

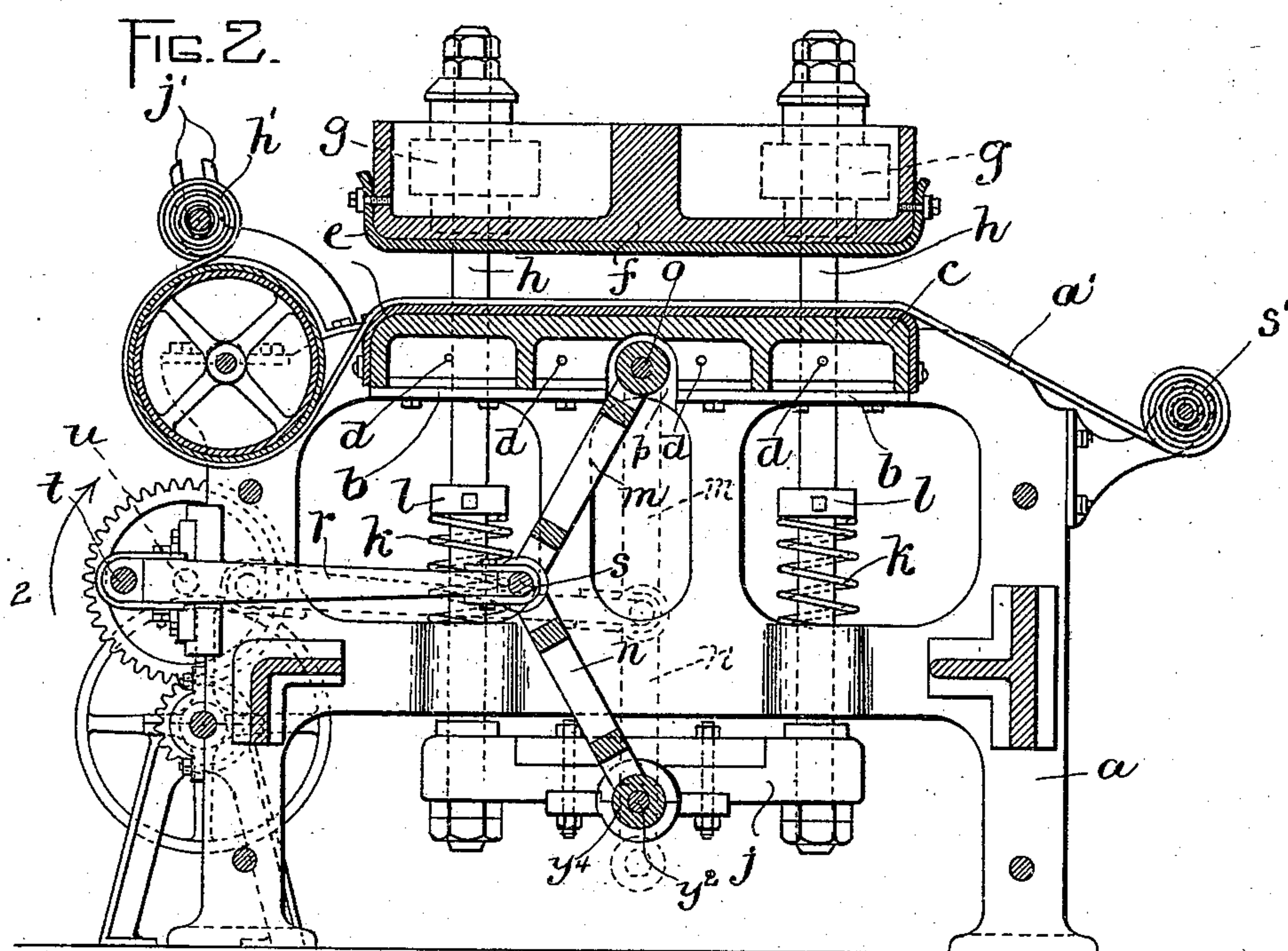
