

W. F. Goulding, Horseshoe Machine,

N^o 54,631.

Patented Aug. 28, 1866.

Fig. 3.

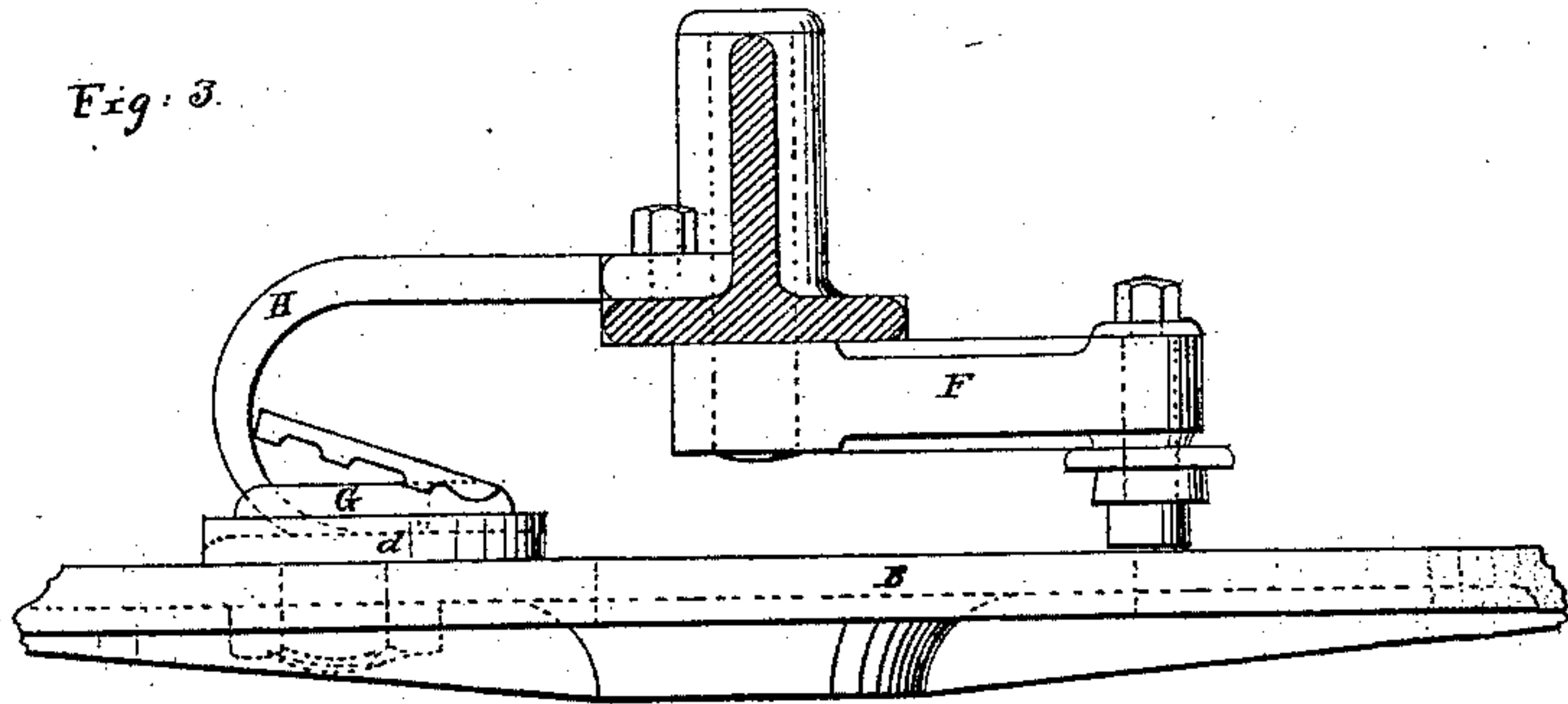


Fig. 2.

