shuttle Spindle	Morrill, George E.	1880
224797	Loom Heddle	Schopp, Eduard	1880
224949	Printing, Calico & Fabric	Prang, Louis	1880
225031	Cloth Cutting Machine	Warth, Albin	1880
225115	Loom Shuttle Box, Drop	Doering, Justus	1880
225181	Spinning Frame Spindle	Taft, Gustavus E.	1880
225217	Thread Cleaner	Finigan, Thomas	1880
225323	Saw Table, Adjusting	Bennett, John	1880
225673	Loom Shuttle	Willis, Newiel J.	1880
225852	Loom, Jacquard	Miesch, John	1880
226041	Hat Pressing Machine	Cuming, Mari A.	1880
226126	Spinning Machine Yarn Guide	Stanley, James E.	1880
226242	Spinning Ring & Holder	Morse, Cyrus B.	1880
226309	Cordage Machine	Hall, James	1880
226332	Combing Machine	Little, George	1880
226594	Loom, Tubular Fabric	Cady, Henry W.	1880
226903	Loom Heddle	Crowell, John H.	1880
227002	Drawing Frame Stop Mechanism	Hayden, Daniel W.	1880
227003	Drawing Frame Stop Mechanism	Hayden, Daniel W.	1880
227063	Cotton Gin	Scattergood, Charles F.	1880
227198	Thread Doubling Machine	Atwood, John E.	1880
227241	Fabric	Fyfe, Alexander M.	1880
227494	Cloth Cutting Machine	Crotte, Joanny	1880
227671	Carding Machine Fleece Divider	Bolette, Jean S.	1880
227940	Cordage Machine	Winchester, Gilman	1880
227964	Braid Holder	Deane, Walter P.	1880
228050	Loom	Flagg, J. Melledge	1880
228191	Loom Shedding Mechanism	Halcroft, Henry	1880
228233	Button Making Machine	Wade, William W.	1880
228248	Basket, Fruit	Crandall, Hosea B.	1880
228256	Loom Temple	Hardaker, John	1880
228309	Fabric Creasing Machine, Fluted	Brosemann, Ernst	1880
228346	Loom Temple	Hamilton, Edward	1880

Patent	Invention	Inventor	Year
228372	Loom, Gauze	McLean, Andrew	1880
228580	Loom Heddle	Ziegler, George	1880
228589	Loom, Circular	Ball, Albert	1880
228809	Spinning Machine Flyer	Foss, John F.	1880
228837	Loom Shuttle	Smith, Julian K.	1880
229487	Knitting Machine, Mattress	Towsend, Matthew	1880
230122	Suspender Strap Webbing	Fryer, John O.	1880
230306	Spindle Support, Ring	Mason, William	1880
230509	Spooling Machine Thread Guide	Trafton, Charles G.	1880
230533	Knitting Machine Thread Guide	Dennett, Alpheus A.	1880
230591	Loom, Jacquard	Uhlinger, William P.	1880
230703	Cloth Stretching Machine	Holt, Robert	1880
231042	Loom Shuttle	Holmes, William	1880
231288	Loom Shuttle	Eaton, Isaac	1880
231380	Spooling Machine Yarn Guide	Upton, George W. D.	1880
231748	Loom, Tubular Fabric	Arnold, Elijah	1880
231773	Loom Shuttle Spindle	Doe, George W.	1880
231809	Loom Temple, Self Acting	Hardaker, John	1880
232021	Spinning Waste Prevention	Garnett, Walter	1880
232319	Loom Shuttle Motion	Weber, Theodore A.	1880
232330	Silk Reel	Brooks, Samuel	1880
233043	Loom Temple	Stramour, John B.	1880
233112	Bobbin Winding Machine	Paul, Archibald	1880
233267	Loom Heddle	Maerteus, Emile	1880
233388	Loom Shuttle Spindle	Williams, Henry A.	1880
233551	Loom Shuttle Motion	Ross, Lester E.	1880
233555	Loom Picker Staff Check	Sartwell, William E.	1880
233629	Fabric, Hat Sweat Band	Lanstrom, Reinhold	1880
234521	Loom	Bigsby, Arthur L.	1880
234897	Spindle Support Mechanism	Wattles, Joseph W.	1880
235661	Loom Shuttle Motion	Weber, Theodore A.	1880
236110	Loom	Thomas, Samuel	1880
236278	Jacquard Machine	Talbot, William	1881
236698	Knitting Machine, Circular	Blacklock, John	1881
237106	Loom Harness Coating Process	Gibbs, William H.	1881
237896	Winding Machine, Yarn	Parker, Samuel	1881
238492	Spinning Machine	Deal, Haslum A.	1881
238538	Loom Reed	Stewart, Thomas	1881
238972	Loom Shuttle, Wire Cloth	Sawyer, Caleb K.	1881
239011	Loom Shuttle, Wire Cloth	Wright, George F.	1881
239012	Loom Shuttle, Wire Cloth	Wright, George F.	1881
239065	Picker, Waste	Sargent, Frederick G.	1881
239169	Knitting Machine, Circular	Huse, Warren D.	1881
239467	Loom Temple, Roller	Draper, George	1881
240645	Bag, Woven	Bernstein, Samuel	1881
241851	Spinning Machine Roller Stand	Essex, Jeremiah	1881
242084	Felt Fabric, Imitate Seal Skin	Waring, John	1881
242736	Pointing Fur	Abraham, Benjamin	1881
244041	Hat Blocking & Shaping Machine	Eickemeyer, Rudolf	1881
244580	Rope Making Machine, Straw	Gardner, John	1881
245362	Fulling Mill	Eickemeyer, Rudolf	1881
245856	Twisting Machine	Murray, William	1881
245878	Spinning & Doubling Machine, Silk	Seymour, Francis	1881
246230	Loom Shuttle	Sohn, John W.	1881
246637	Loom Shuttle	Rigby, John	1881
247126	Cotton Prepared For Transportation	Smith, William H.	1881
247522	Spindle Bearing	Stanley, James C.	1881
247944	Embroidering Machine	Nida, Charles	1881
248392	Plaiting Machine	Berrien, Leonard B.	1881
248719	Knitting Machine Attachment	Denton, James	1881

