

(No Model.)

2 Sheets—Sheet 1.

A. E. GRANT.
STAMPING MACHINE.

No. 518,402.

Patented Apr. 17, 1894.

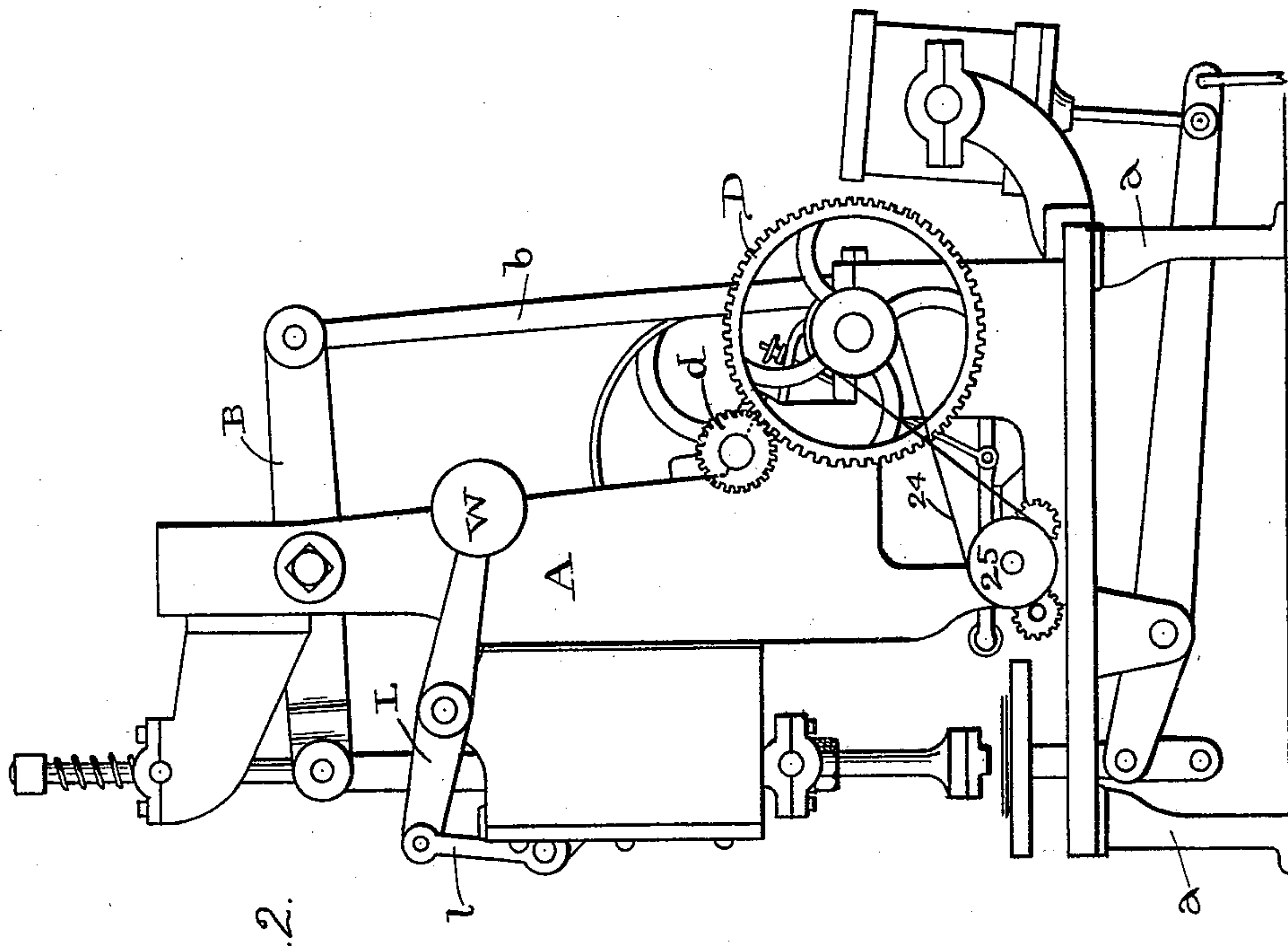


Fig. 2.

