

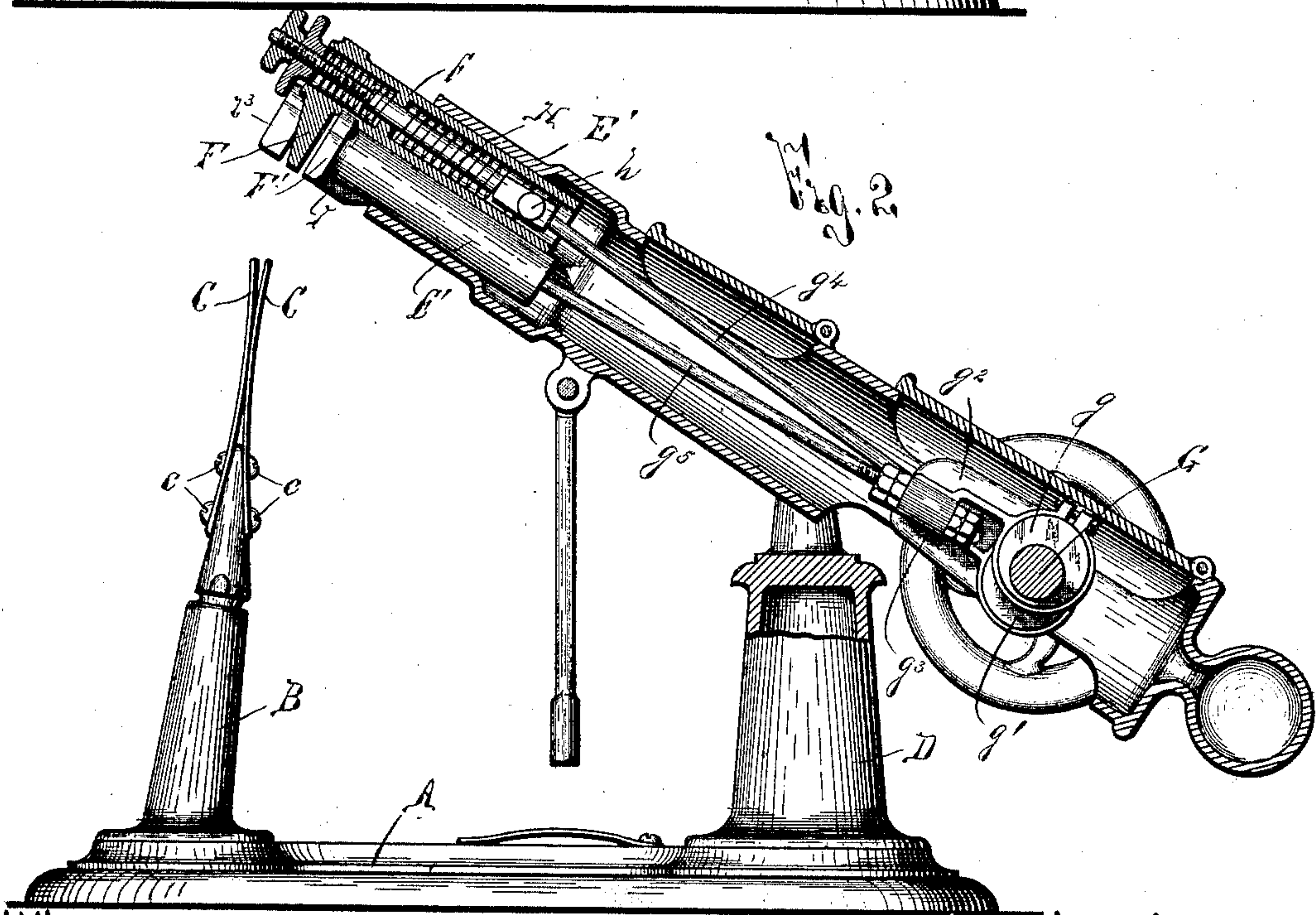
