(No Model.) 2 Sheets—Sheet 1.

S. PIRON.

Finishing Felt Hats.

No. 230,813. Patented Aug. 3, 1880.

Fig. 1

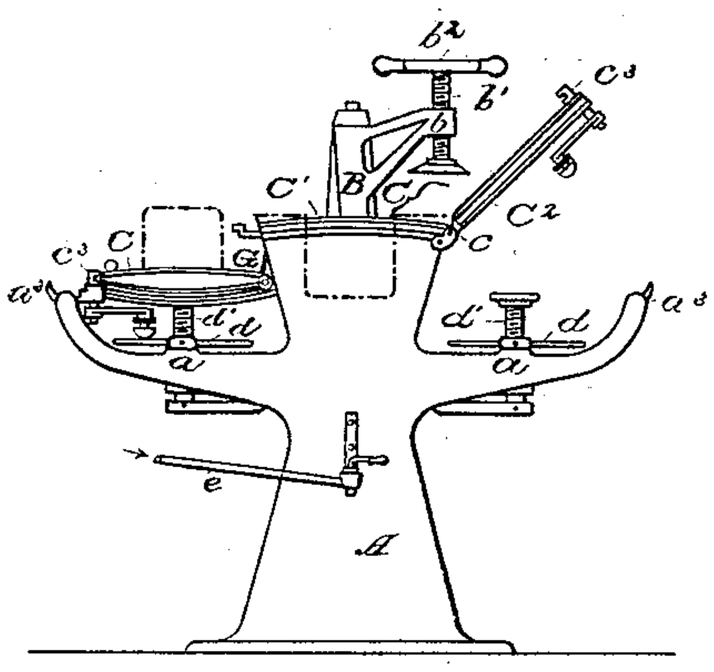


Fig. 2

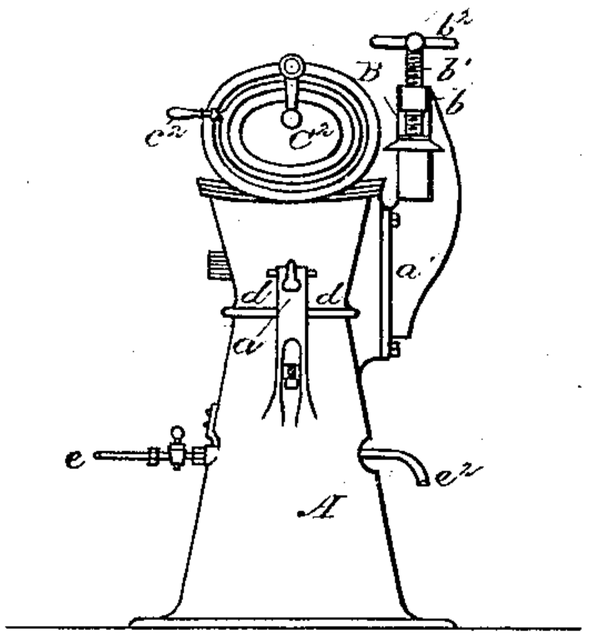


Fig. 3

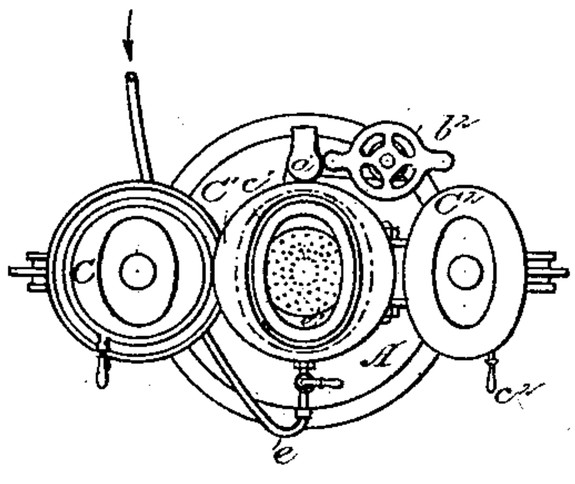
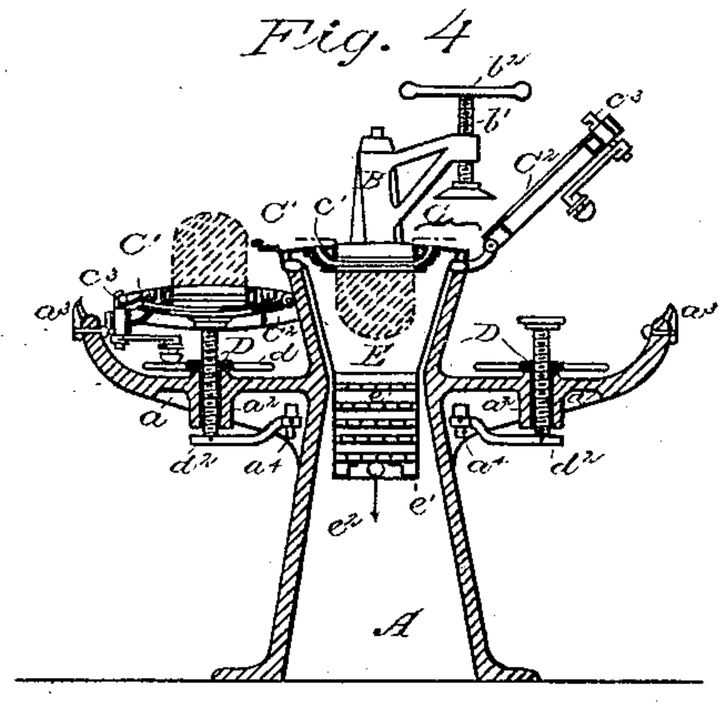


Fig. 4



Witnesses

Emil Barrault

Aug. Vinck

Inventor

S. Piron

(No Model.) 2 Sheets—Sheet 2.

S. PIRON.

Finishing Felt Hats.

No. 230,813. Patented Aug. 3, 1880.

