

(No Model.)

2 Sheets—Sheet 1.

J. W. D. FIFIELD.
Crimping Machine.

No. 229,989.

Patented July 13, 1880.

Fig. 1.

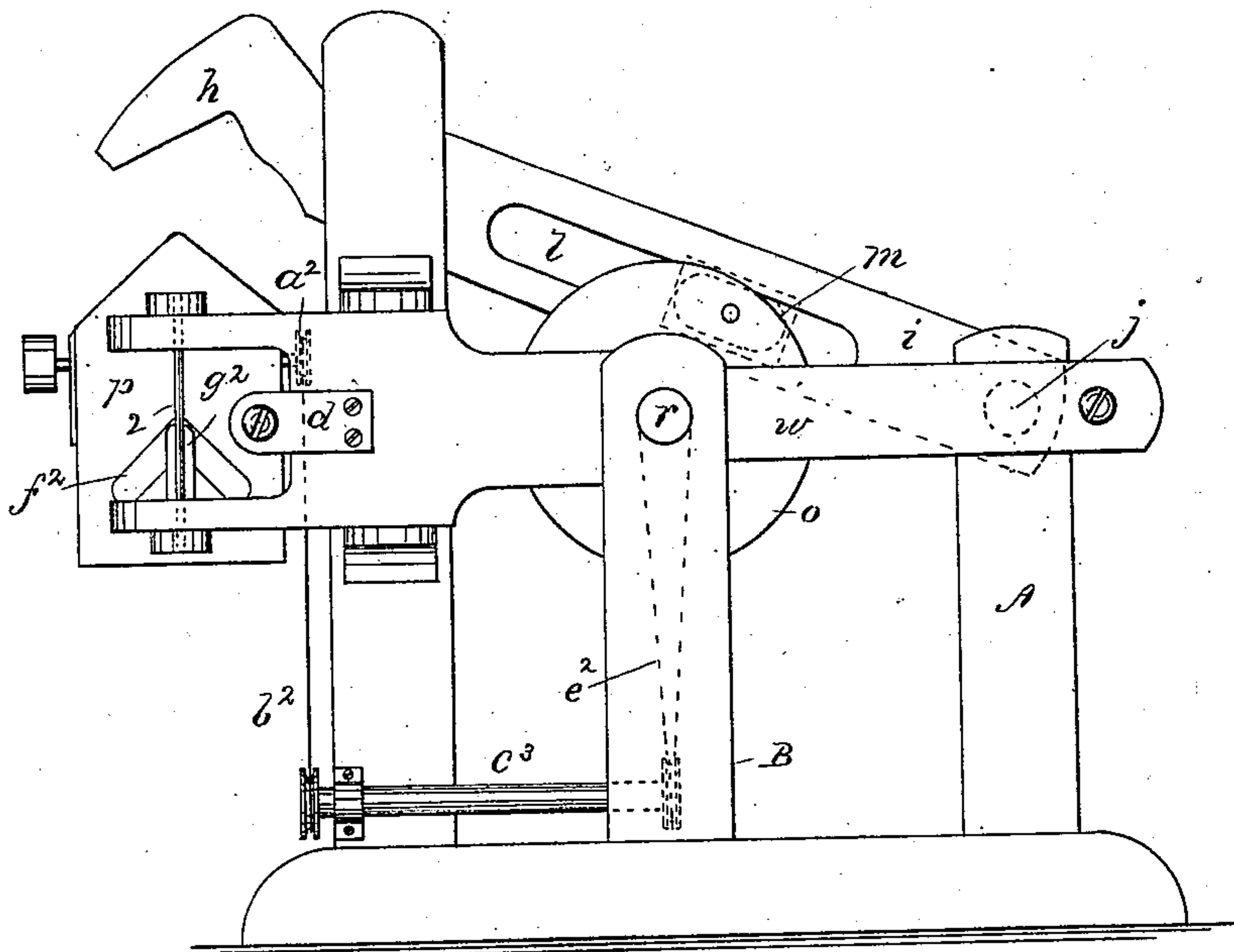
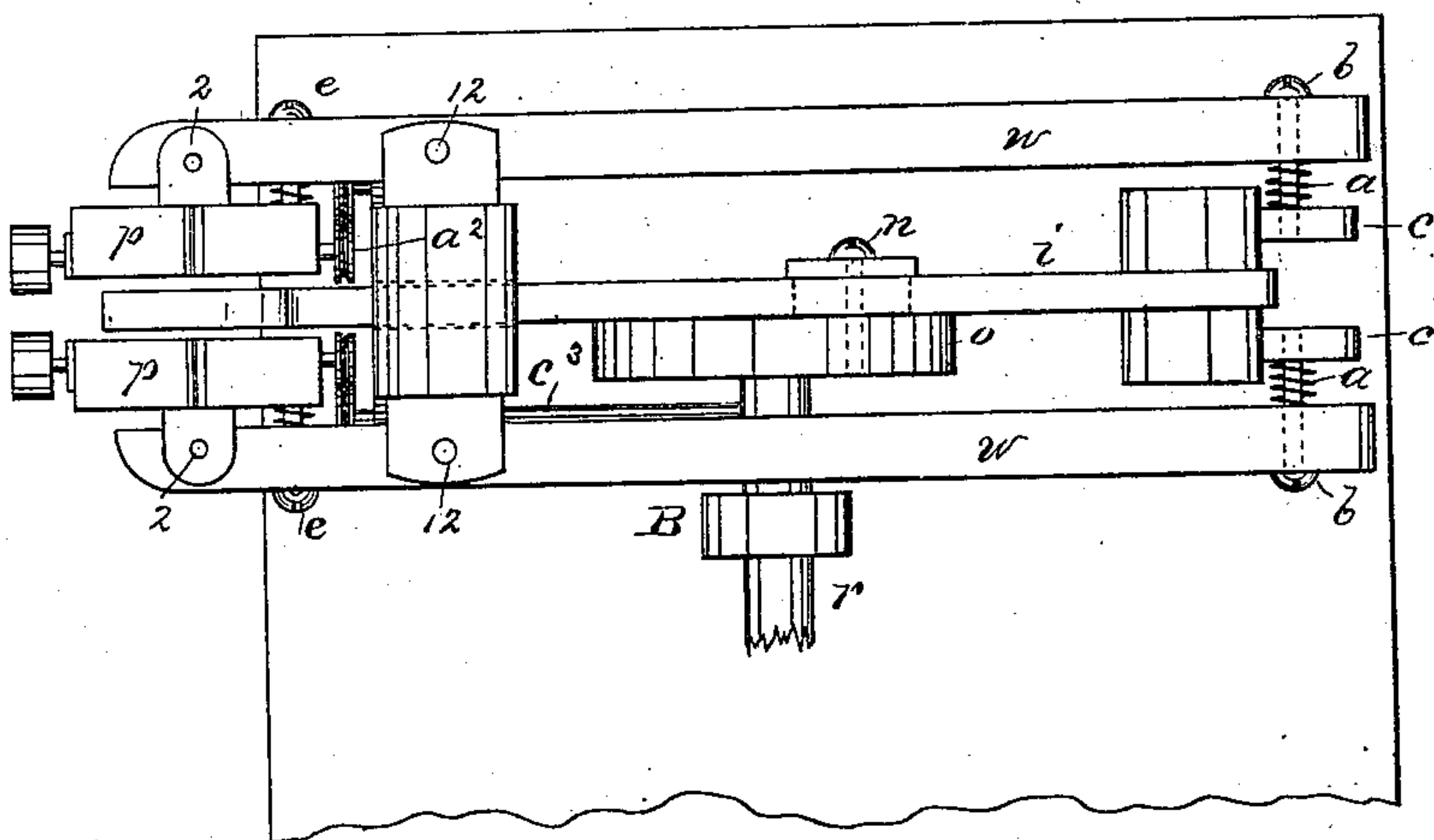


Fig. 2.



