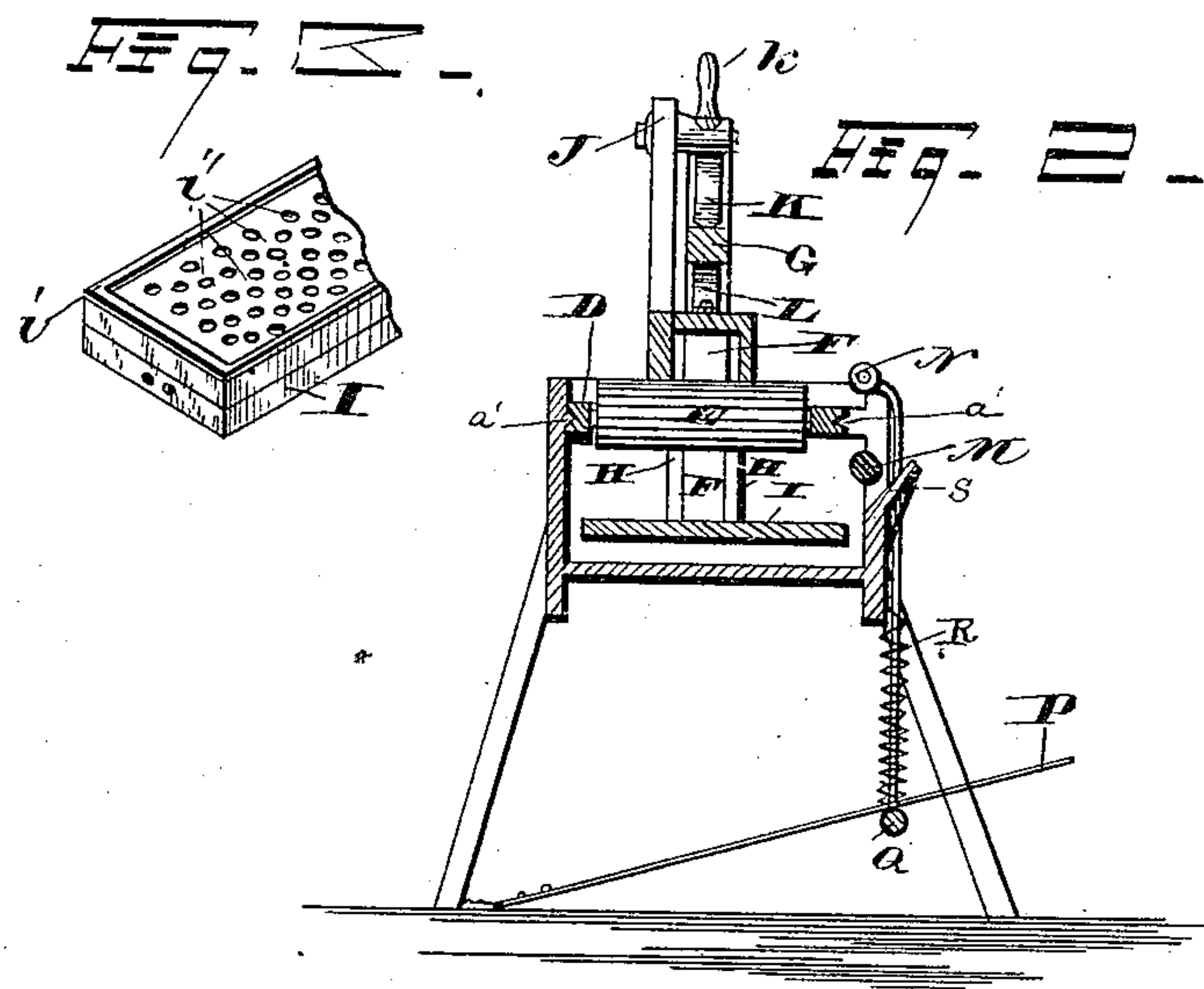