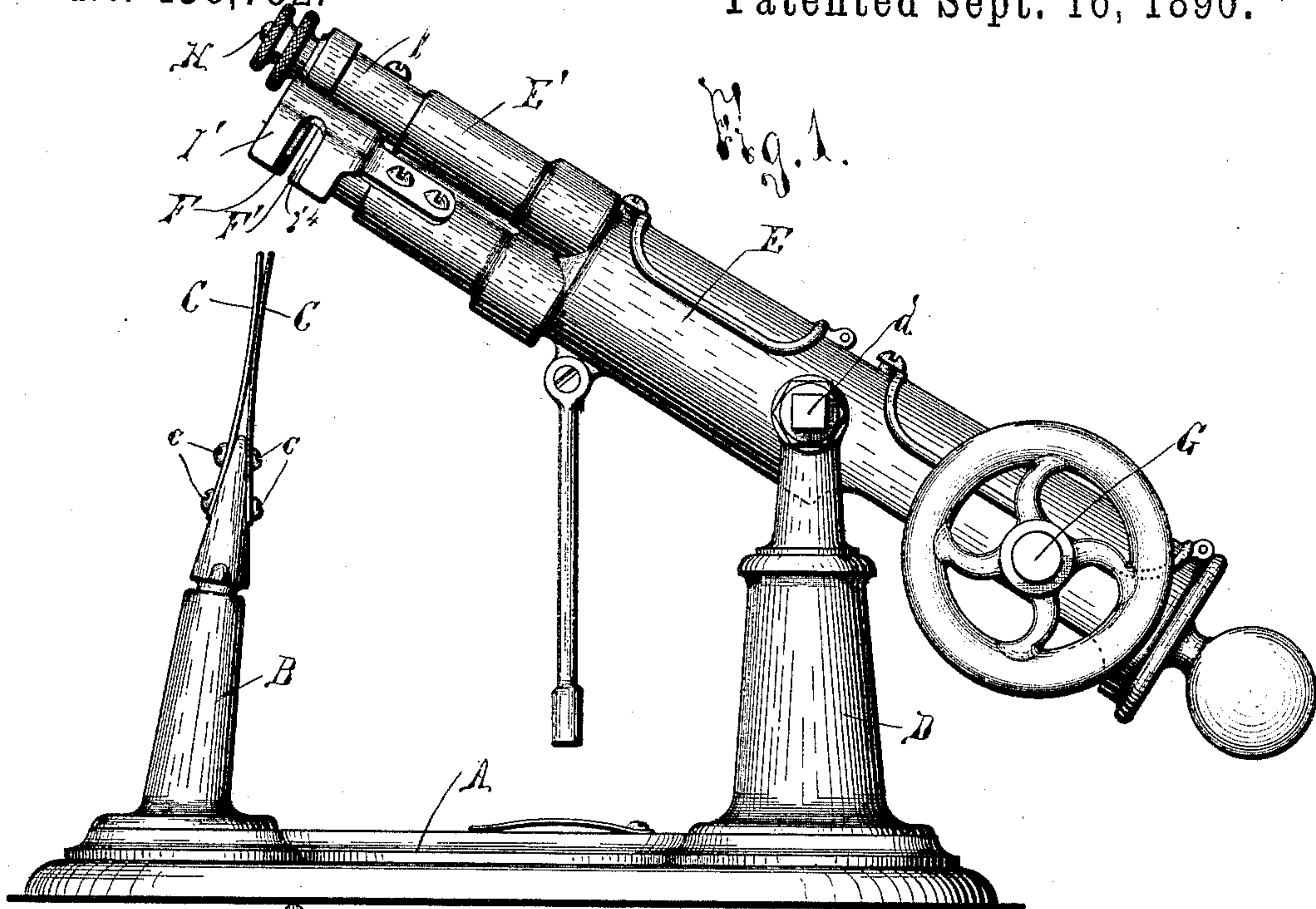
(No Model.)