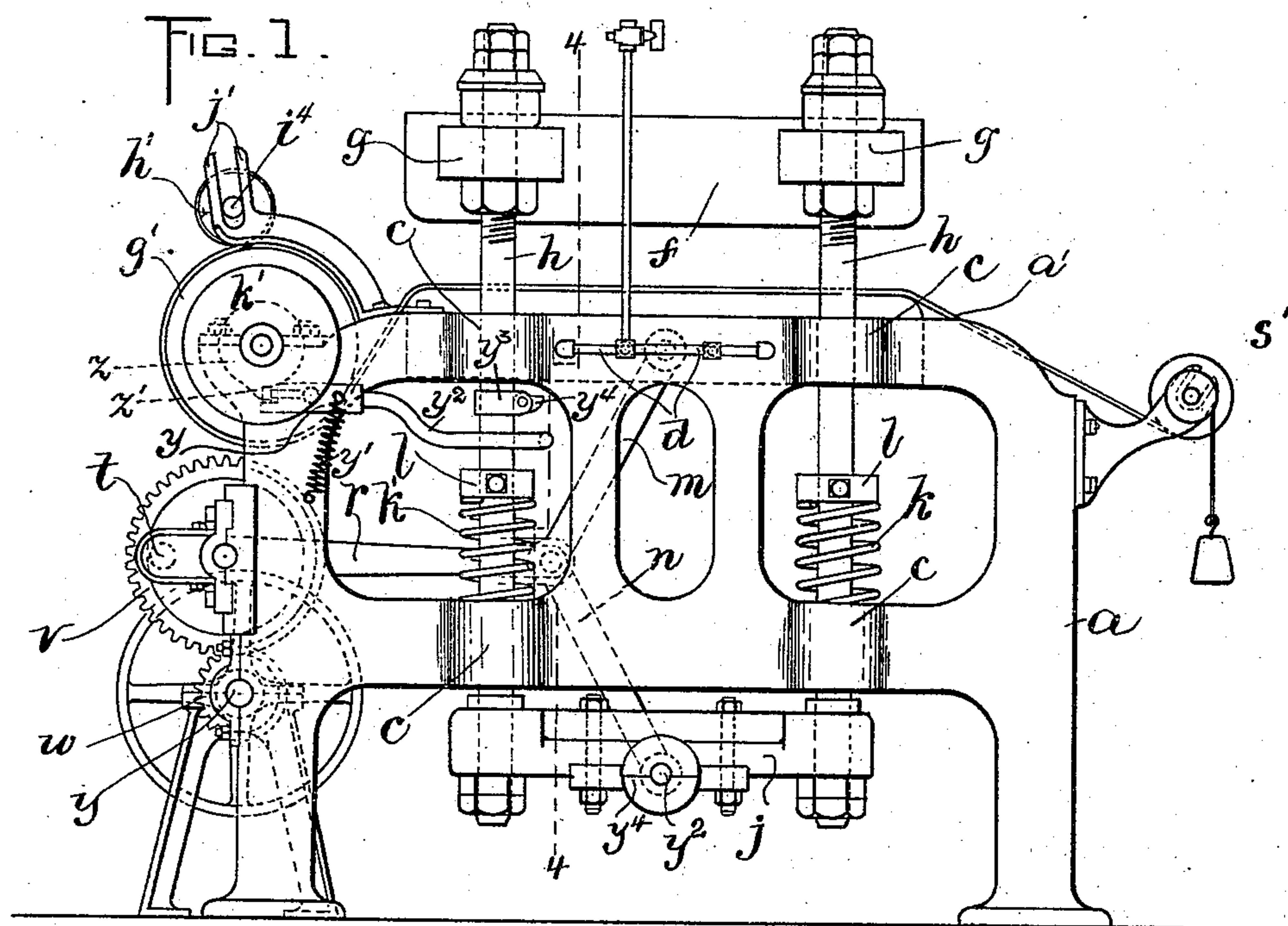
(No Model.)