Patent	Invention	Inventor	Year
248795	Knitting Machine	Rist, Joel W.	1881
249289	Spinning & Doubling Machine	Bastow, John	1881
249988	Loom Shuttle	Pratt, Charles T.	1881
250485	Cotton Gin Saw Filing Machine	Barron, Thomas J.	1881
251072	Cotton Gin Feeder	Sterritt, Joseph	1881
251118	Cord, Rope & Band Making Machine	James, George F.	1881
251815	Spindle, Twister Frame	Bancroft, Joseph B.	1882
255501	Chenille Fringe	Graham, John C.	1882
255519	Carding Machine Feeding Device	Lemaire, Jean T.	1882
257057	Loom Temple	Noble, William H.	1882
257198	Spinning Machine, Ring	Worrall, John F.	1882
258947	Cloth Stretching Machine	Upham, Frederick	1882
260589	Ornamenting Fur & Other Goods	Mayer, Amalia	1882
261415	Knitting Machine Take Up	Abel, William H.	1882
262436	Loom Heddle	Lairdieson, John L.	1882
262467	Knitting Machine	Parr, James A.	1882
266147	Chenille Manufacturing	Hensel, George F.	1882
266361	Loom Shuttle Motion	Greenway, John	1882
268149	Tapestry, Needle Woven	Tillinghast, Mary E.	1882
270749	Chair Seat	Comstock, Issac D.	1883
272561	Knitting Machine	Leighton, George A.	1883
272762	Clothes Pin	Perkins, Richard B.	1883
276606	Lap Forming Machine	Lemaire, Jean T.	1883
277074	Silk Doubling Machine	Singleton, George	1883
284208	Cotton Pres	Ivens, Edmund M.	1883
285767	Loom, Moquette Carpet	Skinner, Halcyon	1883
286460	Spinning Mule Winding on Mechanism	McConnell, William	1883
287808	Stocking, Felted Woolen	Davis, Wilbur	1883
289582	Fabric, Figured	Urbahn, Alwill	1883
289731	Loom	Urbahn, Alwill	1883
293363	Stocking Manufacture	Schilling, Edward	1884
296377	Spindle Driving Mechanism	Atwood, John	1884
301824	Chenille Fringe	McDonald, Lawrence J.	1884
304178	Knitting Machine	Cooley, Truman	1884
333819	Spinning Frame, Ring	Bourcart, Jean J.	1886
335208	Spinning Machine	Bourcart, Jean J.	1886
342988	Fabric Manufacture, Paper	Wyman, Charles P.	1886
346673	Fabric Manufacture, Woven	Mitchell, Abraham	1886
353433	Fringe Manufacture, Woven	Steinecke, Samuel	1886
353869	Carpet, Imitation Turkish	Kohn, Alois	1886
354711	Cloth, Oil Cloth Waste Use	Lance, William L.	1886
354767	Fabric, Figured Woven	Brown, William	1886
356836	Fabric, Woven	Hoult, Cyrus	1887
357226	Spinning Cap Step	Pickford, George	1887
358452	Fringe Manufacture, Netted	Jackson, Charles W.	1887
359862	Fabric, Multiple Ply	Hardwick, Harry	1887
360432	Fabric, Elastic	Green, Jr., Joseph	1887
360482	Carpet, Ingrain	Read, Frederick	1887
361360	Fabric, Woven	Hunt, Robert H.H.	1887
363900	Carpet, Color	Marchetti, Giulio	1887
365755	Clothes Pin	Moore, Solon E.	1887
366198	India Matting	Bicknell, George J.	1887
369276	Fabric, Seersucker	Cumnock, John	1887
371563	Knitting Machine	Esty, William	1887
371572	Carpet, Ingrain, Three Ply	Folsom, James L.	1887
377421	Bobbin Winder, Automatic	Bell, Carl	1888
379033	Fringe, Chenille	Schmidt, Christian A.	1888
382157	Carpet	Hardwick, Harry	1888
388425	Basket	Little, Elizabeth N.	1888
388682	Carpet	Humphries, John	1888
393958	Loom Shuttle	Bardsley, Henry	1888