Fig. 5

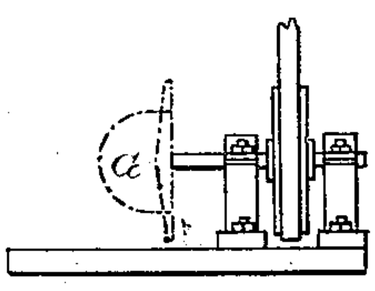


Fig. 6

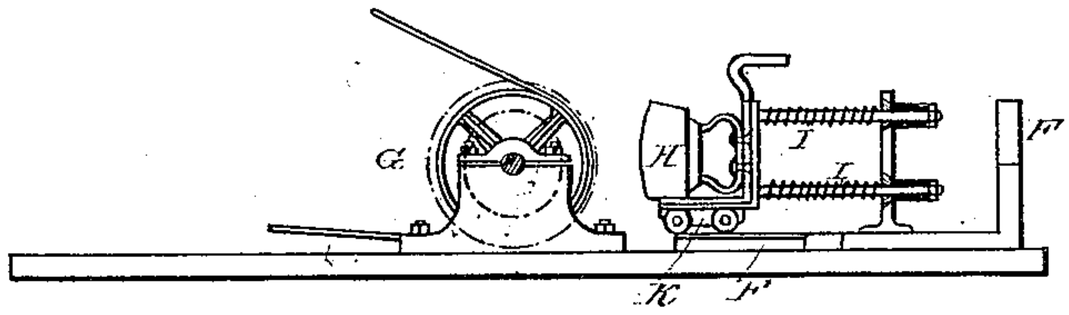


Fig. 7

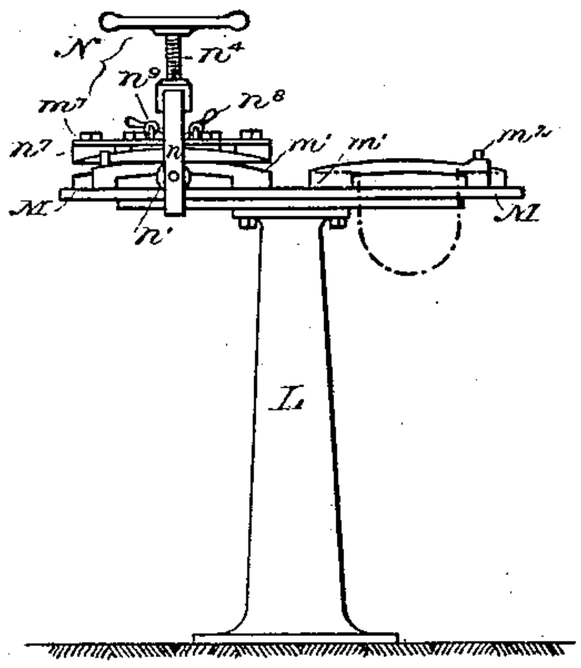


Fig. 8

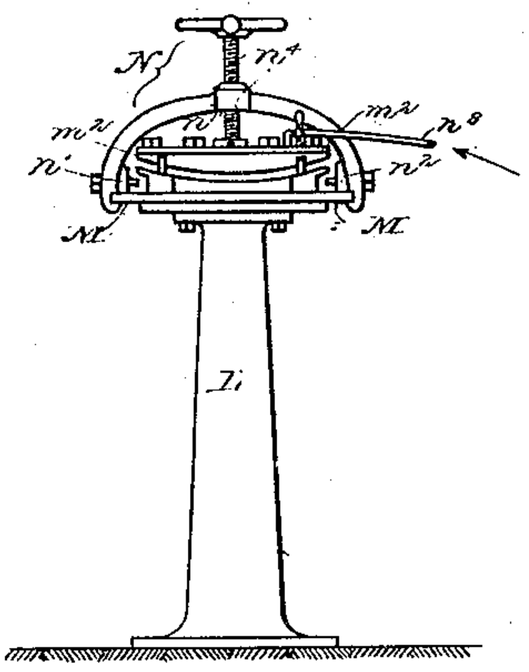


