

No. 687,752.

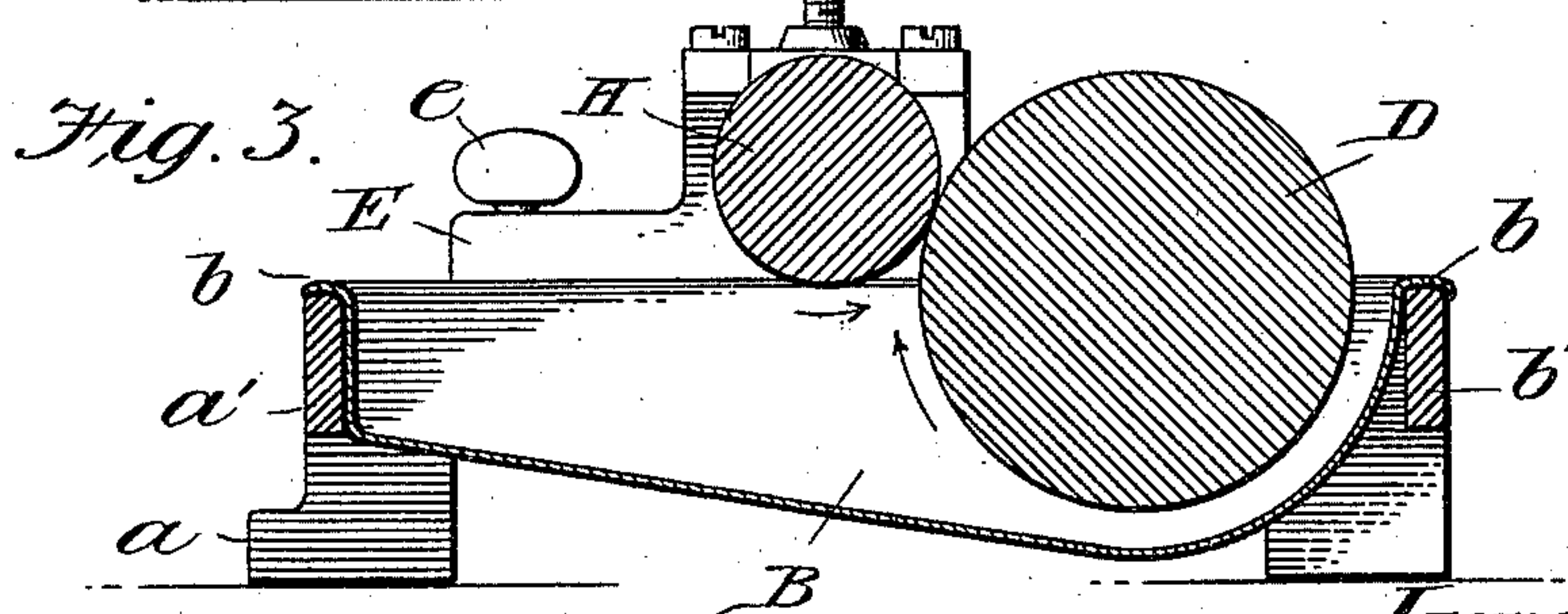
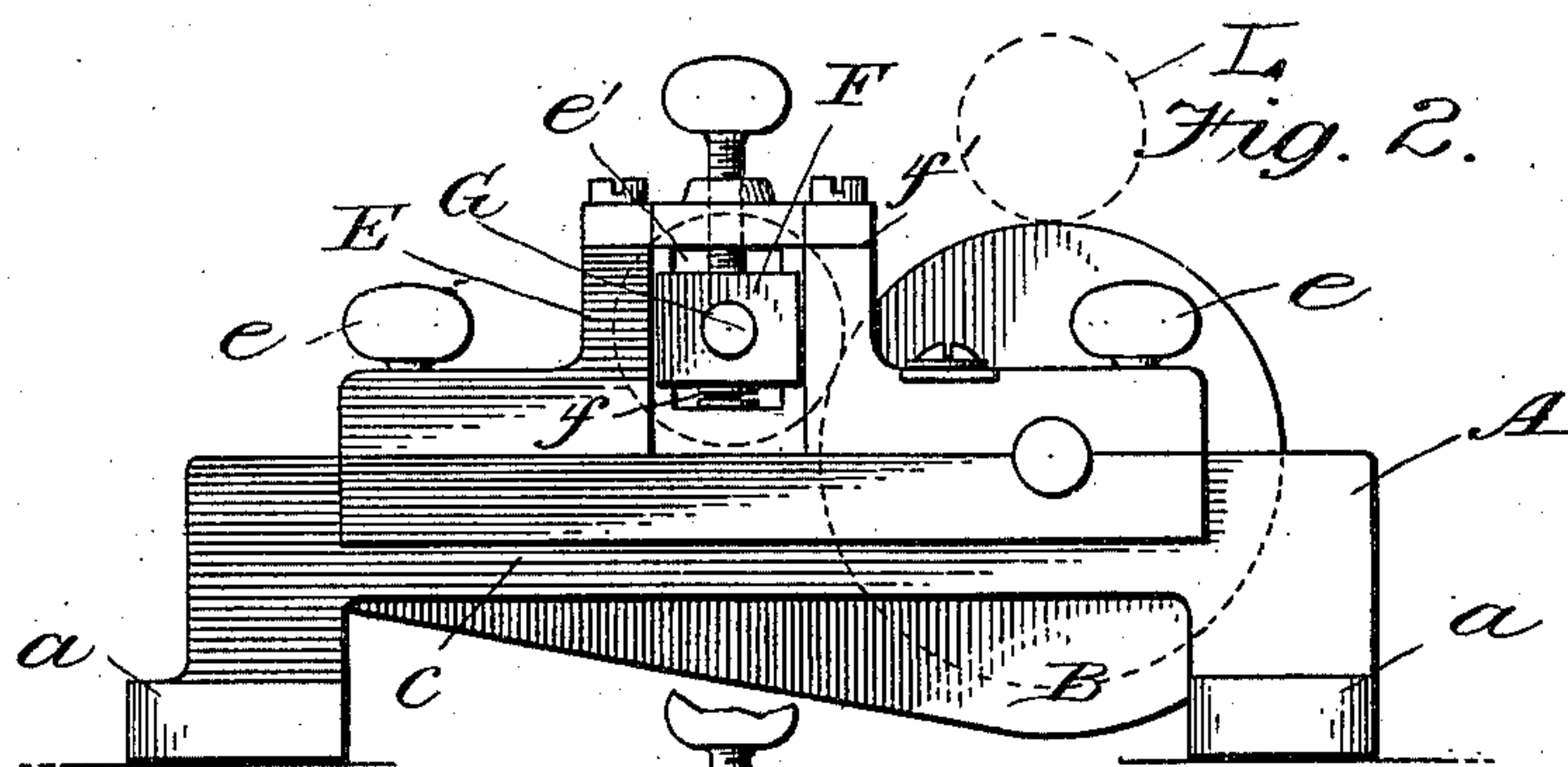