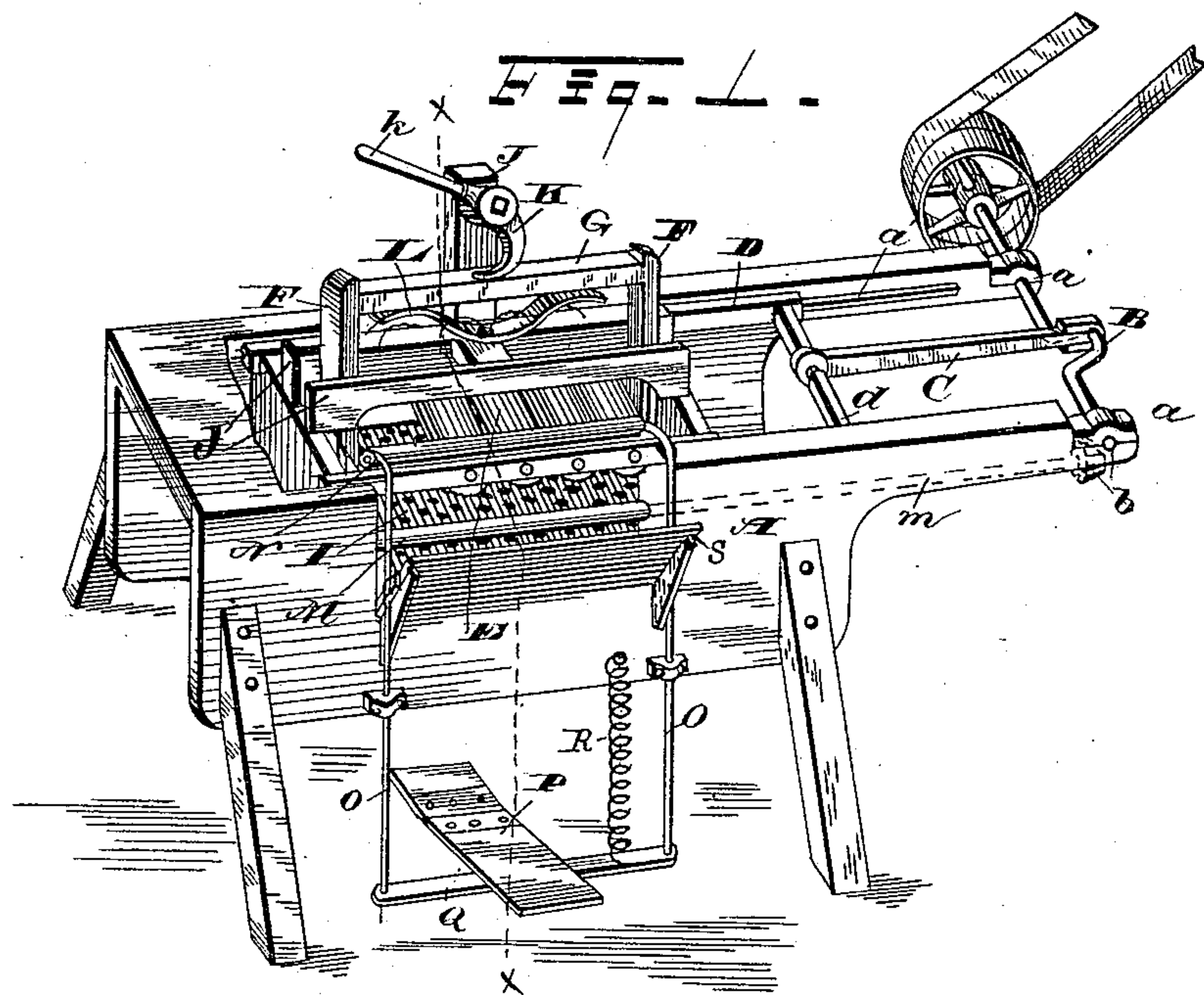