Patent	Invention	Inventor	Year
395242	Fabric, Terry	Leake, Frank	1888
395462	Fabric, Figured	Taylor, Thomas	1889
397240	Fiber From Pine Needles	Latimer, William	1889
398812	Thimble, Broom Makers	Albert, Daniel W.	1889
402844	Fabric, Corded or Elastic	Lapworth, William	1889
407078	Loom Heddle Frame	Ladd, Calvin	1889
409931	Fabric, Chenille	Crabtree, James	1889
410839	Elastic Webbing	Lamb, Elijah	1889
411040	Fabric, Woven	Kerr, David B.	1889
413534	Fabric, Satin Faced	Morrell, Richard B.	1889
413746	Spinning Frame Kink Arrester	Wilmarth, Thomas D.	1889
416052	Twine	Clark, Benjamin P.	1889
416225	Fabric, Woven	Kerr, David B.	1889
418412	Carpet	Jagger, Joseph	1889
419395	Fabric, Elastic	Woodward, Albert C.	1890
419516	Carpet	Gray, William	1890
420269	Carpet or Upholstered Fabric	Griffith, Jr., Goldsborough S.	1890
426152	Cloth, Ornamental	Unger, Herrman	1890
427700	Fabric, Machine Belting	Maddox, Joshua P.	1890
427719	Bobbin, Flanged	Wilson, Joshua	1890
429378	Clothes Dryer	Fuller, Benjamin F.	1890
432763	Carpet, Moquette	Patterson, Robert F.	1890
435445	Fabric, Napped Cotton	Ott, Frederick	1890
435719	Fabric, Excelsior	Adams, James A.	1890
436529	Carpet, Moquette & Wilton	Loynd, Richard B.	1890
438064	Carpet, Ingrain, Two Ply	Dornan, Thomas B.	1890
438065	Fabric, Two Ply	Dornan, Thomas B.	1890
438202	Fabric, Umbrella	Takaki, Samro	1890
443095	Carpet, Ingrain	Keefer, William B.	1890
451438	Hemp Brake and Cleaner	Shely, John D.	1891
451743	Fabric, Double Faced Plush	Tonnar, Felix	1891
457288	Carpet, Ingrain	Patterson, Hugh	1891
459325	Feed Roller	Whitney, Baxter D.	1891
465045	Bobbin	Keene, Samuel D.	1891
472215	Carpet, Ingrain	Harvey, George H.	1892
472216	Fabric, Woven	Harvey, George H.	1892
474883	Fabric, Woven	Urbahn, Alwill	1892
477205	Printing & Embossing Fabric	Farmer, James	1892
480855	Fabric, Woven	McCallum, Irving	1892
483078	Fabric, Figured Woven	Morton, Alexander	1892
483977	Fabric, Double Faced Pile	Coley, Joseph	1892
484537	Fabric, Woven	Marsden, Luther H.	1892
487352	Guiding Edges of Textile Webs	Scholfield, Joseph J.	1892
491434	Bobbin Winding Machine	Marshall, Charles S.	1893
491693	Fabric, Pile	Webb, Albert	1893
493093	Quill Winder	Jones, Corry	1893
494380	Braiding Machine Carrier	McCahey, John	1893
494669	Felted Woolen Net Undergarment	Clement, Ferdinand J.H.	1893
497294	Carpet, Ingrain	Acheson, Samuel J.	1893
505203	Loom Shuttle	Keeley, John W.	1893
509138	Fabric, Pile	Raab, Josef	1893
512694	Fabric, Seamless Figured	Giffin, Robert K.	1894
514809	Fabric, Chenille	Binns, Leedham	1894
518458	Dye, Blue	Krekeler, Karl	1894
522555	Fabric, Woven	Connell, Walter G.	1894
524321	Fabric, Woven	Hardwick, Harry	1894
533690	Carpet	Whittall, Matthew J.	1895
539699	Dye, Blue	Moeller, Max	1895
543747	Dye, Black Azo	Moeller, Max	1895
546639	Drawing Roller	Campbell, Robert G.	1895
546677	Loom Shuttle Thread Tension	Owen, Herbert W.	1895

