

A. GOULD.

Machines for Cutting and Embossing Leather

No. 152,627.

Patented June 30, 1874.

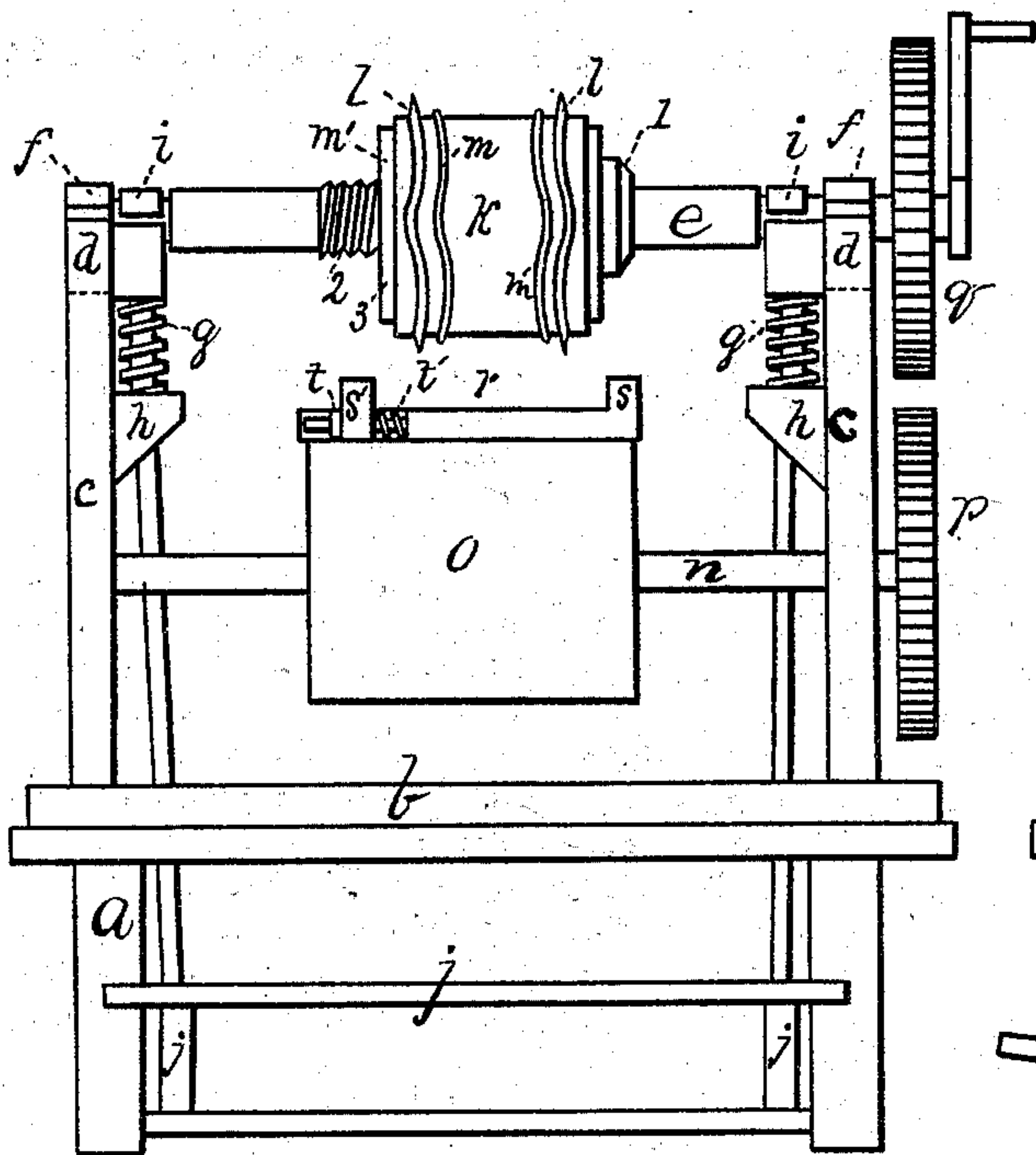


Fig 1.