2 Sheets—Sheet 1.

W. HEBDON.  
MACHINE FOR PRESSING CLOTH.

No. 551,960.

Patented Dec. 24, 1895.



WITNESSES:

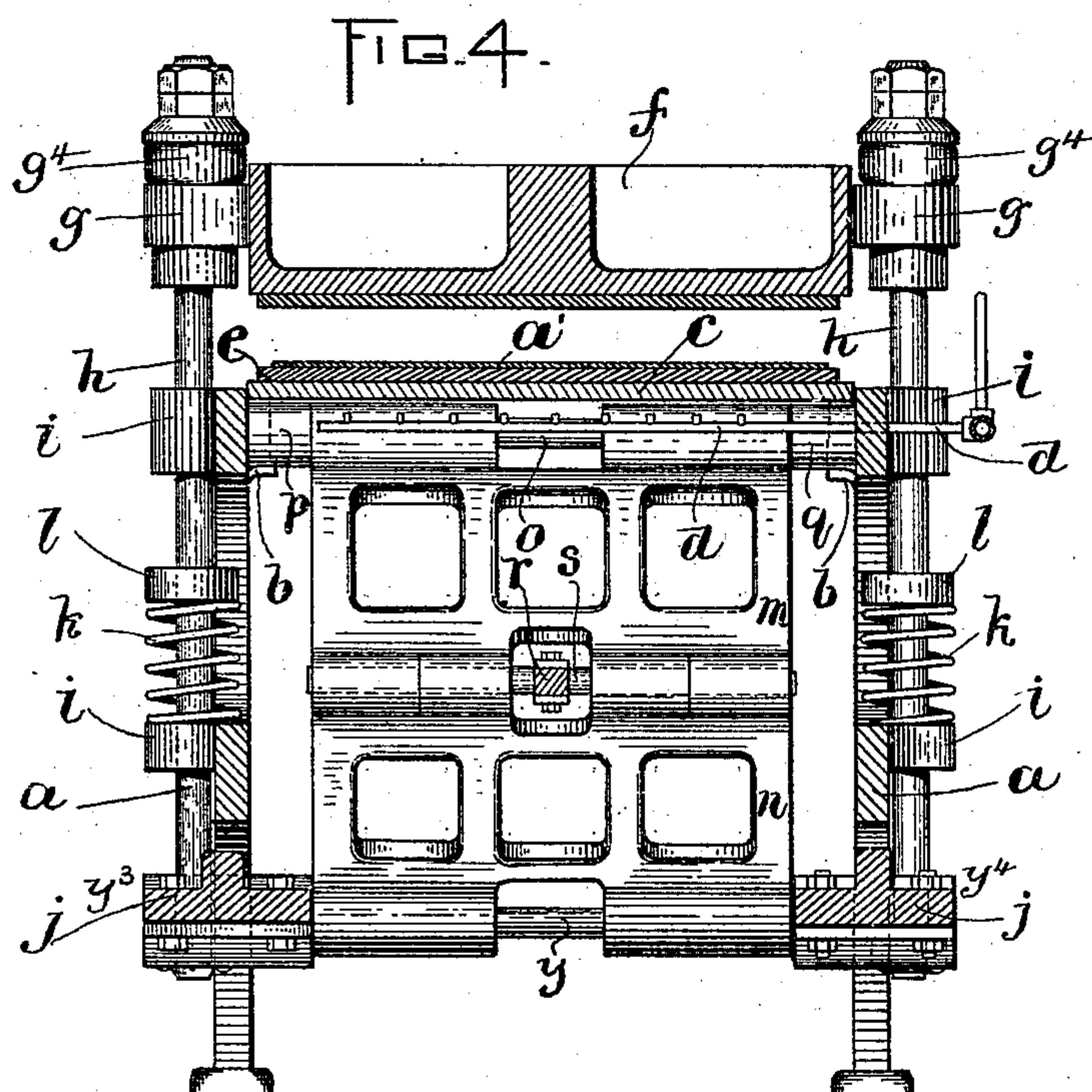
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2 Sheets—Sheet 2.