2 Sheets—Sheet 1.

C. W. COLLYER.
LEATHER BEADING MACHINE.

No. 436,752.

Patented Sept. 16, 1890.



Witnesses
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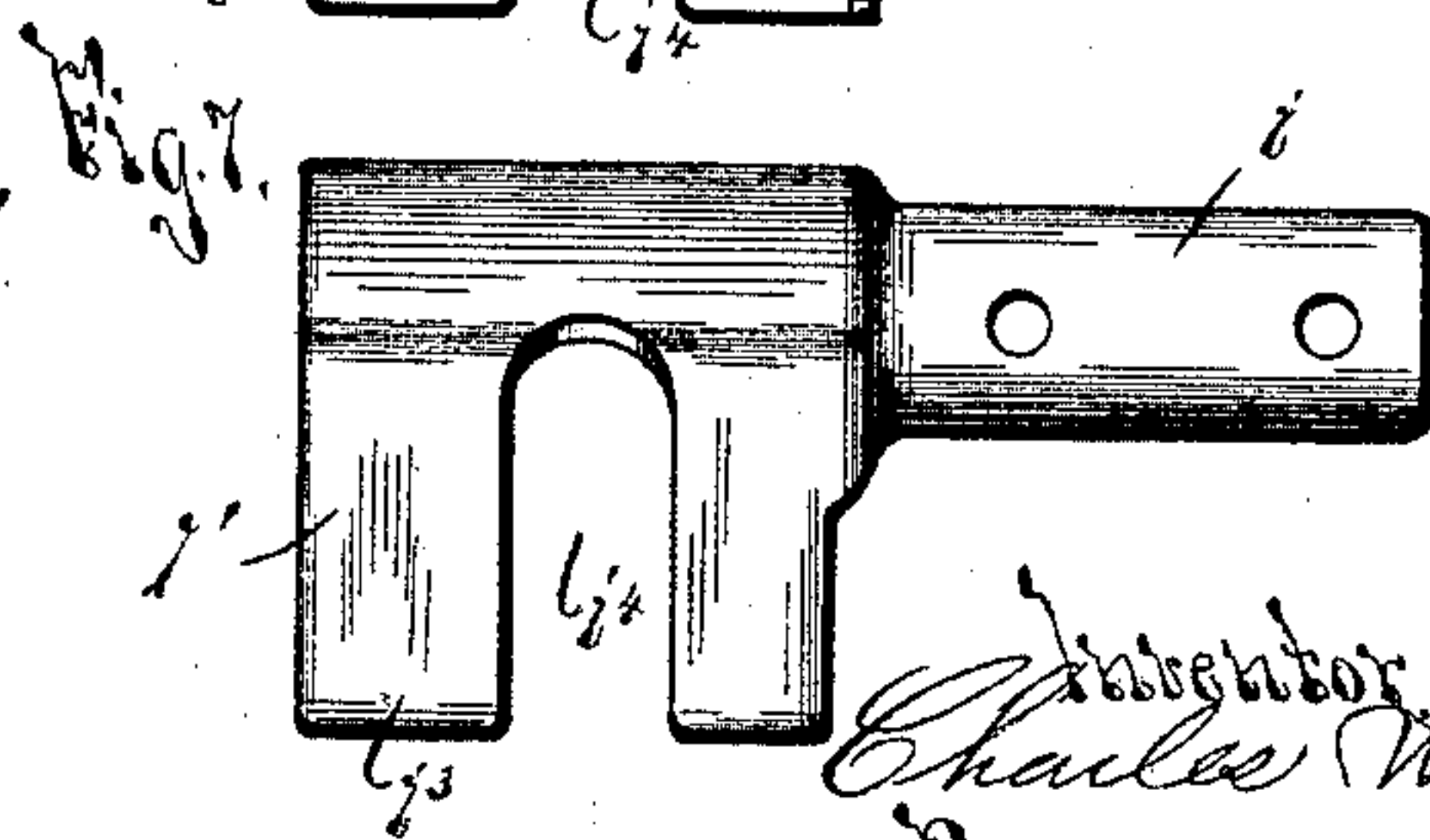