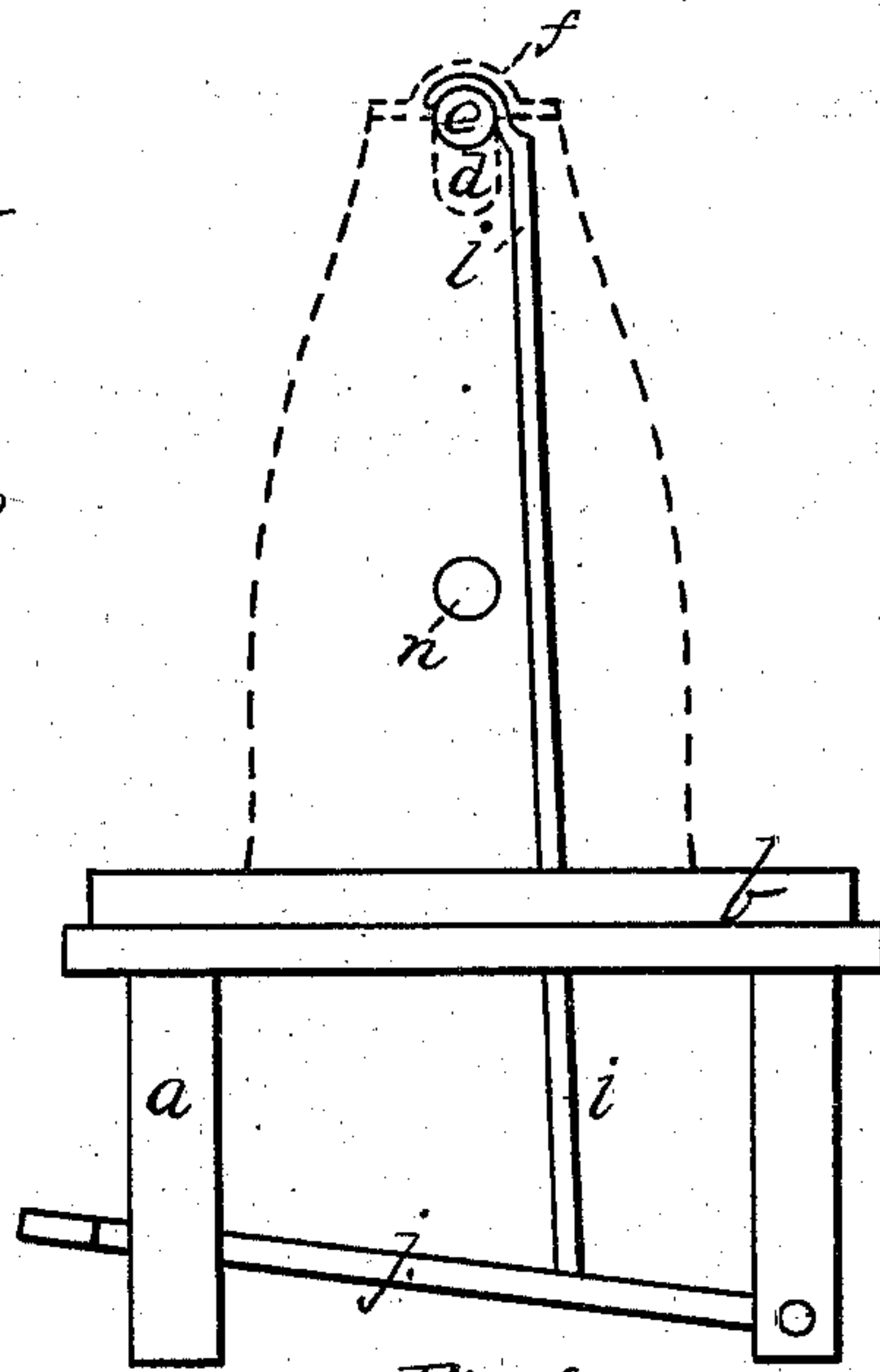


Fig 2.