Patent	Invention	Inventor	Year
547608	Fabric, Pile	Hope, Herbert J.	1895
548747	Carpet, Ingrain	Dornan, Thomas B.	1895
550093	Fabric, Knit, Abdominal Support	Bennett, Charles F.	1895
556705	Loom Shuttle	Stimpson, Edward S.	1896
559306	Loom Shuttle, Self Threading	O'Connell, Patrick J.	1896
563455	Loom Shuttle	Daudelin, Jean B.	1896
567286	Fabric, Figured	Zimmerman, John	1896
568206	Loom Shuttle, Self Threading	Northrop, James H.	1896
568207	Loom Shuttle, Self Threading	Northrop, James H.	1896
568319	Loom Shuttle, Self Threading	Northrop, James H.	1896
569862	Loom Shuttle, Self Threading	Draper, William F.	1896
570174	Bag, Woven	Knight, Jesse A.	1896
574023	Carpet	Dornan, Thomas B.	1896
574387	Fabric, Multiple Ply	Buckler, James	1897
576356	Cop & Cap Winding Apparatus	Wardwell, Jr., Simon W.	1897
578592	Card Clothing	Ashworth, Elijah	1897
578742	Fabric	Heald, Alfred	1897
579164	Fabric, Woven	McAuliffe, Thomas	1897
585385	Carpet or Smyrna Rug	Hornig, Gottfried	1897
585626	Fabric, Stiffening	Hirsch, Nathan	1897
588301	Fabric, Stiffening	Warren, Edward K.	1897
589720	Garment Edging	Haase, Henry	1897
591370	Loom Shuttle, Self Threading	Draper, George O.	1897
593550	Cloth Guiding Machine	Scholfield, Joseph J.	1897
593997	Design Transfer Method	Fish, William R.	1897
596267	Fabric, Woven	Honsch, Carl F.	1897
597672	Fabric, Tubular	Fittz, William B.	1898
598480	Loom Shuttle, Self Threading	Northrop, James H.	1898
599191	Rope, Ornamental	Oehrle, Franklin W.	1898
599860	Loom Shuttle, Self Threading	Nason, Joseph H.	1898
599861	Loom Shuttle, Self Threading	Nason, Joseph H.	1898
600053	Loom	Crompton, Charles	1898
600692	Knitting Machine Needle	Huke, Herman	1898
605783	Fabric, Woven	Heald, Alfred	1898
609031	Stocking, Elastic	Kendrick, Arthur B.	1898
609450	Weaving Needle	Morris, Edmond	1898
610742	Carpet, Ingrain, Two Ply	Hardwick, Harry	1898
611104	Fabric, Double Plush	Claviez, Emil	1898
617772	Fabric, Colored Design	Rettig, Fritz	1899
621522	Carpet, Ingrain	Dornan, Thomas B.	1899
621641	Chenille	Engstfeld, Ernst	1899
622237	Fabric, Woven	Kerr, James E.	1899
624123	Carpet	Stevenson, John	1899
625033	Thread, Celluloid Manufacture	Hoyne, James F.	1899
630573	Fabric	Smith, Robert R.	1899
631310	Fabric, Spangled	Kursheedt, Alphonse	1899
633496	Garment Edge Protection	Weber, Aaron M.	1899
639518	Fabric, Double Faced	Caldwell, James	1899
648567	Carpet, Ingrain	Keefer, William B.	1900
665384	Spindle Bobbin Holder	Deeley, James S.	1901
666253	Fabric, Woven	Aeberli, William	1901
683190	Dye, Brown & Process	Taggesell, Richard	1901
683340	Fabric, Figured Double Pile	Schwartz, Rudolf	1901
684318	Loom Shuttle	Sergeson, James C.	1901
685524	Fabric, Woven Insoles	McIlwain, William	1901
687636	Felt, Metal	Koch, Karl	1901
699019	Lace, Representing Moziac Work	Saunier, Ermans E.	1902
701775	Jacquard Card	Szczepaink, Jan	1902
710767	Loom Weft Stop	Fair, George	1902
731433	Fabric, Pile	Cookson, Richard S.	1903
731715	Reed, Paper	Shaw, Frank J.	1903