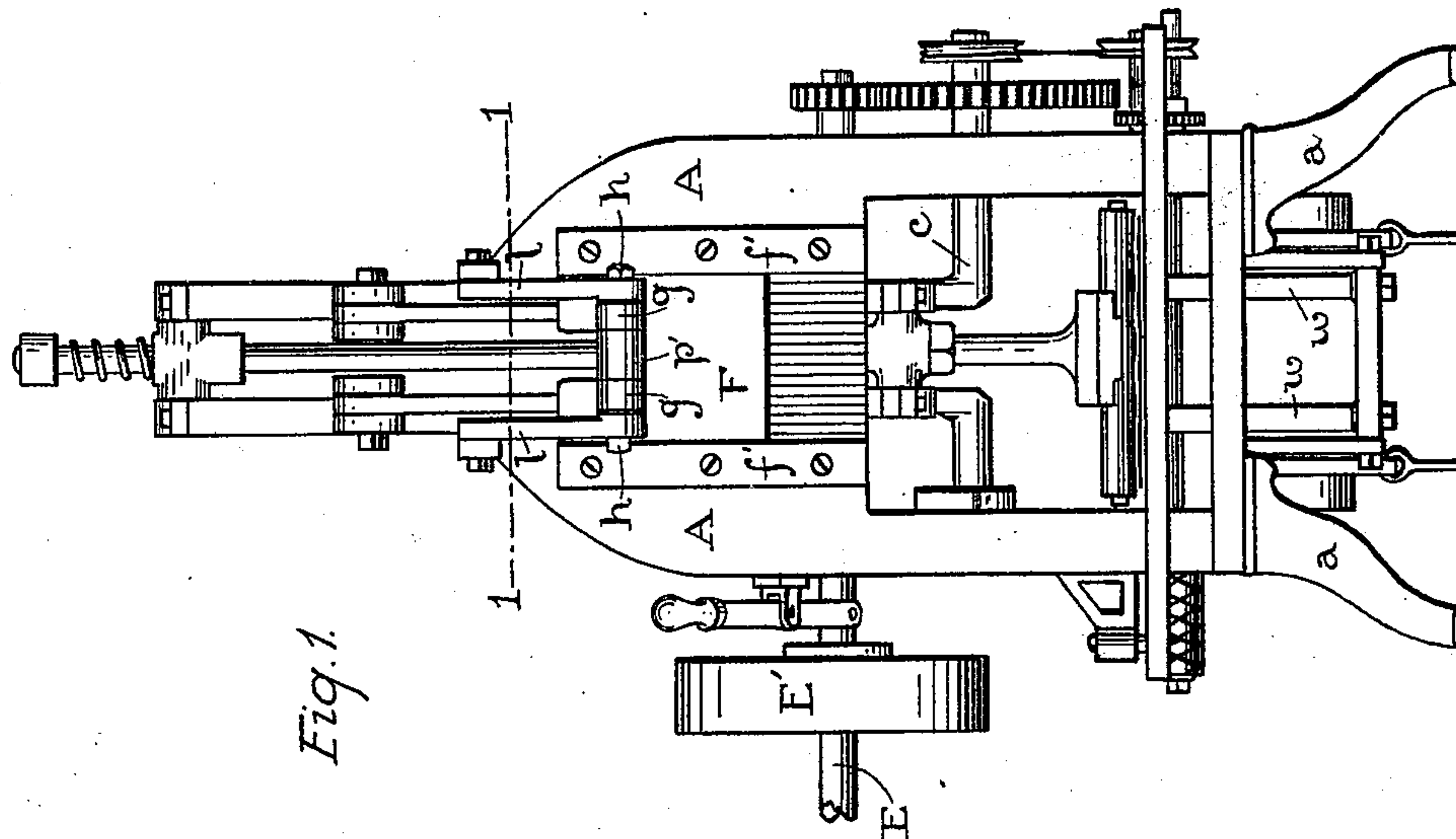


Fig. 1.