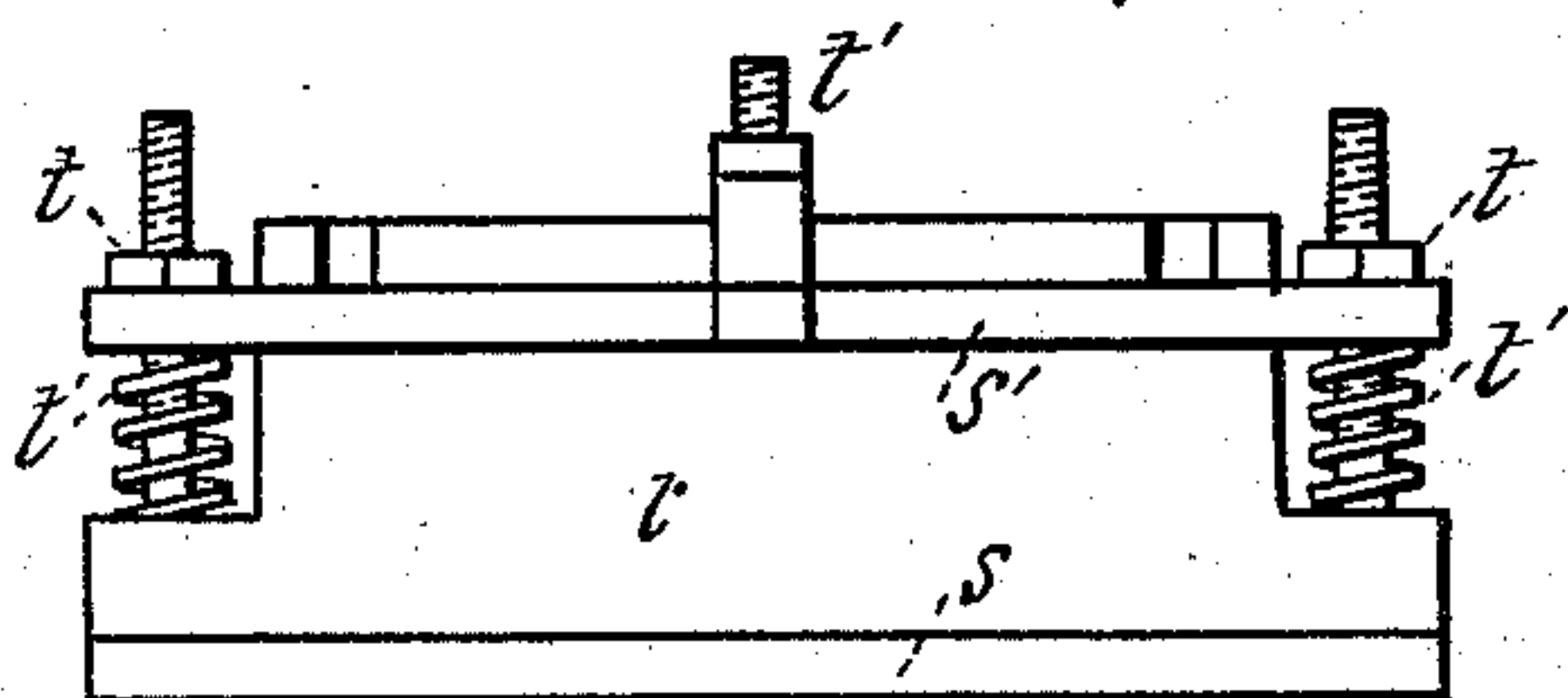


Fig 6.