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Fig: 3.

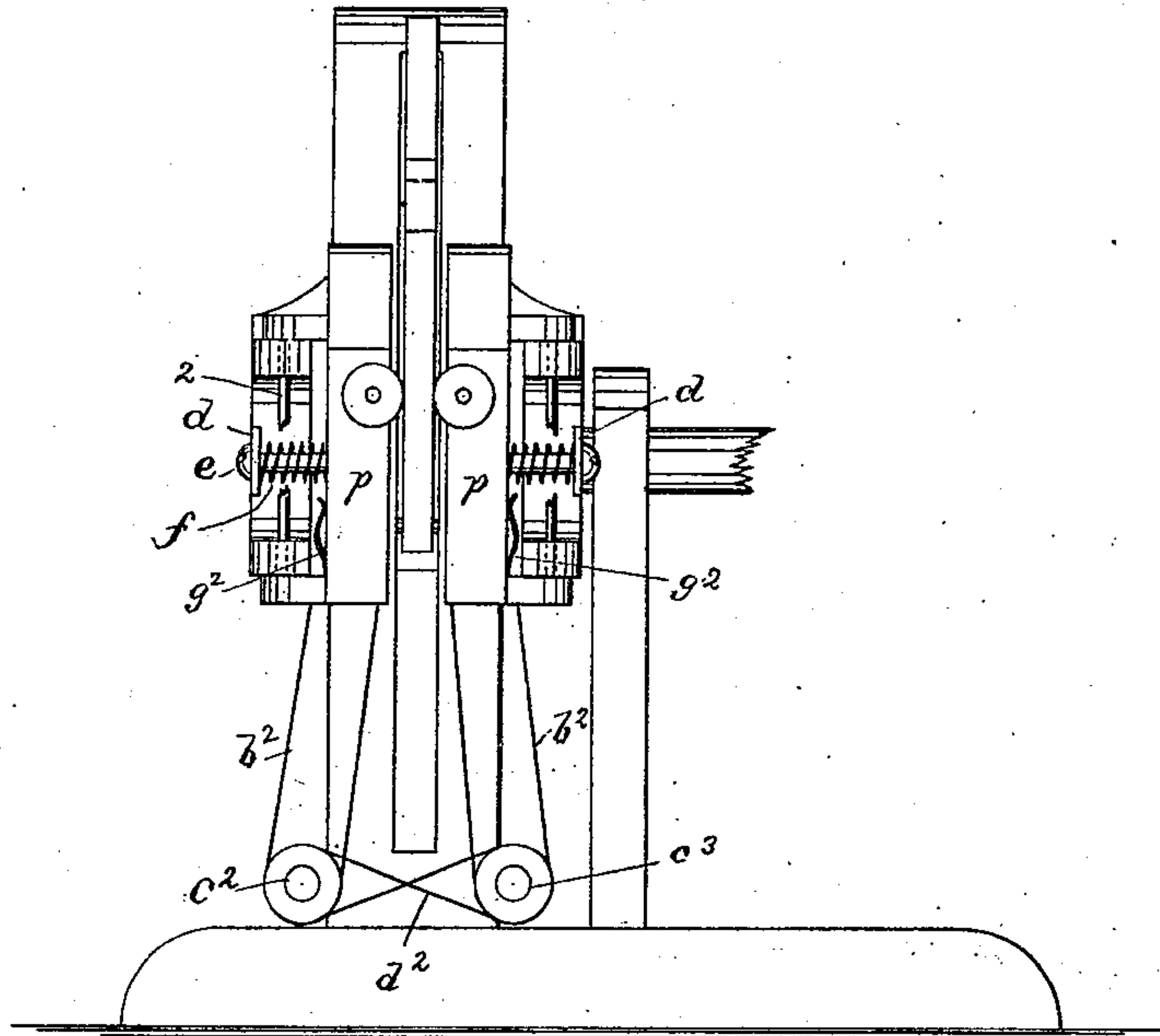


Fig: 4.