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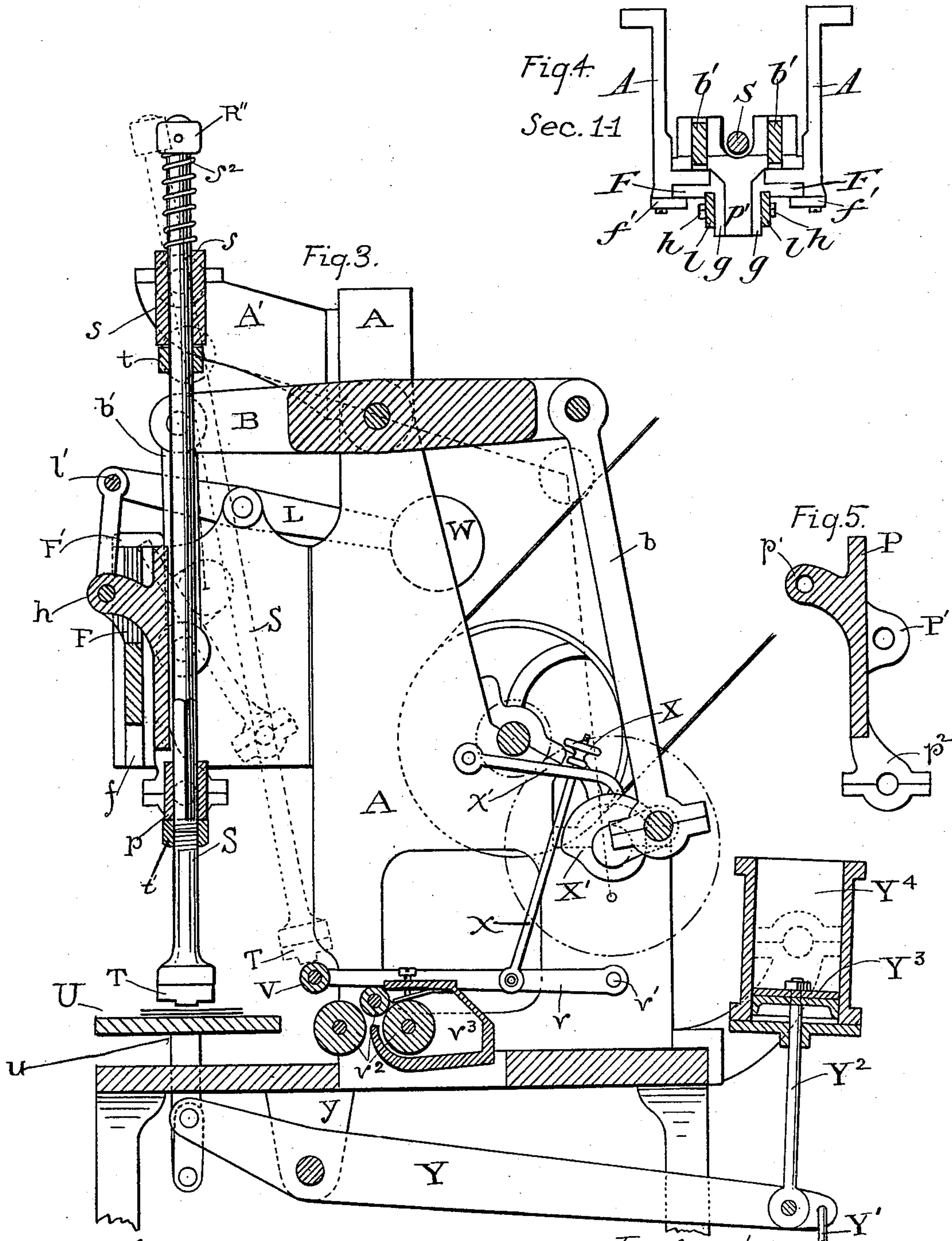
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Witnesses,
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UNITED STATES PATENT OFFICE.

ALBERT E. GRANT, OF TROY, NEW YORK.

STAMPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 518,402, dated April 17, 1894.

Application filed July 1, 1893. Serial No. 479,397. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. GRANT, a citizen of the United States, residing at the city of Troy, county of Rensselaer, State of New York, have invented a new and useful Inking-Stamp, of which the following is a specification.

My invention relates to improvements in mechanism for stamping merchandise; and the object of my invention is to produce a machine by the operation of which articles of merchandise particularly collars and cuffs may be stamped with ink in a positive and effectual manner. I accomplish this object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation. Fig. 2 is a side elevation. Fig. 3 is a vertical section. Fig. 4 is a section along the line I—I on Fig. 1, and Fig. 5 is a detail view of the rear plate P.

Similar letters refer to similar parts throughout the several views.

To the frame A suitably supported by legs or posts *a a*, I pivot the walking beam B, one end of which is attached by arm *b* to the crank shaft C, which shaft C has at one end of it a gear wheel D, which in turn meshes with the small gear wheel *d*, which is on one end of the shaft E and which has at or near the end opposite the gear wheel *d*, the belt wheel E', by means of which power is applied to the machine.