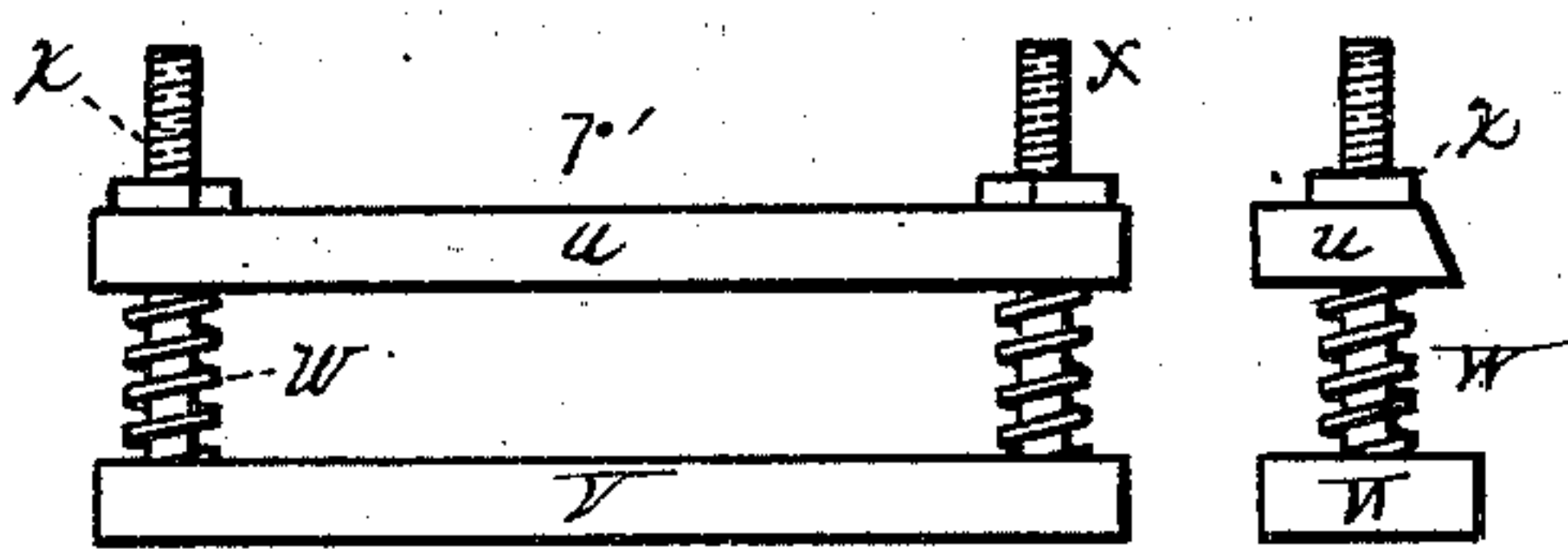


Fig 7.