Patented Dec. 24, 1895.



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# UNITED STATES PATENT OFFICE.

WILLIAM HEBDON, OF BOSTON, MASSACHUSETTS.

## MACHINE FOR PRESSING CLOTH.

SPECIFICATION forming part of Letters Patent No. 551,960, dated December 24, 1895.

Application filed September 9, 1895. Serial No. 561,896. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HEBDON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Machines for Pressing Cloth, of which the following is a specification.

This invention relates to cloth sponging and pressing machines, whereby a uniform finish may be imparted to the cloth without the stretching of the goods, which is objectionable; and it has for its object to provide means for so treating the cloth as to eliminate the shiny "stovepipe" finish, or "shady" appearance, which is well understood by those familiar with cloths.

To these ends the invention consists in the novel construction and combination of means which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of my improved cloth-pressing machine. Fig. 2 represents a transverse vertical section of the same. Fig. 3 represents an end elevation. Fig. 4 represents a section on the line 4 4 of Fig. 1.

In carrying out my invention I provide a frame *a* provided with suitable brackets *b*, formed upon the inner side thereof. Upon said brackets is suitably mounted a bed or platen *c*, the surface of which is adapted to be heated preferably by gas, which is admitted thereto by means of pipes *d*. Upon the upper side of said platen *c* is secured a pad *e*, composed of felting and press-paper, or any other suitable material, said pad being for the purpose of protection to the cloth from the too rigid surface of the platen and to provide a smooth yielding surface thereon.

*f* represents a platen substantially similar in construction to platen *c*, and which is provided with ears or lugs *g*, formed upon the sides thereof, adapted to receive vertical rods *h*, suitably secured thereto, said rods extending downwardly through guides *i*, formed upon the frame *a* and engaging a cross-bar *j*. The platen *f* is normally supported in the position shown by springs *k*, the lower ends of which rest upon the guides *i*, and the upper ends bearing against collars *l* secured to the rods *h*.

*m n* represent sections or members of a toggle-joint lever. The upper member *m* is pivoted at *o* to lugs *p q*, formed on the frame *a*, and the member *n* is pivoted upon a rod *y*<sup>2</sup> journaled in bearings *y*<sup>3</sup> *y*<sup>4</sup> upon the cross-beam *j*. *r* represents a connecting-rod, one end of which is connected to a pintle-rod *s*, which also connects the members *m n*, and the other end is connected with a crank *t*, formed upon a shaft *u* journaled in bearings upon the frame of the machine, and provided at one end with a gear *v*, meshing with a pinion *w* upon a driving-shaft *y*, journaled in bearings upon the frame, and having a suitable driving-pulley attached at one end, the arrangement being such that when motion is imparted to the crank-shaft in the direction of the arrow 2, Fig. 2, the members *m* and *n* are caused to assume the dotted-line position shown in Fig. 2, which causes the upper platen *f* to be brought into engagement with the cloth *a'* interposed between the platens.

In pressing the cloth it is necessary, when pressure is applied thereto, to prolong the pressure a sufficient period to effect the required result, and to this end I have provided means for giving a longer or shorter period to the pressing action of the platen *f* upon the cloth interposed between the latter and the platen *c*, which I will next explain.