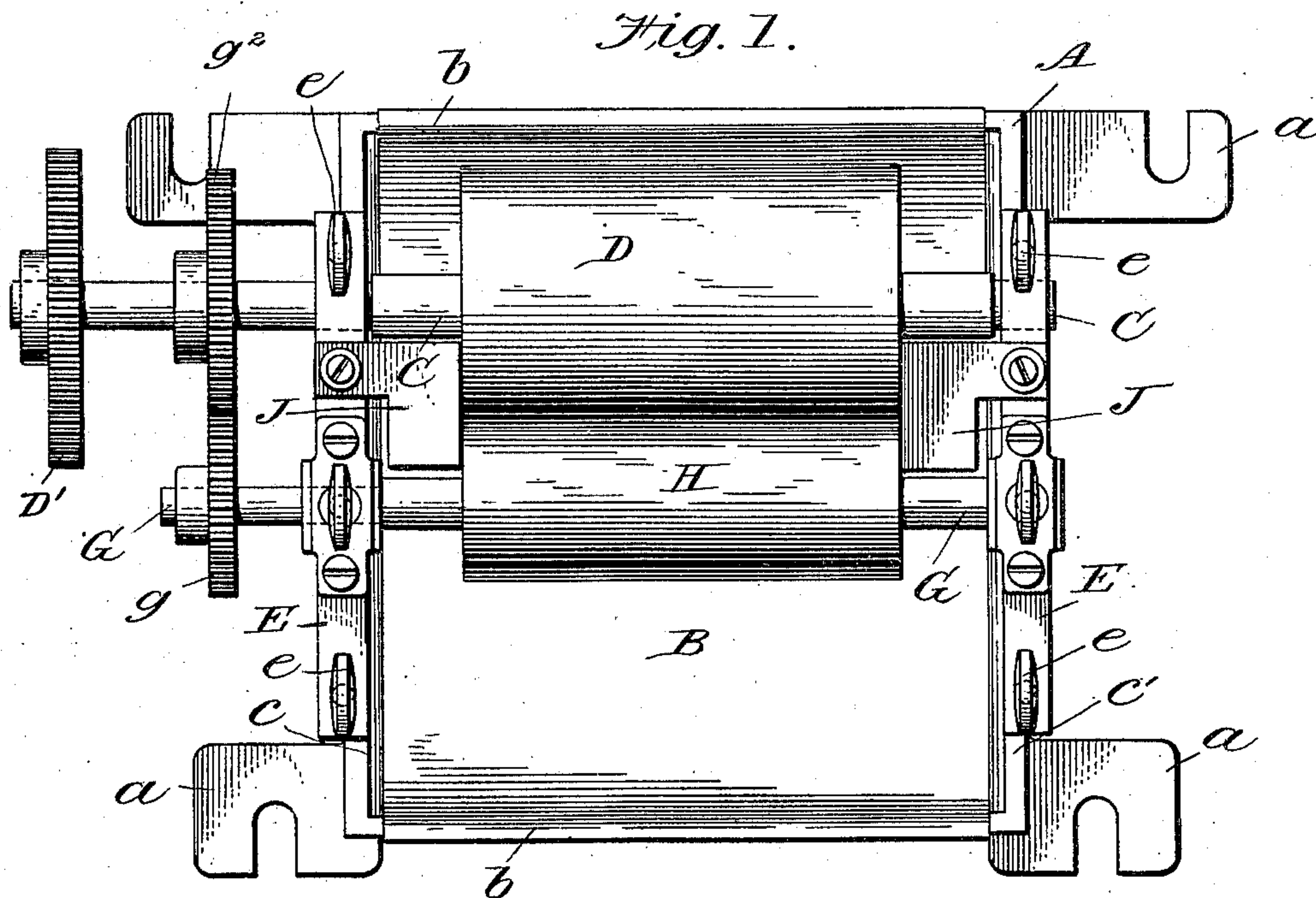
Patented Dec. 3, 1901.