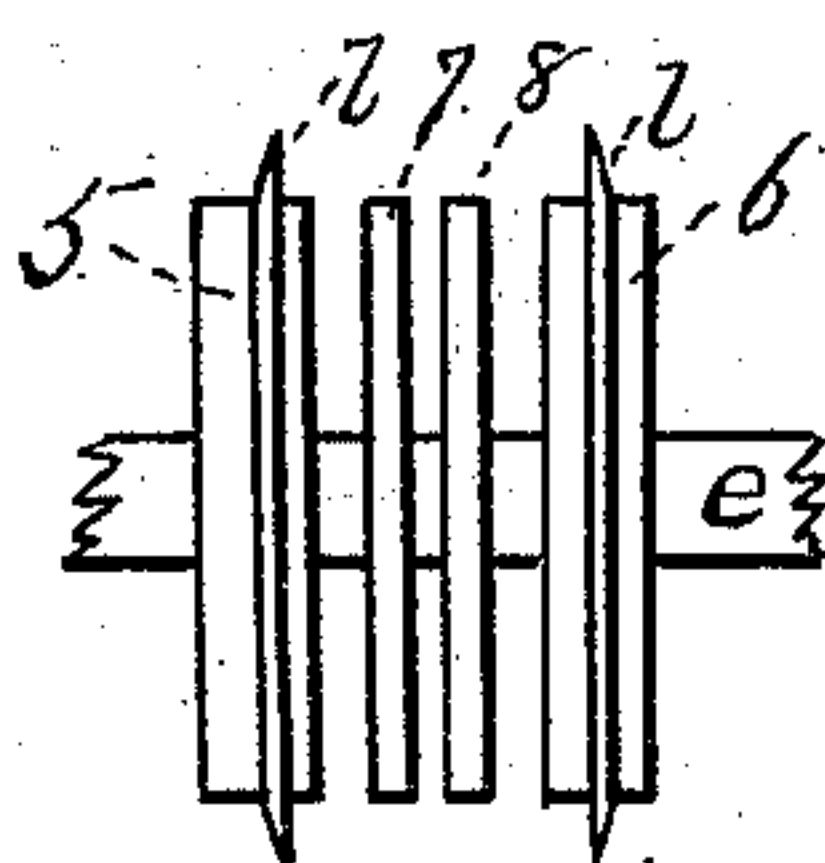


Fig 3.

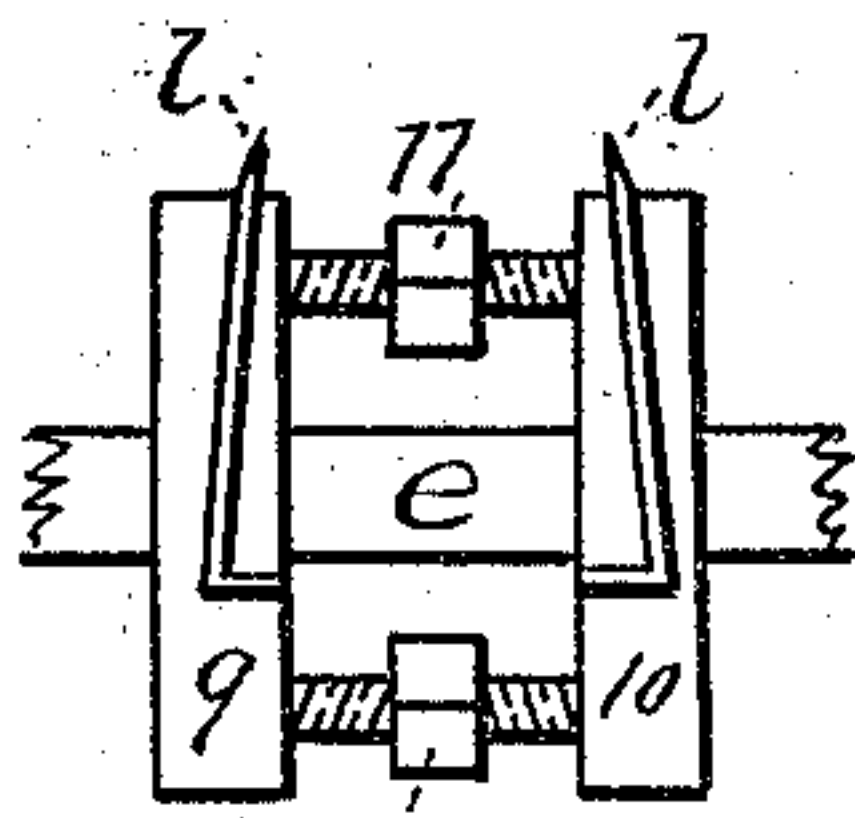


Fig 4.