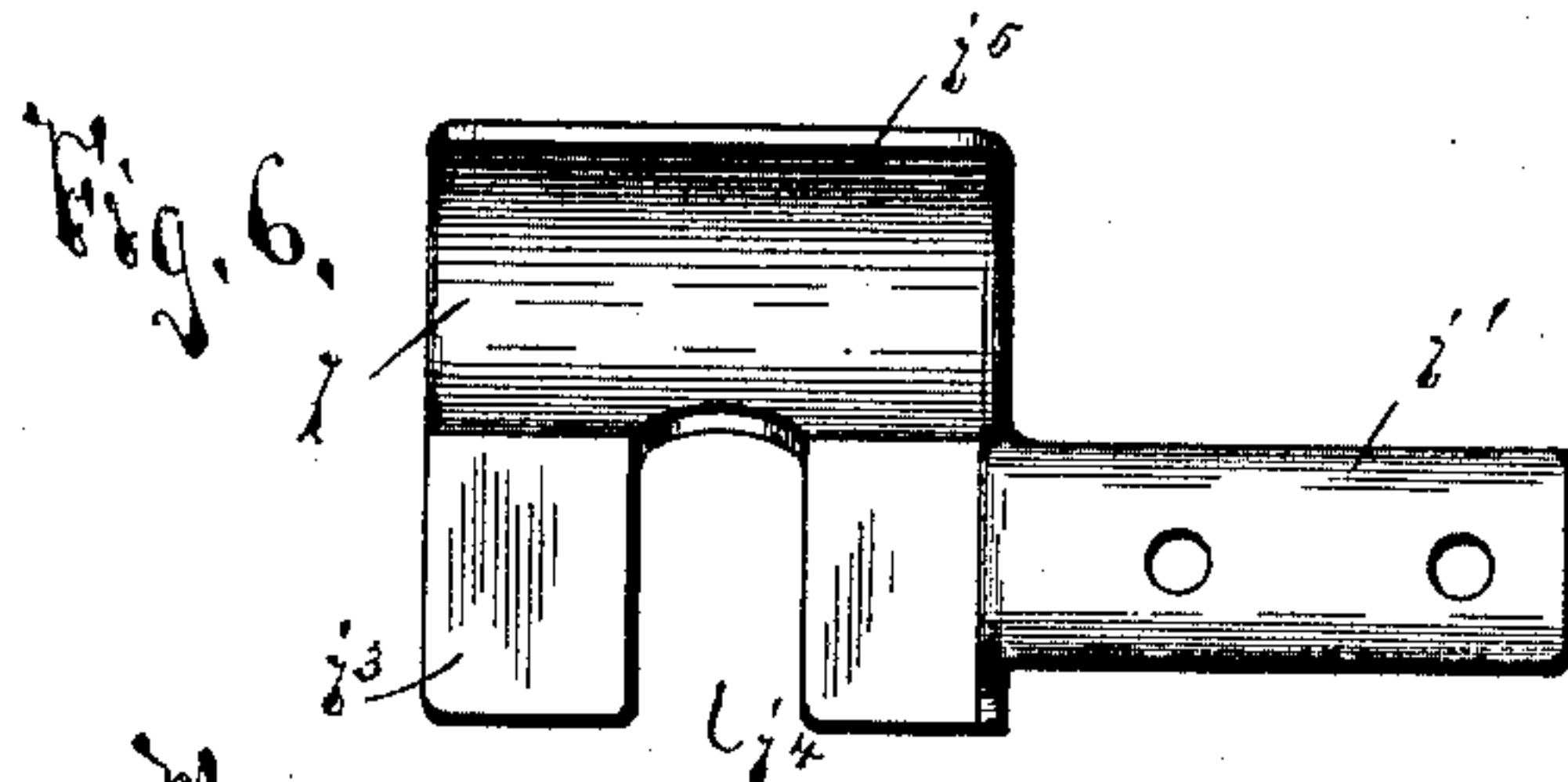
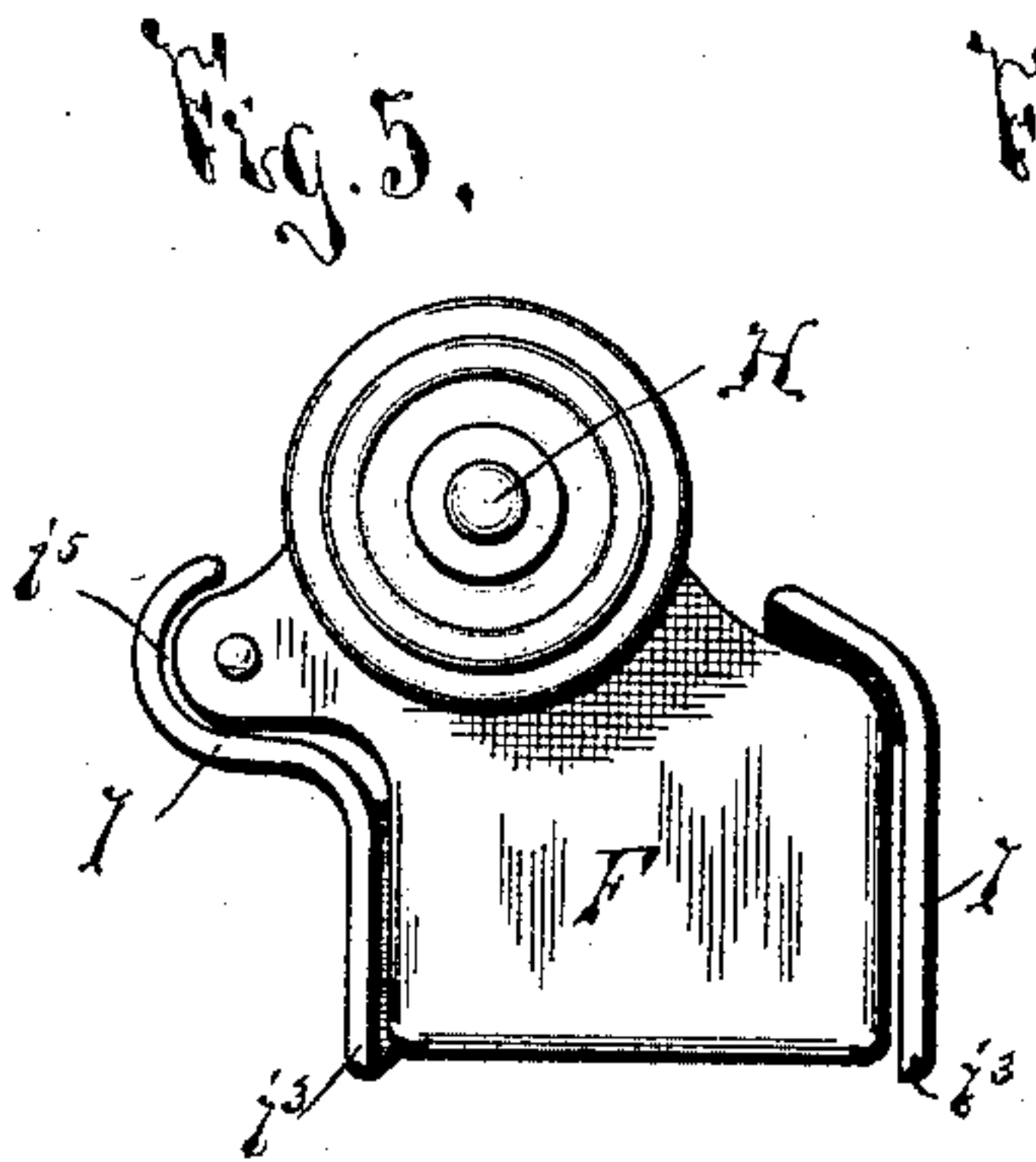