On the front of the frame A, I arrange a movable plate F arranged to have a reciprocatory motion within the grooves *f* in the cleats *f'* secured to the frame A on each side of the plate F. Upon the plate F and projecting therefrom from the front of the machine, I arrange the ears *g g* through which the bolt *h* passes.

The movement of the plate F in an upward direction, is limited by the projecting cleat F' with which the plate comes in contact. In the rear of the plate F, I arrange the plate P shown in detail in Fig. 5, and at the lower end of the plate P, I provide a sleeve *p* containing a squared opening through which the stamping bar S reciprocates. That portion of the stamping bar S which operates within the sleeve *p*, being squared to correspond with the interior of said sleeve. The sleeve *p* is pro-

vided on each side with a bearing *p*², allowing for an oscillating movement of the sleeve *p*.

Upon the side of the plate P toward the plate F, I arrange the ear *p'*, which extends between the ears *g g* of the plate F and is held in connection with them by means of the bolt *h*, which passes through the ear *p'* as well as through the ears *g g*. On the interior surface of the plate P, I also arrange a projecting ear P', to which is secured the arm *b'*, which connects with the walking beam B at its end opposite to that connected by the arm *b* already described.

Pivoted to one side of the frame A, I arrange the lever L provided at one end with a weight W and having its other end attached to the rod *l'*, to which rod is secured two links *l l*, each of which links is brought in contact at its lower end with the ears *g g* on the plate F and is held in position by the bolt *h*; the bolt *h* thus passing through the links *l l*, the ears *g g* and ear *p'*.

At the upper part of the frame A, I arrange a supporting bracket A' consisting of two projections parallel to each other extending forward toward the front of the machine, between which brackets A', I arrange a sleeve *s*, which has suitable bearings on each side thereof within the brackets A' A' allowing for an oscillating movement of the sleeve toward the front and rear of the machine. Passing through the sleeve *s* secured within the bracket A' and the sleeve *p'* in the plate P, I arrange the stamping rod S. At the top of the rod S, I secure to it a cap *s'*, in contact with the under side of which I place one end of a spiral spring *s*², the opposite end of which spring rests upon the top of the sleeves *s*. Below the sleeve *s* I place upon the stamping rod S the collar *t* secured in position by means of a thumb screw and beneath the sleeve *p* I secure the collar *t'* on the stamping rod S by means of a thumb screw.

At the end of the stamping rod S, I place a suitable die T for the purpose of making an impression upon the goods operated upon. The spring *s*² is placed about the stamping rod in such a manner as to tend to force the stamping rod E upward and away from the table U.

The operation of the stamping rod is as follows: When the beam B raises the arm *b'*,

the plate P is acted upon and forced upward which in turn causes the plate F' to rise, and the plate F coming into contact with the oscillating cleat F' causes the plates F and P to be limited in their upward motion. The force on the plate P then causes the plate to move toward the rear of the machine acting upon the bolt *h* passing through the ears *g g* and *p'* as a hinge, which will thus tend to lower or draw downward the bolt *h*, and thus to raise the weight W secured to the end of the lever L, and the position of the stamping rod S will be that shown by dotted lines in Fig. 3. The sleeve *s* will be thus oscillated within the bracket A', and the sleeve *p* in the bearing *p*².

The object of causing the stamping rod S to swing inward toward the rear of the machine is to bring the die T at the lower end thereof in contact with the inking roller V, which is attached to one end of the lever *v*, the opposite end of said lever being pivoted at *v'* to the frame of the machine.

I arrange a series of feed ink rollers *v*² operated by the belt *v*⁴ passing about the hub of the gear wheel D and a belt wheel *v*⁵, for the purpose of carrying ink from the fount *v*³ to the inking roller V. In order to bring the inking roller V into position to be acted upon by the die T, I arrange the rod X provided at its upper end with a knob *x* in contact with the arm *x'* secured to the frame of the machine A, attaching the lower end of said rod X to the lever *v* between the feed roller V and the pivoted support *v'*. The arm *x'* rests at one end upon the cam X', which is secured to the shaft C and is constructed with such a formation that as the arm *x'* resting upon the cam X' is raised the knob *x* on the rod will come into contact with the said arm *x'* and will lift the inking roller V into contact with the die T, and as the shaft C revolves, the cam will cause the arm *x'* to fall and the inking roller to be brought again in contact with the feed roller. As the beam B descends, the plate P is brought to its normal position carrying the stamping rod S to a vertical position; the squared portion of the stamping rod S being within the sleeve *p*, the plate P will be forced downward carrying the stamping rod S positively and forcibly downward bringing the die into contact with the goods on the table U; the collar *t'* in contact with the sleeve *p* causing the stamping rod S to be forced downward with the plate P.