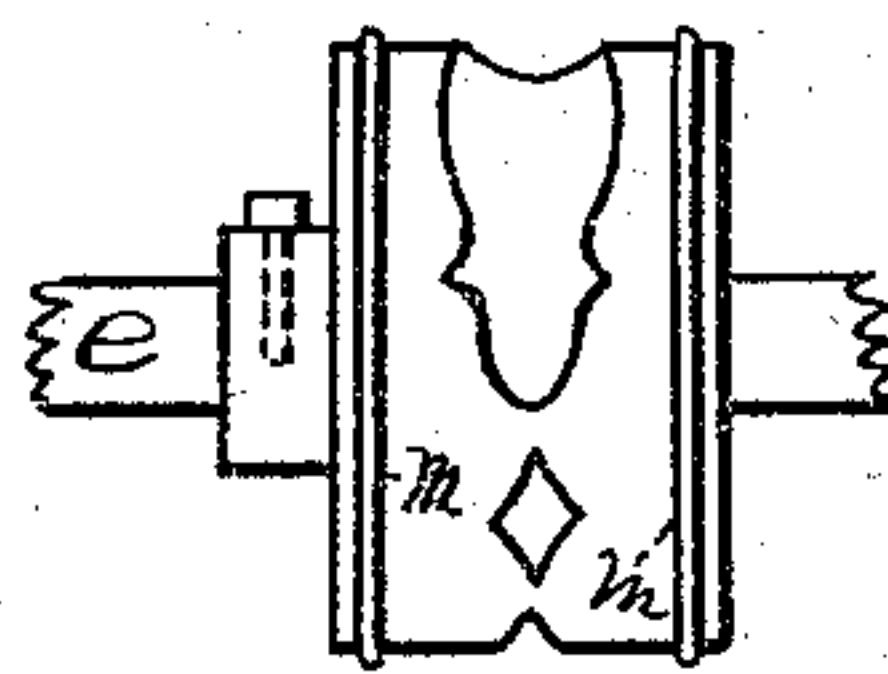


Fig 5.

Witness
J. D. Warren
J. C. Weston

Inventor
Appleton Gould
Per Franklin Leary, Atty.

UNITED STATES PATENT OFFICE.

APPLETON GOULD, OF BANGOR, MAINE, ASSIGNOR OF ONE-THIRD HIS
RIGHT TO DANIEL C. GOULD, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR CUTTING AND EMBOSSING LEATHER.

Specification forming part of Letters Patent No. **152,627**, dated June 30, 1874; application filed
June 3, 1874.

To all whom it may concern:

Be it known that I, APPLETON GOULD, of Bangor, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Machines for Cutting and Embossing Leather, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 shows a front view of my invention; Fig. 2, a side view of depressing devices; Figs. 3, 4, 5, details of cutting and embossing cylinders; Fig. 6, plan of cutting-bed; Fig. 7, plan and section of embossing-bed for box-loops.

Same letters show like parts.

The object of my invention is to facilitate the operations of cutting out and embossing articles of leather and similar material. It is particularly intended for the use of harness-makers, but is capable of application to other purposes. The method usually employed for cutting straps, &c., is to mark the desired pattern upon the surface of the leather, and to cut it by hand. The creasing or embossing is usually done by hand-creasers, and both operations require much time and labor. My device is capable of cutting and embossing at the same time, or of performing either operation separately. It consists of a revolving shaft carrying a cylinder, around the circumference of which are arranged knives capable of cutting out the desired pattern. Under this cylinder is a revolving drum, serving either as a cutting-surface or a rest for a cutting-table. The shaft carrying the cutting-cylinders is so arranged as to be capable of being depressed at will, so as to bring it in contact with the surface of the drum or table, from which it is kept raised when not in use.

Referring to the drawings, *a* shows a bench or table supporting the bed *b* of the machine, which bed is provided with standards *c c* at each end. At the top of these standards are slots *d d*, in which rest the ends of a shaft, *e*, retained therein by means of swinging or removable caps *f f*. These slots allow a down-