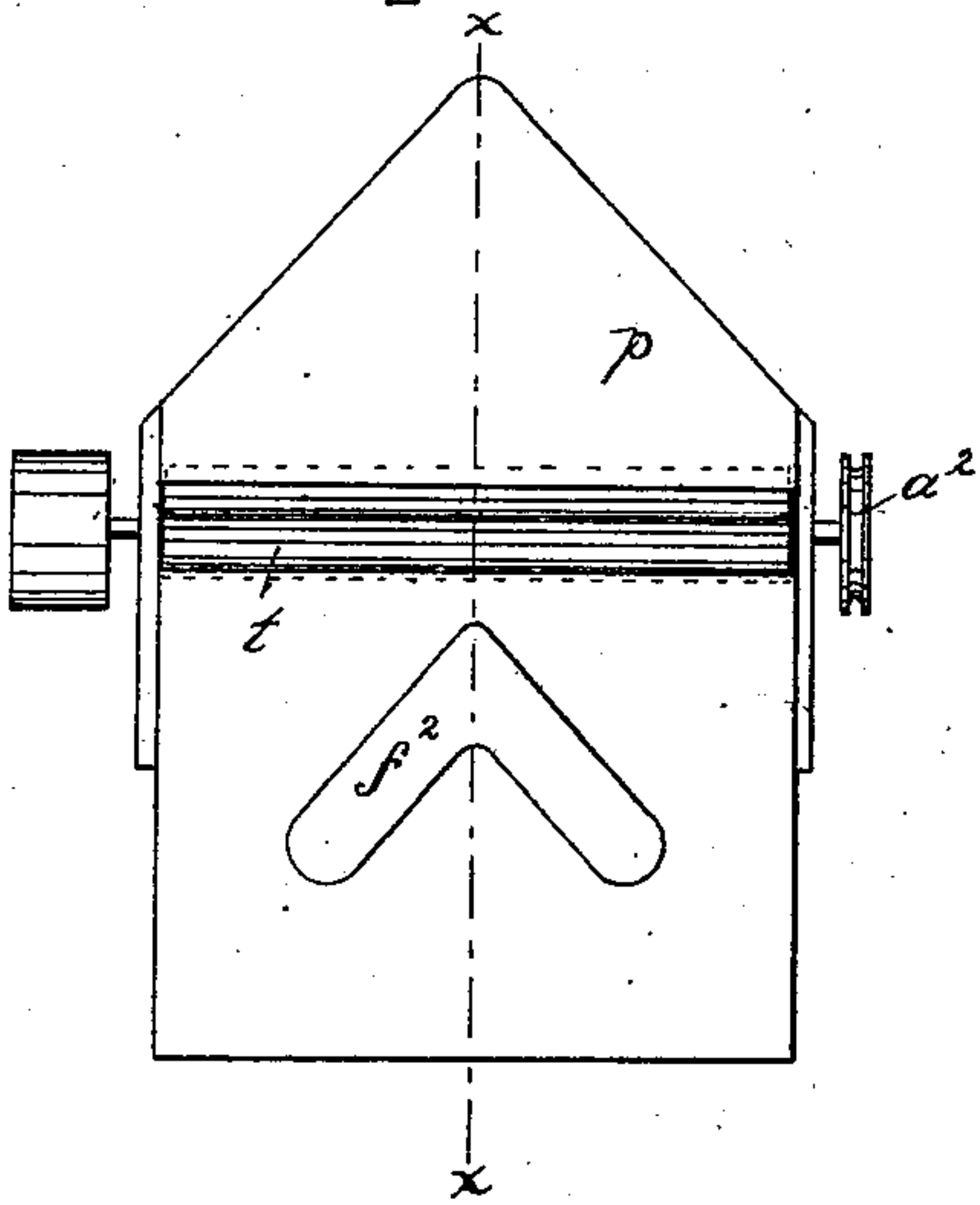