H. S. HEWSTON.

INK FOUNTAIN FOR STAMPING AND EMBOSsing PRESSES.

(Application filed June 12, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

HOWARD S. HEWSTON, OF CAMDEN, NEW JERSEY, ASSIGNOR TO CARVER AND SWIFT STAMPING PRESS AND MANUFACTURING COMPANY, A CORPORATION OF NEW JERSEY.

INK-FOUNTAIN FOR STAMPING AND EMBOSSING PRESSES.

SPECIFICATION forming part of Letters Patent No. 687,752, dated December 3, 1901.

Application filed June 12, 1900. Serial No. 20,070. (No model.)

To all whom it may concern:

Be it known that I, HOWARD S. HEWSTON, a citizen of the United States, and a resident of the city of Camden, State of New Jersey, have invented certain new and useful Improvements in Ink-Fountains for Embossing and Stamping Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in ink-fountains for stamping, embossing, and other printing presses; and it consists in the construction substantially as herein set forth.

The object of my invention is to provide a simple and convenient device for machines of the character above noted for holding and mixing and grinding the ink and applying the same to the die-roller; also, to provide a construction and arrangement of rollers adapted to run at different speeds and to act as grinders and scrapers, having means for adjusting the relative positions of said rollers.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference are used to designate similar parts, Figure 1 is a plan view of a device constructed in accordance with my invention. Fig. 2 is a side elevation of the same, and Fig. 3 is a cross-section taken about centrally through the rollers.

In the said drawings, A designates the supporting-frame, having the foot-flanges *a*, by means of which it may be secured to the frame of a printing or embossing press.

B designates the removable ink-pan, which is provided with flanges *b*, which are supported on the front and rear cross-bars *a'* and *b'* of the frame A.

Journaled in the side walls *c* and *c'* of the supporting-frame is a shaft C, carrying the ink mixing and distributing roll D, which is driven by means of a gear D', secured on the extending end of the shaft C, said gear being connected in any suitable manner with the driving-shaft of the press.

The supplemental frames E are provided on top of the side walls *c* and *c'*, which are removably secured to said side walls by

means of the thumb-screws *e*. These frames E are provided with recessed central portions *e'*, in which slide the adjustable boxes F, in which is journaled the shaft G, which carries the grinding and scraping roller H. The boxes F are supported by a stiff coil-spring *f*, which is seated in a recess formed in the bottom of the recess *e'*. A cap or plate *f'* is provided over the recess *e'*, having a central threaded aperture through which passes the screw *h*, the lower end of said screw bearing against the top of the journal-box F, and by means of which the position of roller H may be adjusted.