The throw of the crank is arranged so that the upper platen will be engaged with the cloth before the crank has passed its center or changed the direction of the connecting-rod, the said engagement, of course, arresting the downward movement of the platen, while the rods continue to descend until the crank changes its direction. To obviate the strain upon the operating mechanism at the point I have interposed yielding washers or buffers *j*<sup>1</sup>, preferably of rubber, between the lugs *g g*, upon the upper side thereof, and the nuts screwed upon the rods *h*, or I may use springs, or instead of the crank *t* equivalent means for operating the toggles. The driving-shaft *y*, through which motion is imparted to the platen, by means already described, has a continuous rotation which imparts a continuous vertical movement to the upper platen, and in the operation of the machine it is necessary to present the cloth to receive pressure during the disengagement



of the latter from the cloth, and to this end I have provided means whereby a given quantity only of cloth is presented to the platen. To this end I have provided a drum  $g'$  journaled in bearings on the frame of the machine. Said drum supports a roll  $h'$  having journals  $i^4$ , which engage with guides  $j'$  secured to the frame of the machine. The cloth to be pressed is first subjected to the sponging process and transferred to the pressing-machine upon a roll  $s'$ , from which it passes between the platens and around the drum  $g'$ , and the end of the piece is suitably secured to the roll  $h'$ , where it is wound upon said roll by the motion of the drum  $g'$ , the circumference of which is slightly less than the width of the platens, so that at each rotation of the drum  $g'$  the amount of cloth drawn through will be less than the amount acted upon, so that there shall be no liability of a crease left in the cloth by the previous impression of the platen therewith. The drum  $g'$  is rotated (in connection with the platen  $f$ ) by a belt  $k^3$  and pulley  $k'$ , the latter being connected with a friction-clutch attachment so arranged as to be operated in connection with said platen, so that when the latter is on its upward movement it will release the clutch-operating devices and permit the cloth to be wound around the drum and upon the roll  $h'$ .

The construction is as follows: The pulley  $k'$  is loose on the journal of the drum  $g'$  and continuously driven, and there is affixed to the shaft or journal a disk  $z$ , having a clutch-tooth  $z'$ , and between said disk and the pulley there is interposed a friction-disk  $z''$ , the pulley and the disk  $z$  being set up tightly against said friction-disk, (which may be of any suitable material, as rubber or leather or metal faced with friction material,) so that when the disk  $z$  is not positively locked against rotation it will be driven by the pulley. A dog  $y$  is pivoted to a convenient portion of the frame and a spring  $y'$ , connected at one end to said dog and at the other to the frame, exerts itself to press the outer end of the dog toward the disk  $z$  and take it in front of the clutch-tooth  $z'$  when it may, as indicated in broken lines in Fig. 1. When thus in front of the said tooth the disk is locked against

rotation in a direction to wind the cloth onto the drum and the friction devices slip on each other. The dog has extending from its rear end a tail  $y^2$ , which passes along near one of the rods  $h$ , and has at its extremity a laterally-turned part, indicated by broken line in Fig. 1. There is affixed to the said rod  $h$  a collar  $y^3$ , to which is pivoted a tooth  $y^4$ , straight on the upper side and curved or tapered on the under side, and said tooth by its own gravity assumes a horizontal position, suitable provision being made to limit its downward movement. This tooth is intercepted in its up-and-down travel by the laterally-turned end of the dog's tail  $y^2$ , so that in the upward movement it carries the same with it far enough to disengage the dog from the disk  $z$ , whereupon the latter is rotated together with the drum  $g$ . The dog is returned against the periphery of the disk by the spring  $y'$ , so that it stands ready to limit the movement of the drum to a single rotation by forming an abutment for the tooth  $z'$ . On the downward movement of the rod  $h$  the tooth  $y^4$  simply rides over the dog's tail by turning on its pivot.

It is evident that either the upper or the lower platen may be the movable one, and that the invention comprehends any such obvious mechanical changes.

I claim—

In a cloth-pressing machine, the combination of upper and lower platens one movable toward and from the other, means for reciprocating the movable platen, a cloth-feeding roller, a continuously rotating driver for said feed-roller and frictionally connected therewith, a detent normally restraining the feed-roller, and a tappet on the movable platen adapted to displace said detent, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of July, A. D. 1895.

WILLIAM HEBDON.

Witnesses:

C. F. BROWN,  
A. D. HARRISON.