(No Model.)

W. H. GARLOCK.
STARCHING MACHINE.

No. 345,043.

Patented July 6, 1886.



WITNESSES
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UNITED STATES PATENT OFFICE.

WILLIAM H. GARLOCK, OF CLEVELAND, OHIO.

STARCHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 345,043, dated July 6, 1886.

Application filed June 6, 1885. Serial No. 167,839. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. GARLOCK, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Starching-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in starching-machines designed more especially for starching shirt-fronts, cuffs, &c., in which the body of the machine forms a container for the starch, with a vertically-moving platen that is immersed in the starch and then elevated, carrying up enough starch on its upper surface for starching the garment that is laid thereon, with pressure-rolls for pressing the garment upon the platen to force the starch through the fabric, with other pressure-rolls arranged to wring the garment and discharge the surplus starch back into the machine, to the end that the work may be done quickly and well, that no starch be wasted, and but little manual labor required.

With these objects in view my invention consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improved starching-machine. Fig. 2 is an elevation in transverse section on the line *xx* of Fig. 1, the indented rubber facing of the platen being removed. Fig. 3 is a view in perspective of a portion of the platen.

A represents the body of the machine, consisting of a container for the starch, and mounted on suitable supports, as shown. The side pieces of the container extend far enough to support the boxes *a*, in which is journaled the crank-shaft B, that is also the driving-shaft, and is provided in the usual manner with a drum and loose pulley. The rod C connects the crank with a cross-bar, *d*, that is attached to the frame D, in which are journaled the elastic pressure-rollers E, the outer portions of which are preferably of soft rubber. The frame D slides on ways *a'* of the side pieces of the container.

F are uprights that above are connected by the cross-piece G, forming a vertically-sliding frame, to which at the bottom is attached the platen I. Cleats H are secured on the inside of the container, to guide the frame and attached platen. A frame-work, J, that may be made in a variety of forms, is secured on top of the container, for supporting the cam K, for depressing the frame and platen, and the spring L for elevating the same. The cam is provided with a hand-lever, *k*, for operating the same, by means of which the platen is depressed and immersed in the starch in the container. As the cam is reversed the spring L elevates the platen. The platen consists usually of a plank or board considerably less in width than the internal width of the container, and has its upper surface covered with thick soft rubber *i*, with numerous indentations or pockets *i'* on the face thereof.

M and N are rubber rollers for wringing the garment after it has been starched. The roller M is mounted on the shaft *m*, that at *b* is intergeared with the shaft B. The spindle of the roller N is journaled in the rods O, that pass through suitable guides, and are connected at the bottom by the cross-bar Q, to which is attached the treadle P for depressing, and the spring R for elevating, the roller N.

In operating the machine a quantity of starch is placed in the container and the shaft B set in motion. The platen, by means of the cam-lever *k*, is depressed and immersed in the starch, while by reversing the lever *k* part way the platen is drawn up by means of the spring L above the starch. The platen, from its late immersion, would, if it had a flat surface on top, retain considerable starch, especially in the central portion; but by reason of the pockets aforesaid the supply of starch retained on the platen is abundant and well distributed. The garment or the portion thereof that is to be starched is laid on the platen and the reverse motion of the lever *k* is continued until the cam K is inoperative, leaving the spring L to force the work against the rollers E. A few passes of these rollers is sufficient to force the starch through the fabric. In case of shirts the garment is folded on the central line of the bosom, so that one half of the bosom engages the rollers E and the other half rests on

the platen, with the other parts of the garment extending out on the rollers M. After one side of the bosom is starched the garment is turned over and the other side treated in the same manner. The platen is then depressed far enough to release the garment and at the same time by means of the treadle the roller N is brought down and held with considerable pressure. By this means the garment is quickly passed out of the machine, and the surplus starch wrung out. The latter, falling on the incline S, is returned to the container.

The machine is simple and easily operated, and by reason of the starching and wringing out being done in the same machine the work is done rapidly and no starch wasted.

What I claim is—

1. In a starching-machine, the combination, with a starch-container, a platen operating therein for elevating the starch and supporting the garment, a reciprocating frame and rollers for pressing the garment upon the platen, of rollers for wringing out the garment, located in open relation with the container, so

that the surplus starch is discharged back into the starch-container, substantially as set forth. 25

2. In a starching-machine, the combination, with a container for starch, of a platen operating in said container and having pockets or depressions on the upper surface thereof, substantially as set forth. 30

3. In a starching-machine, the combination, with a starch-container located in the body of the machine, a reciprocating frame, and pressure-rolls, of a vertically-moving platen operating in said container for elevating starch and holding the garment against the pressure-roll, said platen having pockets or depressions on the upper surface, substantially as set forth. 35 40

In testimony whereof I sign this specification, in the presence of two witnesses, this 18th day of May, 1885.

WILLIAM H. GARLOCK.

Witnesses:

CHAS. H. DORER.

ALBERT E. LYNCH.