Patent	Invention	Inventor	Year
736500	Loom Shuttle, Automatic Threading	Cumnock, Robert L.	1903
755561	Loom Shuttle, Hand Threading	Brown, David	1904
761554	Fabric, Woven	Stevenson, William M.	1904
775589	Loom Shuttle	Welton, James E.	1904
780231	Loom Shuttle, Self Threading	Sackett, Charles E.	1905
781349	Fabric, Tubular	Moore, George D.	1905
788162	Spinning Machine	Mathewson, Arthur L.	1905
788937	Loom Shuttle	Nason, Joseph H.	1905
823626	Loom Shuttle, Self Threading	Northrop, Jonas	1906
838350	Cellulose Derivative & Process	Miles, George W.	1906
920828	Cellulose Process	Cross, Frederick	1909
950435	Proteo Cellulosic Process	Chavassieu, Henri L.	1910

Glossary

ASSIGNEE. A person or organization to whom patent rights are transferred to by the inventor. This often happens when an inventor is working for a company that requires him to apply for the patent and then transfer his patent rights to his employer.

CALICO. A general term used for plain cotton cloth of a coarse quality, e.g., coarser than muslin. It was not until the end of the 18th century that calico came to mean the lowest quality of printed cloth.

CARD. A rectangular wooden implement covered with wire teeth used in pairs to card fibers by hand (see CARDING).

CARDING. An operation, prior to spinning, in which fibers (usually wool) are disentangled by the brushing action of two closely spaced "toothed" surfaces, which loosely align the fibers into a roll (see SLIVER).

COMBING. The process of straightening and making parallel fibers of equal lengths in preparation for spinning into yarn. Any impurities and short fibers are removed by combs, in combination with brushes and rollers.

COP. A tapered cylinder of yarn used to fill the loom shuttle.

COTTON WHIPPER. A machine that cleans cotton by beating or whipping the uncleaned cotton with rotating spikes causing foreign matter to fall out and clumps of cotton to separate.

DOCTOR. Blade on a printing machine that removes surplus ink or coloring matter from the printing cylinder.

FANCY POWER LOOM. A loom that operates by mechanical means rather than by hand power and produces cloth with an overall woven pattern.

FLYER. An inverted U-shaped metal guide, the center of which is attached to the tip of the spindle, typically on a spinning machine. The yarn is twisted by the rotation of the arm (guide) around the bobbin.

GINGHAM. A plain-woven cotton cloth consisting of two or more colors that form simple checks, plaids, or stripes.

HAIR CLOTH. Cloth constructed of a weft of hair from the mane or tail of a horse and a warp of cotton or linen. The fabric was once popular for upholstering furniture.

HARNESS. The part of a loom consisting of the frame and heddles by which the shedding motion is accomplished (see SHEDDING).

HEDDLE. A cord, wire, or thin flat steel strip with an eye near the center, through which a warp end is drawn. Heddles make up the harnesses that control the shedding action of the loom.

JACKS. An intermediate level on a straight knitting machine that transmits motion to the sinkers.

KNOTTED COUNTERPANE. A bed cover woven of cotton with a raised decorative pattern.

LET-OFF. A mechanism for controlling the motion of a loom that releases warp yarns from the warp beam during weaving (see TAKE-UP).

NAPPING. A finishing process used in raising a fibrous surface or nap from the basic structure of the fabric, usually woolen. This process is also called teazling or gigging.

PICKER. A machine used in fiber preparation to remove foreign matter and break apart the matted cotton or wool.