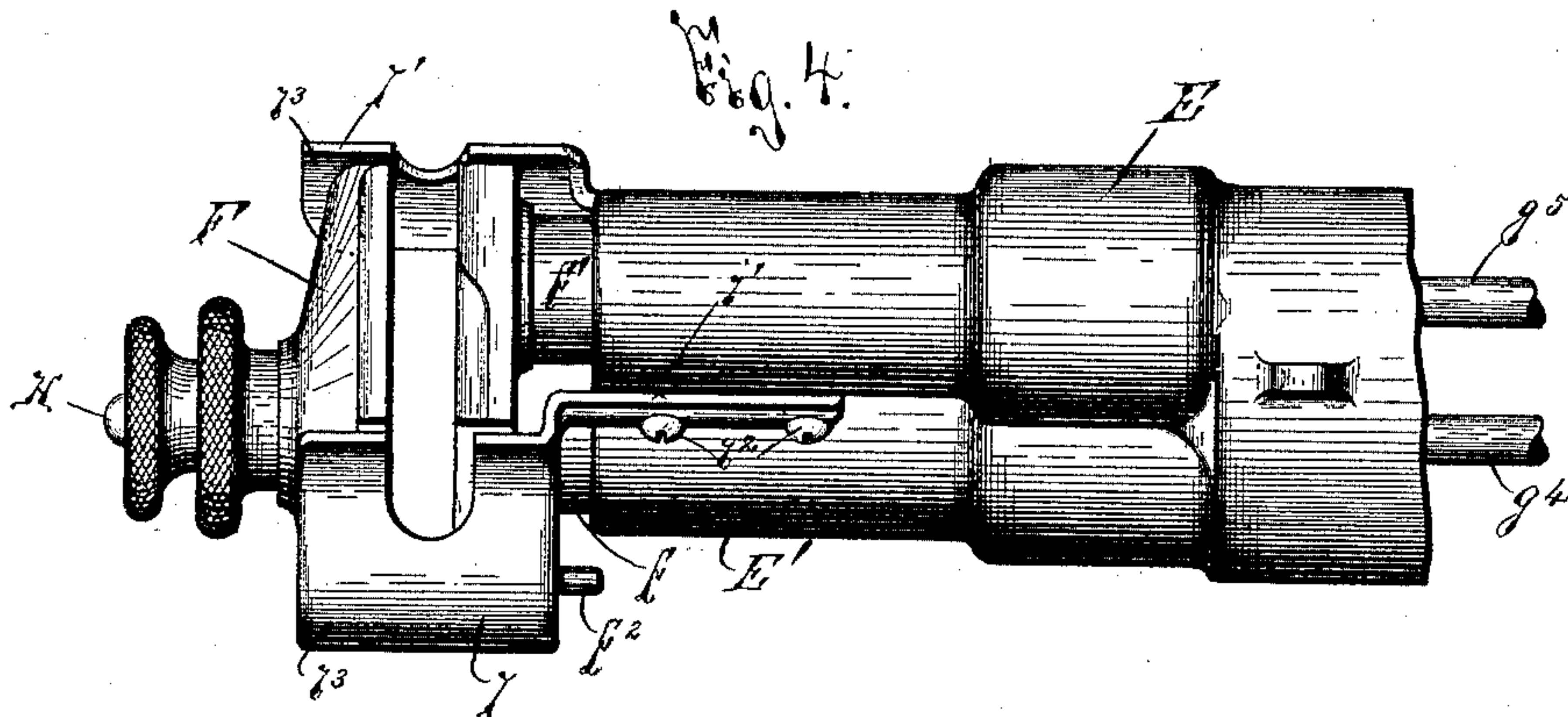
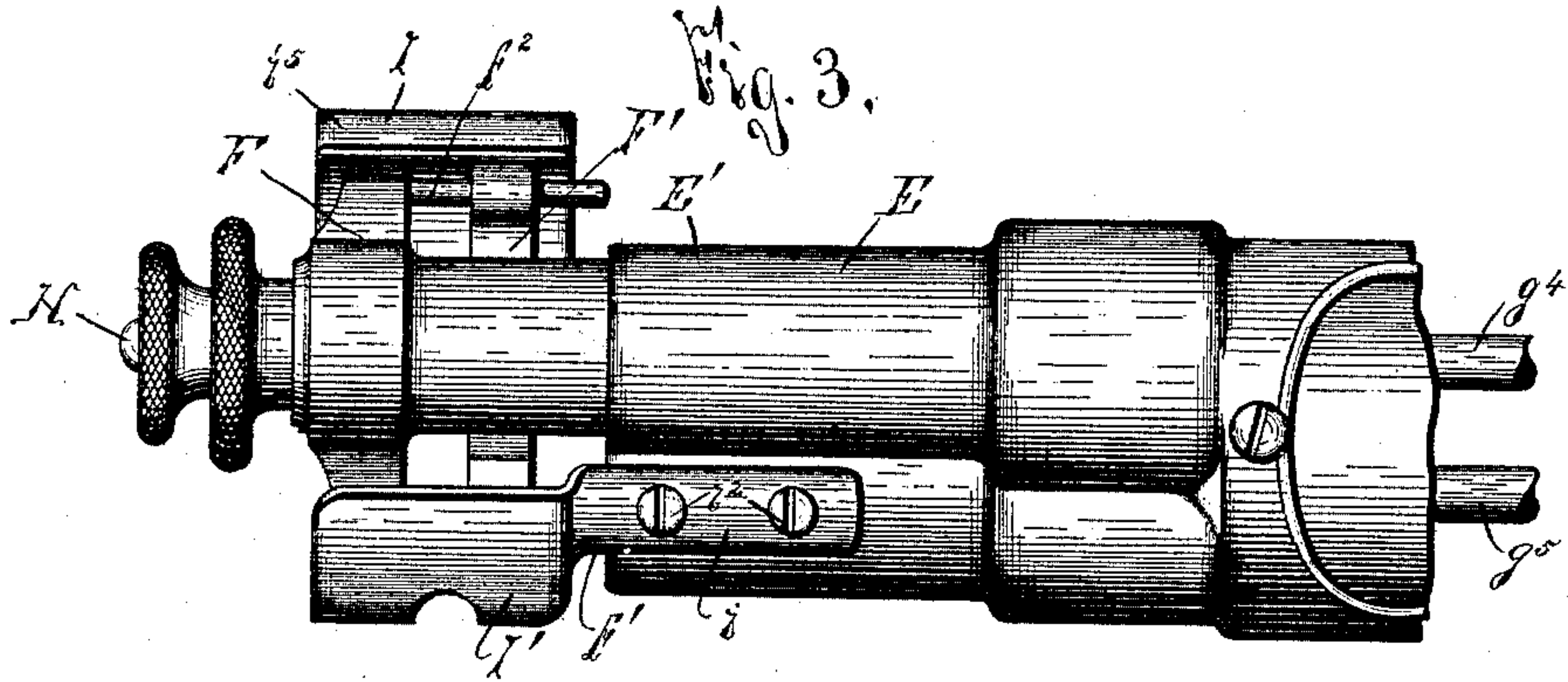
(No Model.)