Fig. 9

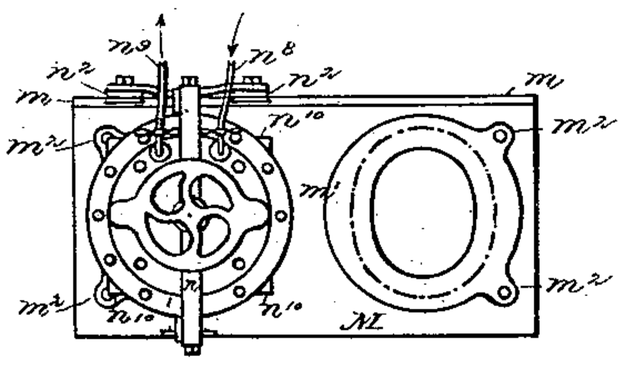
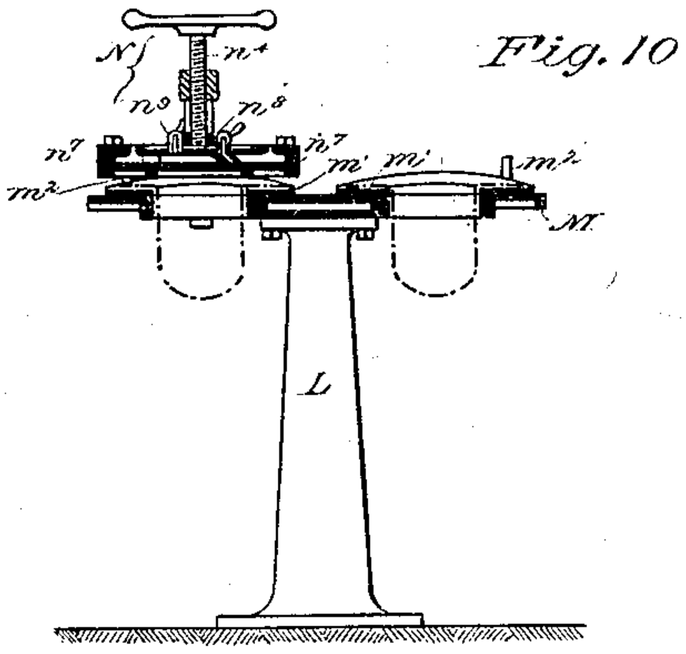


Fig. 10



Witnesses

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UNITED STATES PATENT OFFICE.

