H. E. SMITH.

Ironing Apparatus.

No. 166,648. Patented Aug. 10, 1875.

Fig: 1

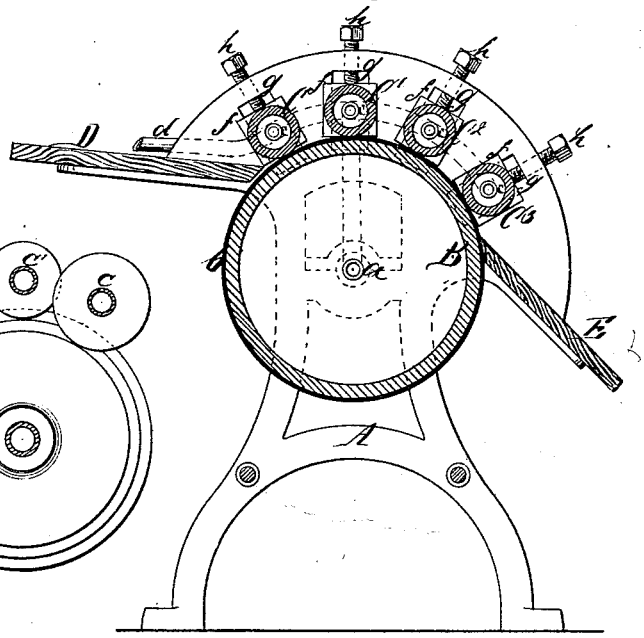
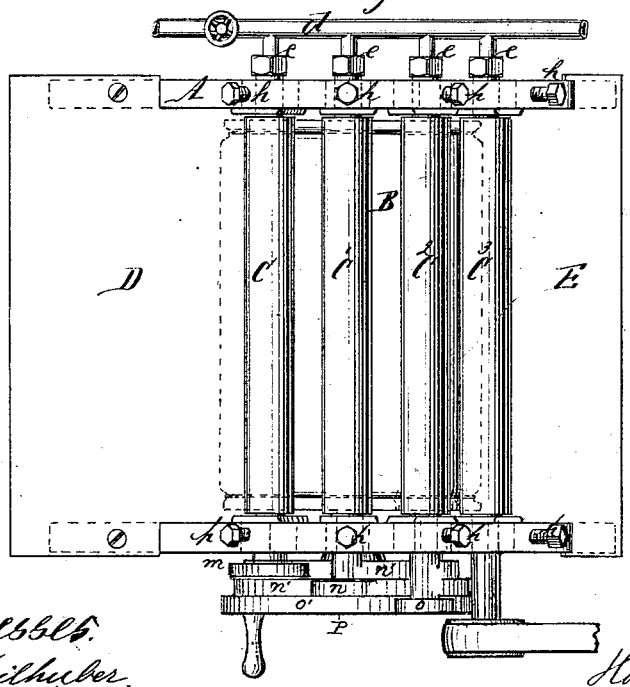


Fig: 3.

Fig: 2



Witnesses.
Emil Bilhuber.
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UNITED STATES PATENT OFFICE.

HAMILTON E. SMITH, OF NEW YORK, N. Y.

IMPROVEMENT IN IRONING APPARATUS.

Specification forming part of Letters Patent No. **166,648**, dated August 10, 1875; application filed January 29, 1875.

CASE A.

To all whom it may concern:

Be it known that I, HAMILTON E. SMITH, of the city, county, and State of New York, have invented a certain new and useful Improvement in Ironing-Machines, of which the following is a specification:

This invention is illustrated in the accompanying drawing, in which—

Figure 1 represents a vertical section. Fig. 2 is a plan or top view.

Similar letters indicate corresponding parts.

This invention consists in the combination of a heated cloth-covered supporting-roller with two or more heated pressing-rollers running at a gradually-increasing speed, the superficial speed of the first pressing-roller being equal, or nearly so, to that of the supporting-roller, while the superficial speed of the succeeding pressing roller or rollers differs more and more from that of said supporting-roller, in such a manner that the clothes, while passing through between the supporting-roller and the first pressing-roller, are dried and pressed, and while passing through under the succeeding pressing-rollers they are finally dried and polished.

In the drawing, the letter A designates a frame, which forms the bearings for the gudgeons *a* of the supporting-roller B. These gudgeons, as well as the roller, are hollow, so that said roller can be heated by steam, or otherwise. The supporting-roller is covered by a layer, *b*, of cloth or other suitable material, which is, by preference, fastened in such a manner that it can be readily removed when it becomes dirty, or whenever it is desirable to replace the same by another cloth. Over the supporting-roller B are placed a series (two or more) of pressing-rollers, C C^1 C^2 C^3, which are hollow and provided with hollow gudgeons *c*, so that they can be heated by steam, or otherwise. The steam or heated air is introduced through a pipe, *d*, which communicates, by branch pipes *e*, with the pressing-rollers, and also with the supporting-roller. The gudgeons *c* of the pressing-rollers have their bearings in boxes *f*, which are fitted into slots *g* in the frame A, and which are subjected to the action of screws *h*, so that said pressing-rollers can be forced up against the supporting-roller with any desired degree of pressure. Said pressing-rollers are geared together with the supporting-roller, and their velocity is so adjusted that the superficial speed of the first pressing-roller C is equal to that of the supporting-roller, that of the second pressing-roller C^1 a little greater than that of the supporting-roller, and so on, so that the clothes, as the same pass through between the supporting roller and the first pressing-roller, are simply pressed, and at the same time partially dried by the heat of said rollers, and on passing through between the supporting-roller and the succeeding pressing roller or rollers the clothes are finally dried, and at the same time they are again pressed, and also exposed to a polishing action, produced on account of the increased speed of the second and the succeeding pressing-rollers. During the polishing action the clothes are prevented from slipping on the supporting-roller by the ironing-cloth wrapped round the same; and, besides this, the first pressing-roller retains the rear portion of the clothes, while their front portion is exposed to the polishing action of the second pressing-roller, and so on. The clothes are fed to the apparatus over a table, D, which is secured on one end of the frame A, and they discharge over a chute, E, secured on the opposite end of said frame.

The difference in the speed of the pressure-rollers is produced by belts or by intermediate gears—in the present example by means of gear-wheels *m n o*, each of which meshes with its own gear, *m′ n′ o′*, mounted or formed on the wheel P of the shaft of the cloth-supporting roller.

What I claim as new, and desire to secure by Letters Patent, is—

In an ironing-machine, the combination of a heated cloth-wound supporting-roller with a series of pressing-rollers, constructed to rotate at different speeds, substantially as herein shown and described.

In testimony that I claim the foregoing, I have hereunto set my hand and seal this 25th day of January, 1875.

HAMILTON E. SMITH. [L. S.]

Witnesses:

FRANCIS FORBES,

E. BILHUBER.