ROVING. A long, loose, and continuous strand consisting of wool or cotton fibers that have a slight twist. Also the process of preparing the fibers for spinning into yarn.

SATINET. A woven cloth made with a cotton warp and a woolen filling.

SHEARING MACHINE. A machine, used in cloth finishing, that cuts uneven thread from the face of the cloth in order to achieve a uniform height.

SHED. In weaving, the opening between the warp threads through which the shuttle passes and inserts the filling.

SHEDDING. The operation of producing a shed.

SHUTTLE. A device that carries the filling yarn through the shed in the process of weaving. There are different types of shuttles. A typical shuttle is a hollow wooden boat-shaped device that contains a bobbin wound with filling yarn.

SHUTTLE-TONGUE. A slender metal rod in the center cavity of the shuttle upon which the filling yarn is wound.

SLAY or SLEY. The number of warp ends per inch in cloth. Its meaning has been extended to include "high sley" denoting a cloth with a large number of warp threads per inch.

SLUBBING. The relatively thick, slightly twisted strands of fibers ready for spinning.

SLIVER. Continuous, loosely assembled fibers, in rope form, which lack twist. The process of carding produces fibers in this condition.

SPEEDER. A machine used in cotton yarn spinning that inserts a slight twist in the sliver and winds it on the bobbin. At this stage, the SLIVER is called ROVING.

SPINDLE. A slender, tapered metal rod that rotates, upon which are fitted spools, bobbins, etc., used in such processes as spinning, spooling, or quilling. Spindles can also be used to produce twist in yarn.

STOP MOTION MECHANISM. A device utilized on textile machines to halt them automatically if the material being processed (i.e., thread, roving, etc.) is broken or depleted.

STUFFER THREAD. Additional yarns used to increase the weight, firmness, or thickness of a fabric. The yarn can be used either as warp or weft.

TAKE-UP. A mechanism that controls the rate at which cloth is wound forward during weaving.

TEAZLING. See NAPPING.

TEMPLES. Devices on each side of a loom frame designed to keep the cloth at a uniform width during weaving.

THROSTLE. A type of spinning or twisting frame developed in 1790 based on Richard Arkwright's waterframe of 1769. Arkwright (1732–1792), an Englishman, invented cotton spinning machinery using a continuous spinning method operated by water power.

TOW. Short coarse flax or hemp fibers that are separated from longer, finer fibers during hackling (a combing process). It is mostly used for spinning into low grade yarn or twine.

WARP. Yarns running lengthwise in a woven fabric, parallel to the selvage and interwoven with the WEFT.

WEFT. The yarns of a woven fabric running from selvage to selvage at right angles to the warp. Also called "filling" or "woof."

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Selected Bibliography

This bibliography is a combination of two subject areas, textile technology and information on patents. It is not intended to be all encompassing of the fields but rather a compilation of the literature relating to the period that is the subject of this catalog.

Of the materials listed in the bibliography, some were more helpful than others depending on their scope, content, and readability. To those unfamiliar with the patent literature, an advantageous beginning would be to read the section on patents and the National Archives in Eugene Ferguson's *Bibliography of the History of Technology.* Secondly, Nathan Reingold's article "U.S. Patent Office Records as Sources for the History of Invention and Technological Property" is valuable for his concise overview of the patent records in the National Archives.

Of all the journals researched, the *Journal of the Franklin Institute* proved to be the most useful in providing technical information for this catalog. The early volumes are particularly important for their pre–1836 patent information; for certain patents, they are the only source of information. The four volumes of the *Journal of the American Institute* also contain useful technical information, and the reports of the fairs of the American Institute relate interesting details about different machines and inventors. *Scientific American,* although in general an important journal for technical information, is of limited value because it did not begin publication until 1845.

Other recommended publications include the Rays' book entitled *The Art of Invention: Patent Models and Their Makers,* for its exquisite color photographs of patent models, and the Hagley Museum's catalog entitled *Little Machines: Patent Models in the Nineteenth Century,* written by Ferguson and Baer. The latter publication is suggested for its readable synopsis of the patent system and a selection of patent models in the museum. The Cooper-Hewitt Museum's catalog, *American Enterprise: Nineteenth-Century Patent Models,* is excellent for both its photographs and essays.

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Center heads of whatever level should be typed with initial caps of major words, with extra space above and below the head, but no other preparation (such as all caps or underline, except for the underline necessary for generic and specific epithets). Run-in paragraph heads should use period/dashes or colons as necessary.

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