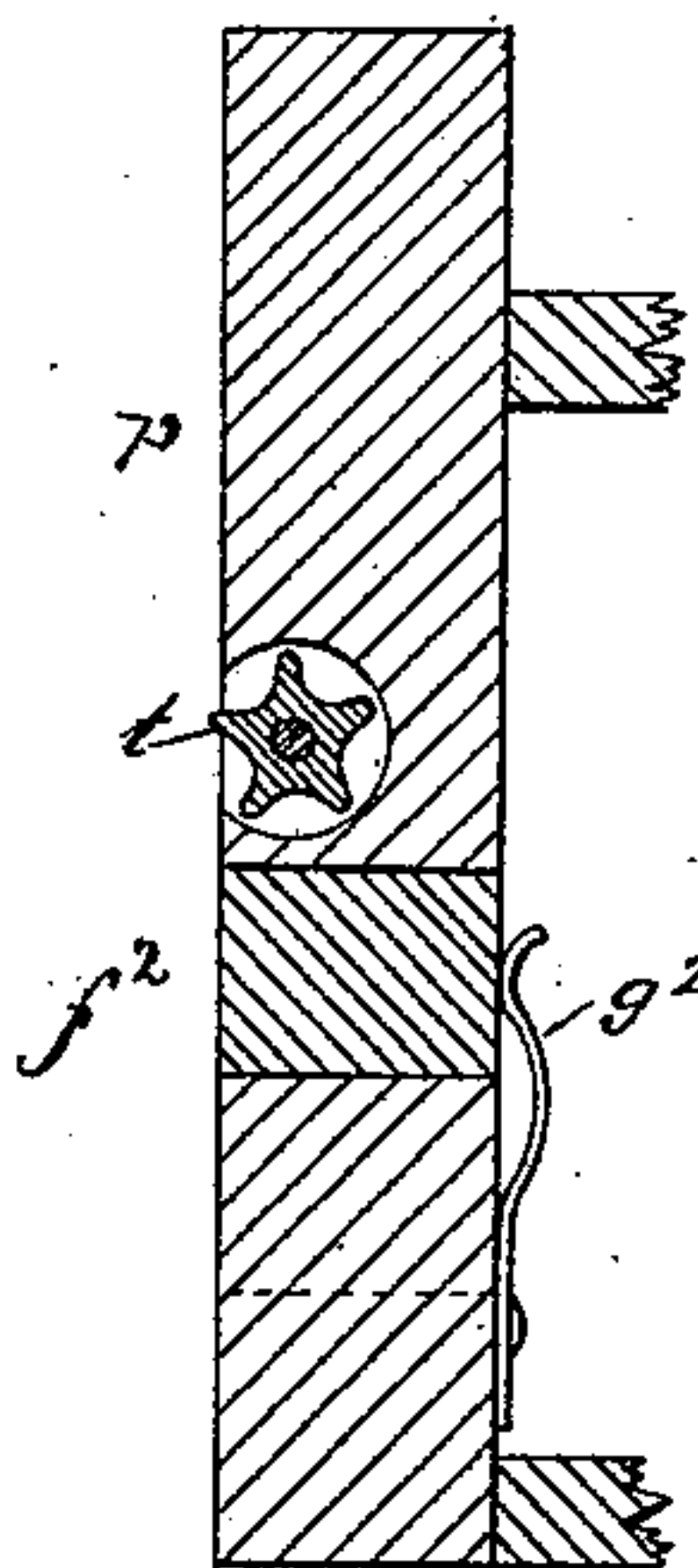