SIMON PIRON, OF PARIS, FRANCE.

FINISHING FELT HATS.

SPECIFICATION forming part of Letters Patent No. 230,813, dated August 3, 1880.

Application filed June 19, 1880. (No model.) Patented in France April 8, 1879.

To all whom it may concern:

Be it known that I, SIMON PIRON, of Paris, France, have invented a new and useful Improvement in Finishing Felt Hats, of which the following is a specification.

In Letters Patent of the United States granted to me June 18, 1878, No. 204,994, a system of finishing felt hats by means of a series of machines employed successively is described.

The present invention relates to improvements in the shaping-machine, in the iron-holder of the machine for ironing the crown, and in the brim-press, these apparatus forming part of the aforesaid series; and it has for its object to increase the practical efficiency and convenient use of the several apparatus.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation, Fig. 2 an end elevation, Fig. 3 a plan, and Fig. 4 a longitudinal vertical section, of the improved shaping-machine; Fig. 5, a view in elevation of the hat-support; Fig. 6, a view in elevation at right angles to that in Fig. 5, showing the improved iron-holder; Fig. 7, a view in side elevation of the improved brim-press; and Figs. 8, 9, and 10, respectively, an end view, a plan, and a section of the same.

Referring to Figs. 1 to 4, A is the supporting-frame, provided with two horizontal arms, *a a*, and with a vertical arm, *a'*, all of which are supported by or cast in one piece with the frame A. B is a frame sustained by the arm *a'*, so as to be movable on a vertical axis, and carrying in the head *b* the pressure-screw *b'*. The latter works in a suitable screw-threaded opening in the head *b*, and is provided at its upper end with a hand-wheel or operating device, b^2.

C C are clamping-disks, hinged at *c c* to the supporting-frame, and each composed of two principal parts, C' C^2. The part C' fits the upper part of the frame A, and on it are disposed one or more metal circles, *c'*, corresponding to the exterior of the crown at the bottom. The part C^2 is provided with a handle, c^2, by which it can be moved on its hinge, and also with a clamp, c^3, by which it can be firmly connected with the part C'.

The disks C can be turned onto one or the other of the arms *a*, and they are held there by small spring-bolts, having operating knobs or fingers a^3. In each of the arms *a* is a nut, D, supported in bearings, so that it can be revolved on a vertical axis by handles *d*, or other suitable means. Through each nut passes a screw, *d'*, at the lower end of which is a small guide-piece, d^2, located under each arm *a*, and connected at the end next the frame A with the strengthening-rib a^4.

E is a close metal chamber, of cylindro-conical form, provided with inlet-pipe *e*, having a suitable cock, and an outlet, e^2, and also with a series of perforated disks, *e'*, so arranged as to dry the steam before it enters the top of the chamber.

The operation is as follows: One and the same form being adapted for use in finishing hats of the same size but of different height, the part C' of the clamping-disks being on top of the arm *a'*, as shown best in Fig. 4, the hat to be shaped is placed, crown downward, so as to occupy the position indicated by dotted lines. The part c^2 is then placed over it and clamped in position, the brim of the hat being held between the two parts. The cock in pipe *e* is then opened for some moments, so that the steam comes into contact with the crown of the hat, and a wooden form of the required size and shape (such as indicated in Fig. 4) is introduced.

The frame B is turned so as to bring the screw *b* over the form, and the said screw is revolved so as to force the form well into the bottom of the hat. The frame B is then returned to its first position, and by means of the handle c^2 the ring, form, and hat are turned over onto one of the arms *a*, as indicated in Figs. 1, 3, and 4, with reference to the arm at the left of the frame A. The crown of the hat is thus exposed to view, and by aid of the nut D the screw *d'* is forced upward until, pressing against the bottom of the form, the crown of the hat is subjected to the desired tension. While the hat thus stretched remains on the form another hat undergoes the operations just described by the aid of the other clamping-disk, being finally turned over on the other of the arms *a*. In this way no time is lost.