The portion of the stamping rod S within the sleeve *p* being squared and fitting snugly within the sleeve, there is no oscillation to the stamping rod S, thereby preventing a cloudy and indistinct impression upon the goods. The downward movement of the stamping rod causes a contraction of the spiral spring at its upper end and immediately upon the upward movement of the plate P, caused by the weight W acting upon the projecting ear P', the resiliency of the spring *s*² will cause the stamping rod S to ascend thus keeping

the collar *t'* in contact with the lower end of the sleeve *p* and the collar *t* in contact with the lower portion of the sleeve *s*.

The collar *t* and *t'* may be changed to correspond with the limit which it is desired to give to the movement of the stamping rod S.

The table U is provided with downwardly projecting bars *uu*, which extend through the base of the frame A and connect with the lever Y pivoted to a lug *y* extending from the base of the frame A. At the end of the lever Y farthest from the table U, I attach a weight Y'. Near the end to which the weight is attached, I secure a rod Y² which is connected with a piston Y³ operated in an air cylinder Y⁴. The operation of the air cylinder being to provide an air cushion and to assist in adjusting the movement of the table U.

The operation of my machine causes the die to be brought in contact with the materials placed on the table with force and positively in the same manner each time. The table may be easily moved downward and adjusted to the number of thicknesses of goods it is desired to place beneath the die.

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

1. In a stamping machine, the combination of a stamping rod, a die secured thereto, a shaft suitably mounted, a means for connecting said shaft with said stamping rod, an inking device with which said die may be brought in contact, a movable table upon which the goods to be operated upon may be placed, all so arranged that by the operation of the shaft the die at the end of the stamping rod will be brought in contact with the inking device and then swung away from the inking device and caused to descend in a vertical plane and brought into forcible and positive contact with the work on said table, substantially as described and for the purpose set forth.

2. In a stamping machine, the combination of a stamping rod, means for raising said rod from the goods to be operated upon, an inking device with which said stamping rod may be brought in contact, a movable table upon which the goods to be operated upon may be placed, substantially as described and for the purpose set forth.

3. In a stamping machine, a stamping rod, a plate provided with a sleeve pivotally secured thereto, said sleeve capable of oscillatory movement on said plate, said plate constructed to permit of a swinging motion, means for raising said plate and causing said rod to swing into contact with an inking roller, an inking mechanism provided with an inking roller arranged to be brought in contact with the end of the stamping rod when the stamping rod is swung away from the table with a table upon which the goods are placed to be operated upon, substantially as described and for the purpose set forth.

4. In a stamping machine, a table provided with downwardly extending bars attached to one end of a lever, said lever pivoted to the

frame of the machine, a weight attached to the end of said lever opposite to that secured to the bars of the table, a rod secured to said lever near said weight, an air cylinder, a piston in said air cylinder connected to said rod, substantially as described and for the purpose set forth.

5. In a stamping machine, a stamping rod, a plate provided at its lower extremity with a bearing, a sleeve provided with a squared opening therethrough, a portion of the stamping rod passing through said sleeve having a squared portion, said sleeve capable of oscillatory movement in said bearing, an ear projecting from said plate, a plate placed in front of said last mentioned plate provided with ears, a bolt passing through each of said ears on each of said plates, a lever pivoted to the frame of the machine, with links secured by

said bolt, with a weight attached to the end 20 of said lever farthest from said links, with an arm attached to a lug on said first mentioned plate, with an arm securing said lug to a walking beam, said walking beam attached by an arm to a shaft, with a sleeve secured within bearings in a bracket attached 25 to the frame of the machine, a cap at the upper end of said stamping rod, a spiral spring resting against said cap and upon the top of said sleeve, with an adjustable collar placed 30 upon said stamping rod immediately beneath each of said sleeves, substantially as described and for the purpose set forth.

ALBERT E. GRANT.

Witnesses:

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GRACE T. MANY.