Fig: 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN W. D. FIFIELD, OF NORTH BROOKFIELD, MASSACHUSETTS.

CRIMPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 229,989, dated July 13, 1880.

Application filed May 17, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. D. FIFIELD, of North Brookfield, county of Worcester, State of Massachusetts, have invented an Improvement in Crimping-Machines, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to mechanism for crimping the uppers of boots and shoes, and is an improvement on United States Patent No. 216,768, granted June 24, 1879.

In this present invention I have shown the wrinkle-rubbers as rollers which are rotated positively, whereas in the patent referred to the rubbing devices were reciprocated. I have also added to the jaws movable spring-held blocks to divide each jaw into two or more sections, thus making the jaw more effective in rubbing and stretching the vamp to the form. I have also combined with the pivoted jaws a vibrating brake or form-carrying lever operated by a crank.

Figure 1 represents, in side elevation, a crimping-machine showing my improvements; Fig. 2, a top view thereof; Fig. 3, a front-end view; Fig. 4, a detail of the inner face of one of the jaws, and Fig. 5 a section thereof on the line *x x*.

In the mechanism herein described the pivoted jaws *p* and their pivoted carrying-levers *w* are as in the patent referred to; but instead of adjusting the levers at their rear ends by means of a right and left handed screw, I employ springs *a*, placed between the said levers and fixed ears *c*, about headed screws *b*, fixed to the said ears and extended through holes in the levers, the said holes being of greater diameter than the shanks of the screws and of less diameter than their heads. The screws may be turned to determine the distance of one from the other jaw.

Instead of the leveling-springs 22 described in the said patent, I now provide the levers with lugs *d*, through which are loosely-extended headed adjusting-screws *e*, that at their inner ends are screwed into the jaws *p*, and about these screws, between the lugs and jaws, I place spiral springs *f*. These screws may be turned whenever necessary to adjust the pressure of the jaws.

The form *h*, of any usual or suitable shape,

instead of being made to slide vertically, is attached to or made part of a vibrating lever, *i*, pivoted on a fixed part of the frame A, and slotted as at *l* to receive a block, *m*, held by a crank-pin, *n*, of a disk, *o*, attached to the rotating shaft *r*, held in suitable standards B.

The rubbing devices *t*, to remove the wrinkles in the vamp being crimped, are shown as fluted rollers positively rotated as the form is made to pass the vamp between the jaws. The shafts upon which these rubbers are secured are herein shown as provided with pulleys *a*², which, by bands *b*², are driven from pulleys on shafts *c*² *c*³, connected by a cross-belt, *d*², the shaft *c*³ being rotated from the shaft *r* by a belt, *e*², (shown only in dotted lines, Fig. 1.)

The jaws are shown as provided with openings containing movable sections *f*², one or more for each jaw, backed by or resting upon springs *g*². The front of each movable section will normally project outward a very little beyond the face of the jaw, to thus divide, as it were, each jaw into yielding sections more or less in number, thus enabling all parts of the vamp, notwithstanding variation in its thickness, to be acted upon and be rubbed and fitted to the form on its passage between the jaws.

The sections *f*² may be shaped as shown, or be round or rectangular.

The rotating wrinkle-rubbers shown operate more rapidly than do those in the patent referred to.

Instead of the devices shown by which to rotate the rubbing devices *t*, I may employ any other suitable devices.

By means of the crank-pin and slotted form-carrying lever *i*, located as described, I am enabled to move the lever slowly at or nearest its highest position to permit the vamp to be placed across the top of the jaws, and then to move it rapidly to pass the vamp between the jaws, discharge it below the jaws, and return. The movable sections aid in discharging the crimped vamp from the form when rising, if the vamp happens to adhere to it. The pins 2 serve as the pivots for the jaws.

I do not broadly claim one or more rollers held loosely in the jaws, as I am aware that such rollers have been employed; but such

rollers have not, prior to my invention, been rotated positively.

I claim—

1. In a crimping-machine for boots and shoes, 5 crimping-jaws combined with positively-driven rotating rubbing devices, substantially as described.

2. The levers and their pivoted jaws, combined with the pivoted vibrating form-carry- 10 ing lever and a crank to operate it to move the form at a variable speed, substantially as described.

3. In combination, the crimping-jaws and their yielding sections f^2 , to operate substan- 15 tially as described and shown.

4. The pivoted levers w and their pivoted jaws, combined with the headed adjusting-screws, fixed with relation to the frame-work of the machine, extended loosely through the said levers, and the springs a , substantially as 20 described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. D. FIFIELD.

Witnesses:

N. E. C. WHITNEY,
G. W. GREGORY.