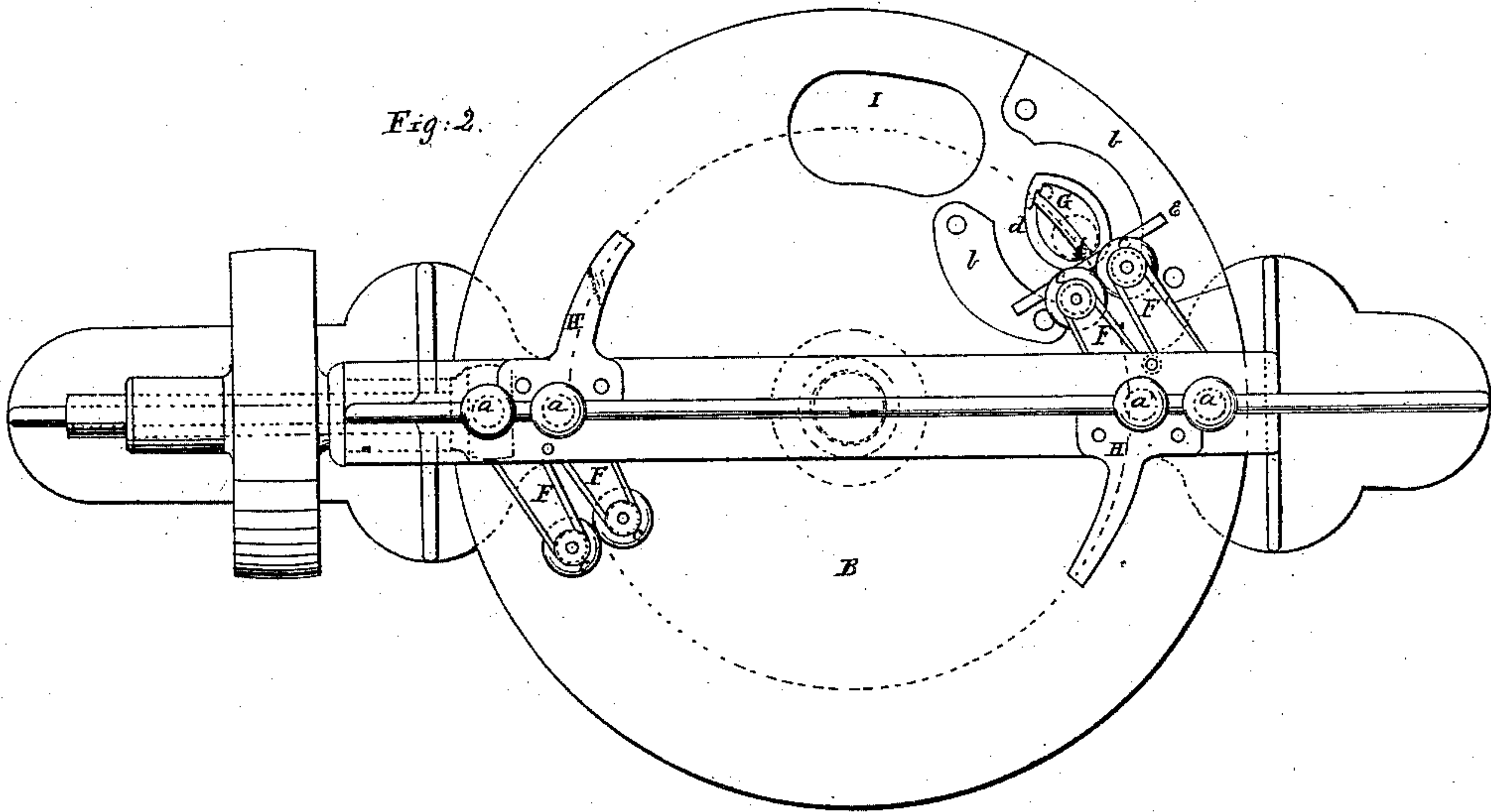
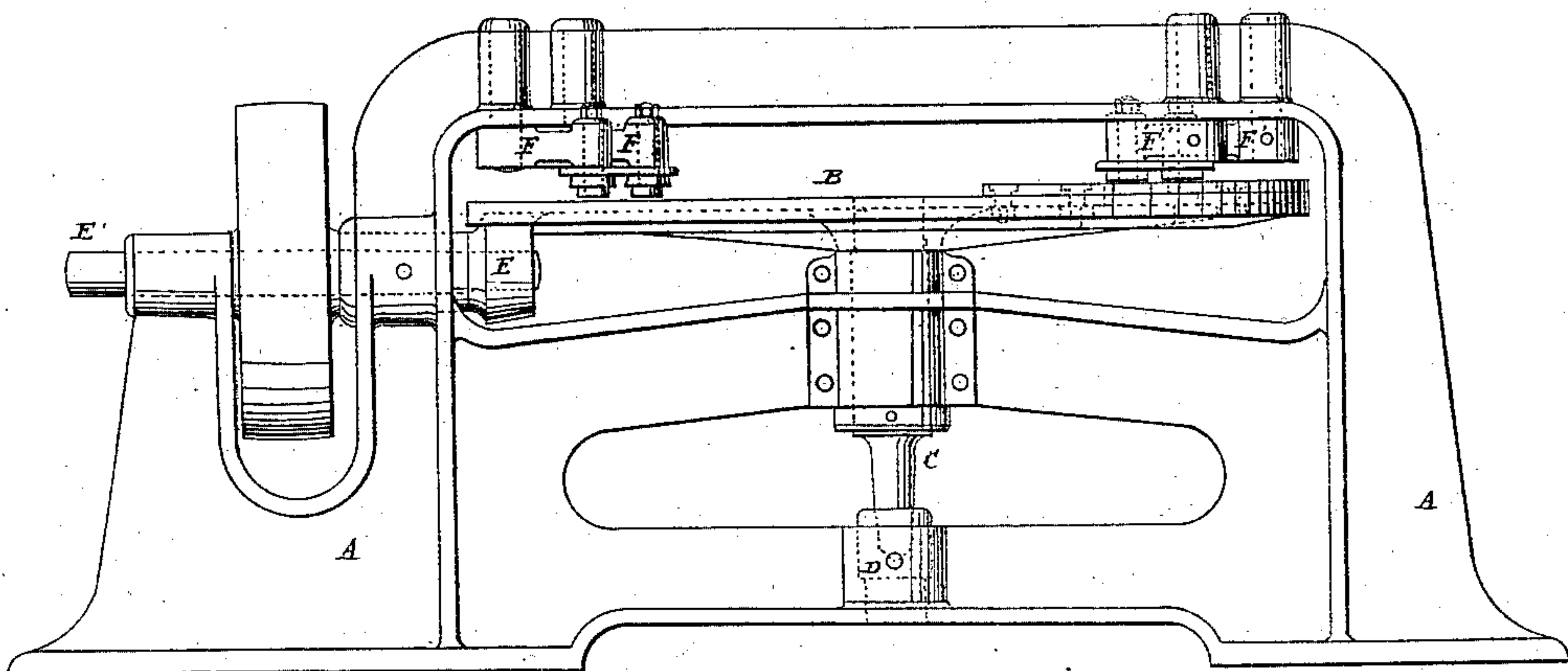