2 Sheets—Sheet 2.

C. W. COLLYER.
LEATHER BEADING MACHINE.

No. 436,752.

Patented Sept. 16, 1890.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES W. COLLYER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THE ROCHESTER LASTING MACHINE COMPANY, OF ROCHESTER, NEW
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LEATHER-BEADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 436,752, dated September 16, 1890.

Application filed June 26, 1890. Serial No. 356,858. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. COLLYER, of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented new and useful Improvements in Beading-Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in machines for beading shoe-uppers, and has for its object the production of a simple and effective device, whereby in the operation of the machine all liability of injury to the operator's hands is entirely obviated; and to this end the invention consists, essentially, in a movable jaw or jaws for compressing the seam and a guard at one side of said jaw for preventing contact of the operator's fingers with the jaw.

The invention also consists in an opening or slot leading from one edge of the guard to receive the shoe-upper, and in the detail construction and arrangement of the parts, all as hereinafter more particularly described, and pointed out in the claims.

In describing my invention reference is had to the accompanying drawings, forming a part thereof, in which like letters indicate corresponding parts in all the views.

Figure 1 represents an elevation of a beading-machine constructed in accordance with my invention. Fig. 2 represents a like elevation, partly in section, to that illustrated in Fig. 1. Fig. 3 is a top plan view of the detached compressor-jaws and the guards mounted on either side thereof. Figs. 4 and 5 are respectively inverted plan and front elevation of the parts as illustrated in Fig. 3. Fig. 6 is an elevation of the inner side of one of the guards, and Fig. 7 is an elevation of the outer side of the opposite guard.

The base A of the beading-machine is of desirable form, size, and construction, and is here illustrated as provided at one extremity with the upwardly-extending arm or beading-standard B. The upper extremity of this standard is adapted to support the turned-over seam of the shoe-upper during its compression by the compressor-jaws, as hereinafter described, and as preferably constructed

said upper extremity of the beading-standard is composed of separable halves or irons C, suitably secured at *c* to the lower extremity of the beading-standard.

Extending upwardly from the frame or base A at its opposite extremity is the supporting-standard D, to which at *d* is pivoted the movable arm E, provided with one or more jaws F and F' for compressing the seam on the beading-standard B.

Journaled at the rear extremity of the arm E is a shaft G, mounted upon which are the separate eccentrics *g* and *g'*, connected by suitable eccentric-straps *g*² and *g*³ to the connecting-links *g*⁴ and *g*⁵. The connecting-link *g*⁴ is pivoted at *h* to a sliding rod H, which carries the forward movable jaw F and preferably passes through a rearward extension *f*, formed upon said jaw and guided in the bearing E' of the arm E. The other link *g*⁵ is suitably connected to the rear extension *f'* of the jaw F'.