It will be seen that by the improved machines the same operations can be performed that I have indicated in my before-mentioned

patent, but the said operations are rendered less tiring to the operator and more certain and rapid.

I now proceed to describe, referring to Figs. 5 and 6, the sad-iron holder, by means of which the great fatigue caused by the strong yet yielding pressure by which the iron must be held is for the most part avoided. F is a plate or support which can be turned around the hat G, placed upon a suitable form, mounted on a horizontal arbor, and revolved by belt and pulley, as shown, or by other suitable means. The sad-iron H rests upon a wheeled carriage, K, suitably guided and pressed toward the hat by the spiral spring I.

In operation the iron is pressed against the hat and has a to-and-fro movement which is communicated by the oval shape in cross-section of the hat, which movement is permitted by the spring and wheeled carriage.

The improvements in the brim-press are as follows, Figs. 7 to 10 being referred to. L is the supporting-frame, to the upper part of which is fixed the table M, having on one edge a rib, m, and in the two arms openings surrounded by raised rims or shaping-blocks m', each provided with stops or vertical pins m^2 on the upper surface. The press proper, N, is composed of an arched piece or yoke, n, which engages at the ends the edges of the table, and is provided with three rollers, one, n', running on the table near the edge, and the other two, n^2, running upon the rib m. A screw, n^4, turning in a suitably-threaded socket in the upper part of the yoke n, and provided with a hand-wheel or other operating device, and an upper block or former, n^7, with which the lower end of the screw n^4 is connected, so that the latter is capable of turning on its axis. This block is hollow, and is provided with inlet and outlet for the introduction of steam by the flexible tubing n^8 and n^9.

There are four angular projections, n^{10}, on the block n^7, which limit the movement of it, and of the arched piece or yoke n as well, by contact with stops m^2, and also by the same contact prevent the turning of the block n^7 when in use.

The operation of this apparatus is as follows: A hat is placed with the crown projecting through one of the openings of the table M and the brim resting on the corresponding raised rim or lower shaping-block, m'. The press proper, N, is then brought into position above the hat, and by means of the screw n^4 the steam-heated block or form n^7 is forced downward until the brim is held with the desired pressure between it and the lower block or form. The pressure on the brim is continued for some minutes, or so long as may be necessary. During this time another hat is placed in the other opening in the table M, the press proper, N, is shifted, and the operations just described are repeated. The first hat is removed and replaced by another, the press proper again shifted, and so on. In this way no time is lost. Owing to the circulation of steam in the upper block or former the heating of the brim before submitting it to pressure is unnecessary.

In conclusion, it may be said that in the brim-press and shaping-machine it is well to cover with felt most of the metallic surfaces which act upon the brim of the hat, the interposition of the felt preventing all ill results in the operation.

I do not limit myself to the forms, dimensions, proportions, materials, and accessory devices employed, since these may be varied without departing from the spirit or characteristic feature of this invention.

Having now fully described my said invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. In a hat-shaping machine, the combination, with devices for supporting a hat, of a movable frame and pressure-screw carried thereby.

2. A clamping disk or frame composed of two parts, hinged to a supporting-frame, in combination with a steam-chamber for steaming the crown and a pressure-screw for shaping, by means of a suitable form, the crown after it is exposed to view by turning said clamping disk or frame on its hinge, substantially as described.

3. The combination, with a single steam-chamber, of a number of clamping-disks hinged to a supporting-frame and a number of pressure-screws, said parts being relatively arranged substantially as described.

4. The combination, with the steam-chamber of a hat-shaping machine, of perforated plates for drying the steam, substantially as described.

5. The sad-iron holder, supported on wheels and held by springs, substantially as described.

6. In a brim-press, the hollow upper block or former provided with means for introducing a heating agent, as steam.

7. The combination, in a brim-press, with lower blocks or formers, of a movable upper block or former adapted to be shifted so as to operate alternately in connection with said lower blocks.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

S. PIRON.

Witnesses:
EMILE BARRAULT,
AUG. VINCK.