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM F. GOULDING, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO
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MACHINE FOR BENDING HORSESHOES.

Specification forming part of Letters Patent No. 57,631, dated August 28, 1866.

To all whom it may concern:

Be it known that I, WILLIAM F. GOULDING, of the city and county of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Machines for Bending Horseshoes; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a side elevation. Fig. 2 is a top view. Fig. 3 is a view in section.

In the accompanying drawings, A is the frame of the machine, the sides of which, at the top and at the bottom, may be tied together for greater strength and for convenience in mounting some of the operating parts.

B is a revolving bed, which is capable of turning in a plane parallel with that of the horizon, and is supported by a spindle, C, which has its step at D in the bottom rail of the lower cross-tie of the frame. This bed receives its motion from the bevel-gear wheel E in the driving-shaft E', the teeth of which gear-wheel engage with the teeth of a corresponding bevel-gear upon the lower surface of the bed B.

F F and F' F' are respectively two pairs of benders, which, in this instance, consist of arms hinged to the upper cross-tie of the frame, as shown at *a a a' a'*.

In combination with each pair of benders are guide-plates *b b*, the inner edges of which correspond with the outline of the outer edge of the forming-block G, and against which guide-plates on the one side and the edge of the base of the forming-block on the other friction-wheels *c c* on the ends of the benders F F bear, so that as the bed-plate revolves the said benders will, when in contact with the guide-plates, describe a figure corresponding with that of the outline of the forming-block.

The forming-blocks consist of raised pieces of metal of the size and general shape of a horseshoe.

The portion G, around which the shoe is formed, is placed upon a base, *d*, Fig. 3, of the

same shape as the forming-block, but extending beyond the edge of the latter, so as to form a ledge of the same height above the table B as the guide-plates *b b*, and upon which ledge the shoe-blank rests while being shaped.

The blanks having been first creased and cut into proper length are heated and placed, one by one, in front of the forming-block, as shown at E, Fig. 2, and the table B set in motion, when it will necessarily follow that the rollers upon the arms of the benders will bend the blank around the edge of the former.

For the purpose of removing the shoe from the former I attach to the cross-tie of the frame, so as to overhang each forming-block in its path of travel, a hooked finger, H, and, as its point extends below the lower surface of the blank, a channel, *f*, is cut in the block G to allow the table to revolve without being obstructed by such finger; and I also make, directly in the rear of the block, but on the circle which the point of the hook will describe upon the surface of the table as the latter revolves, an opening, I, through which the shoe will fall after the hooked finger has, in the course of the revolution of the table, raised it off the former and tilted it, as shown in Fig. 3.

Although my machine is designed specially for the bending of horseshoes, it is equally adapted to bend bars of iron for other purposes, the forming-block and guide-plates being made with reference to the shape of the article to be bent.

I am aware that horseshoes have, before my invention, been shaped upon a revolving cylinder by means of a forming-block placed thereon in combination with suitable benders; but in such instances the shoe requires to be flattened after coming from the machine, in order to deprive it of the curved form which it receives from being bent upon a cylindrical surface. I do not, therefore, claim, broadly, any revolving bed in combination with suitable bending devices for shaping a horseshoe; but

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

1. The revolving flat bed or table B, provided with suitable forming-blocks G, and guides *b b*, in combination with suitable stationary bending-instruments F F, arranged substantially as described, for the purposes specified.

2. The combination of the stationary finger

H with the forming-block G and the said revolving bed B, arranged substantially as described, for the purposes specified.

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Witnesses:

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