It will thus be understood that when the arm E is rocked on its pivot *d* the upper extremity of the beading-standard registers with the opening between the compressor-jaws, and when power is transmitted to the shaft G by suitable mechanism, not necessary to herein describe, said jaws are operated to compress the seam in the shoe-upper upon the beading-standard.

As thus far described my invention is very similar in construction to the devices set forth in the Patents No. 318,731 to C. B. Hatfield and No. 344,435 to Q. W. Booth. In the practical operation of the beading-machines set forth in the aforesaid patents I have found that, owing to the necessity of constantly feeding the uncompressed portion of the shoe-upper to the compressor-jaws, there is great liability of the operator's fingers being caught between the said compressor-jaws.

In order to sufficiently compress the seam of the shoe-upper and afford the desired finish, these compressor-jaws move very quickly and are brought together positively with a great degree of force. Accordingly when a finger is caught between the same the nail is entirely torn therefrom or the extremity of the finger is seriously smashed, and indeed the injury to the operator, in addition to be-

ing extremely painful and a serious detriment to the universal use of the machine, often effects a permanent injury.

The object of my invention is to entirely obvi-
 5 ate this liability of injury to the operator's fingers, and accordingly I provide a guard or guards at one side of the compressor-jaws F and F', whereby contact of the operator's fingers with said jaws is absolutely prevented.
 10 Moreover, by the use of these guards and the absolute obviation of injury the operator is free to apply his whole attention to feeding the shoe-upper through the machine, and, owing to his absolute safety from injury, can feed
 15 the shoes more quickly than would be the case if he were compelled to take great care in not approximating his fingers too closely to the compressor-jaws.

The guards I and I' may be of suitable form, size, and construction required by the particular construction of beading-machine to which they are designed to be attached. With the construction of machine illustrated the guards are preferably two in number, and are
 25 secured at their rear extremities *i i'* to the arm E by suitable securing means *i²*. Formed in the forward extremity *i³* of the guards is the slot *i⁴*, extending upwardly from their lower edge and aligned with the opening between the compressor-jaws, whereby when the
 30 arm E is swung into operative position the slot *i⁴* is registered with the upper extremity of the beading-standard and enables the shoe-upper to readily pass therethrough. It will
 35 be understood, however, that this slot is preferably of less width than the operator's fingers, in order that the obviation of contact with the compressor-jaws may be more certain.

Upon reference to Figs. 3 and 5 it will be noted that formed upon the forward jaw F is a guide-pin *f²*, and that the upper extremity
 40 *i⁵* of the guide I is extended upwardly and around said guide-pin for preventing contact of outside articles and of the operator's fingers with said guide-pin.

Although I have shown my invention in use upon a machine in which both jaws are movable, it is obvious that the same is equally
 50 applicable where but one jaw is movable and the other stationary, and it is equally obvious that, instead of approximating the jaws to the upper turning extremity of the beading-standard, the said upper extremity of the beading-

standard might be movable and be approximated to the jaws. 55

The operation of my invention will be readily perceived from the foregoing, and it will be understood that without perceptibly increasing the cost of the beading-iron I obviate
 60 all liability of injury to the operator and at the same time enable the operator to do more and better work than would otherwise be possible.

It is evident that the particular form of compressor-jaw, beading-standard, and guard may be somewhat varied from the precise form and construction shown and described without essentially departing from the spirit of my invention. 70

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a beading-machine, the combination of a movable beading-jaw and a guard at one side of said jaw, said guard having an opening extending from its edge inwardly to admit the article to be beaded, substantially as and for the purpose set forth. 75

2. In a beading-machine, the combination of a frame, a jaw movably mounted on said frame, and a pair of guards having one extremity secured to said frame and the other projecting on opposite sides of said jaw and each provided with an opening extending from their edge inwardly to admit the article to be beaded, substantially as and for the purpose specified. 80

3. In a beading-machine, the combination of a frame, a jaw movably mounted on said frame, a guide for said movable jaw, a pair of guards having one extremity secured to said frame and the other projecting on opposite sides of said jaw and each provided with an opening extending from its edge inwardly to admit the article to be beaded, and an upward extension on one of said guards extending on one side of said guide, substantially as and for the purpose specified. 85 90 95

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, this 9th day of June, 1890. 100

CHARLES W. COLLYER.

Witnesses:

CHAS. C. BRADFORD,
 ALEXANDER RICKEY.