ward motion to the shaft *e*, which otherwise is kept pressed up by springs *g g*, or similar devices, resting on supports *h h'* on the standards *c c*. Attached to the shaft *e* at each end, preferably by means of hooks passing over it, are rods *i i*, secured below the bench *a* to a lever, *j*, operated by the foot. This shaft *e* is so arranged as to be capable of receiving a cylinder, *k*, having knives *l* arranged around its circumference; and also, if desired, embossing-stamps *m*. This cylinder is slipped on over the end of the shaft, and secured in place by a nut, *m'*, or similar device. This allows cylinders of different patterns to be substituted at will, the end of the shaft *e* being removed from the boxes for the purpose. Immediately below the shaft *e* is a second shaft, *n*, having thereon a drum, *o*, which may either serve as a bed for the knife or embossing cylinder, or as a rest for a bed placed on it. Said shaft *n* is connected with the shaft *e* by gears *p q*, meshed together when the shaft *e* is drawn down by the foot-lever *j*, so that both cylinder and drum may be revolved simultaneously. Although, as stated, the drum *o* may be used as a cutting-bed, I prefer a bed of the construction shown in Fig. 6, at *r*. This is provided with side pieces *s s'*, one of which, *s'*, is movable, and adjustable by thumb-nuts *t t*, so that the width between the sides may be made to correspond with the width of the cutting or embossing cylinder employed. The leather to be cut is tacked at each end to the bottom of the bed, which is then placed upon the drum. The shaft *e* being then pressed down, the knives are brought to bear on the leather, and the gears *p q* meshed together. The shafts being then revolved, the bed is fed through, and the cylinder *k* on the shaft *e* cuts or embosses the strap or other article of the desired pattern. The movable side *s'* of the bed *r*, in addition to the thumb-nuts and rods *t t*, is provided with springs *t' t'*, keeping it pressed open to such extent as the position of the nuts will allow.

For embossing box-loops, such as are seen on winkers, &c., I use a slightly different form of bed, *r'*. (Shown in Fig. 7.) This has no bottom, the lower part of the loop resting on the drum. It consists of two side pieces, *u v*, hav-

ing springs *w* between them, and provided with rods and thumb-nuts *x x*, by which they may be adjusted to different widths. The lower edge of one of the side pieces *u* is chamfered off to allow the winker to project. The loop being placed between said sides, they are clamped by means of the adjusting-nuts, so as to hold it tightly, and it is then run under an embossing-wheel secured on the shaft *e*. By this means a square corner is secured for the box-loop—a result which it has been heretofore difficult to attain.

The cutting or embossing cylinders may be secured upon the shaft *e* in any convenient way—as, for instance, by making a stationary collar, 1, on said shaft, against which the cylinder may be placed, and providing a screw-thread and nut, 2 3, to retain it in position, or by making a flange on the cylinder, as at Fig. 5, at 4, through which a pin may pass into the shaft.

Modifications of the cylinders are shown in Figs. 3, 4, and 5. Fig. 3 shows a cylinder made in two annular parts, 5 6, having knives attached to each. By this means the width of the strap to be cut may be varied by interposing washers 7 8 between the parts. That shown in Fig. 4 is also made in two parts, 9 10, which are adjustable to different widths by means of right-and-left screws between them. This form leaves the strap partially uncut at the ends. Fig. 5 shows an embossing-cylinder, to which is attached the flange above referred to. These cylinders may be

made of cast-steel, with the knives cast therewith, or of other material, to which the knives may be secured afterward, as desired.

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

1. In a leather cutting and embossing machine, the depressible shaft *e*, provided with a cutting or embossing cylinder, in combination with a drum-carrying shaft, *n*, revolving simultaneously therewith, substantially as and for the purposes set forth.

2. In combination with the depressible shaft, with its cutting or embossing cylinder, and the drum-carrying shaft *n*, the supplemental bed or table *r*, adjustable to different widths of cylinders, substantially as described.

3. In combination with the depressible shaft, with its cutting or embossing cylinder, and the drum-carrying shaft *n*, the adjustable bed or clamp *r'*, for embossing box-loops, &c., arranged and operating substantially as herein described.

4. A cutting-cylinder made in two parts, 5 6, each provided with knives, and adjustable to different widths of straps by right-and-left adjusting-screws between said parts, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of May, 1874.

APPLETON GOULD.

Witnesses:

D. C. GOULD,

WM. FRANKLIN SEAVEY.