On the projecting end of the shaft G is secured a gear *g*, which meshes with a larger gear *g'*, carried by the shaft C, so that as shaft C is driven motion is transmitted to the shaft G and roller H. The gear *g* is larger in diameter than the diameter of the roller H, and the gear *g'*, which meshes with gear *g*, is larger than said gear *g*, but smaller in diameter than that of the roller D. The object in having these gears of different diameters to the rollers is for the purpose of gaining different circumferential speeds to the two rollers in order that the grinding effect between the said rollers may be accomplished.

On each side of the rollers D and H is a plate J, secured to the side frames E by means of screws or otherwise, the inner edges of each plate bearing against the edges of said rollers, as illustrated in Fig. 1 of the drawings, the purposes of which are to serve as a guard or fender and prevent the ink which accumulates on the sides of the rollers from splashing as the rollers revolve, these plates also serving to scrape the ink from the ends of the rollers.

In the operation of my device the removable pan B is partially filled with the ink to be used and the roller D is partially immersed in the same. As this roller D revolves through the medium of its gear connection with the driving-shaft of the press the ink is agitated, and thereby kept in a thoroughly-mixed condition, and the ink which adheres to said roller during its revolution is ground by the contact of the auxiliary roller H, which revolves in an opposite direction with respect to

the roller D. The gear g^2 being of a smaller diameter than the roller D and the inter-meshing gear g being of a larger diameter than the roller H causes the two rollers to
 5 move at different speeds, the roller H revolving much faster than the roller D. This produces a grinding effect between the two rollers, and as the roller D takes up the ink from the pan it will be thoroughly ground between
 10 these two rollers and all lumps and hard particles removed. The roller H also acts as a scraper, causing a portion of the ink adhering to roller D to drop back into the fountain, while a thoroughly mixed and ground coating
 15 is left on said roller to be transferred through the medium of a third roller to the die. This roller is a flexible roller made of a yielding material, such as that known as "printers' composition," and is mounted
 20 on a pivoted arm or holder which swings during the operation of the machine, coming in contact with the roller D at the end of its movement in one direction and passing over the die or form in its movement in the other
 25 direction, thus freshly supplying ink to the form before each impression is taken. The adjustable bearings provided for the auxiliary roller H permit of its being adjusted either closer to or farther away from the
 30 grinding and mixing roller D, thus regulating the amount of ink admitted between these two rollers.

When it is desired to remove the pan B, the screws e in the supplemental frames E
 35 are unscrewed and these frames removed, together with the rollers D and H.

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

40 1. An inking-fountain for embossing and other printing presses comprising a pan adapted to hold the ink, a mixing-roller extending into the pan for agitating and taking up the ink, a grinding-roller located above the ink-
 45 receptacle, and means for driving the two rollers in direction opposite to each other so that their meeting surfaces travel in the same direction at different rates of speed to produce a grinding effect between the said
 50 rollers.

2. An inking-fountain for embossing and other printing presses comprising a pan adapt-

ed to hold the ink, a mixing-roller extending into the pan for agitating and taking up the ink, a grinding-roller located above the ink-
 55 receptacle, a gear provided on the mixing-roller of a diameter different from the diameter of said roller, and a gear on the shaft of the grinding-roller different in diameter than that of said grinding-roller, whereby a differ-
 60 ent rate of speed is attained to produce a grinding effect between the two rollers.

3. An inking-fountain for embossing and other printing presses comprising a pan adapted to hold the ink, a mixing-roller extending
 65 into the pan for agitating and taking up the ink, a grinding-roller located above the ink-receptacle, a gear provided on the mixing-roller of a diameter different from the diameter of said roller, a gear on the shaft of the
 70 grinding-roller different in diameter than that of said grinding-roller, whereby a different rate of speed is attained to produce a grinding effect between the two rollers, and means for adjusting the contact of the two
 75 rollers, D and H for the purpose of regulating the amount of ink which passes between them.

4. In an inking-fountain, for embossing and other printing presses the combination
 80 of a main supporting-frame, A, a removable ink-pan, B, suspended on said frame, supplemental frames, E, removably secured to the side walls of the main frame, a mixing-roller, D, journaled in the frame adapted to
 85 extend into the ink-pan, means for driving the said roller, a grinding-roller, H, located above the ink-pan, gearing between the roller, D and the roller, H, whereby the said rollers are driven at a different circumferential speed
 90 in opposite directions, an adjustable bearing for the roller, H, so that the said roller may be adjusted with respect to the roller, D, to regulate the supply of ink admitted between the two rollers, and scraping-plates, J, se-
 95 cured to the supporting-frame and bearing against the ends of each roller, D and H, for the purpose described.

In witness whereof I have hereunto set my hand this 1st day of June, A. D. 1900.

HOWARD S. HEWSTON.

Witnesses:

CHARLES N. SPECKMAN,
 HORACE PETTIT.