

(No Model.)

M. M. SMITH.

DIE HOLDER AND STRAIGHTENING DEVICE FOR WIRE NAIL MACHINES.  
No. 379,735.

Patented Mar. 20, 1888.

Fig. 1.

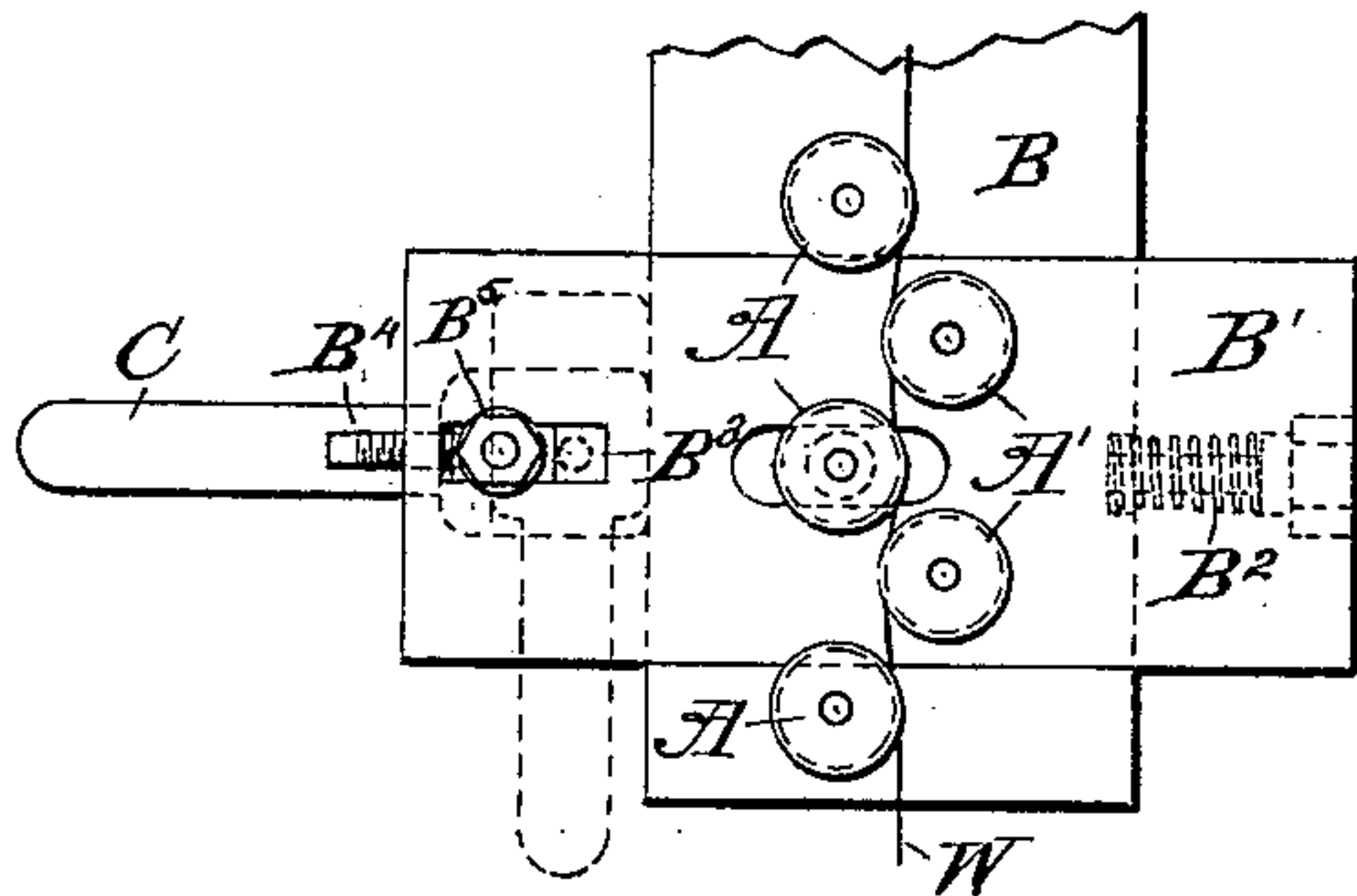


Fig. 2.

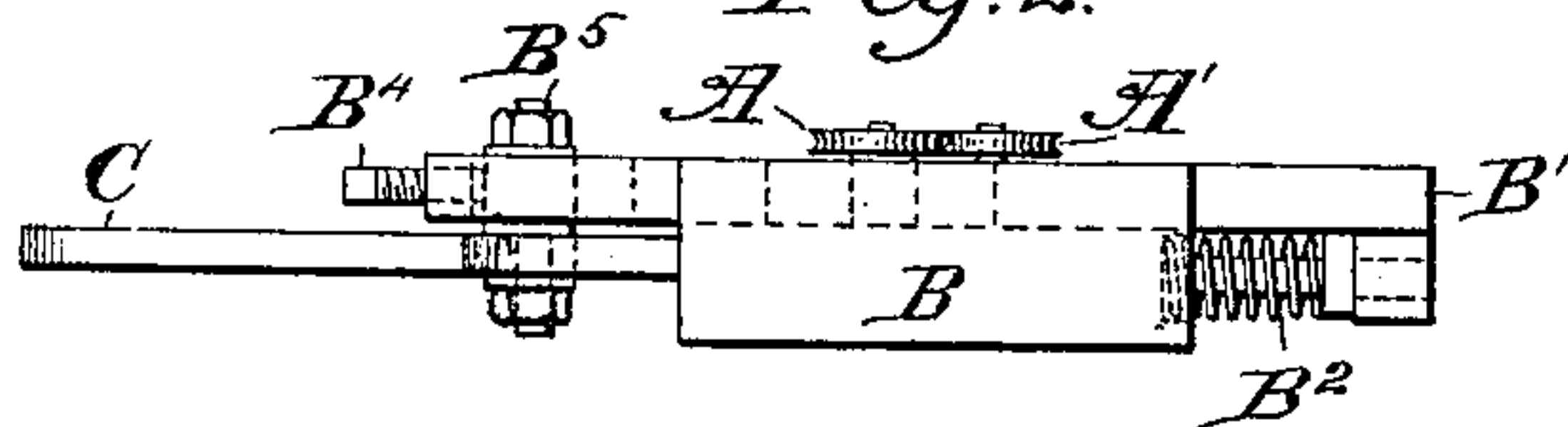


Fig. 3.

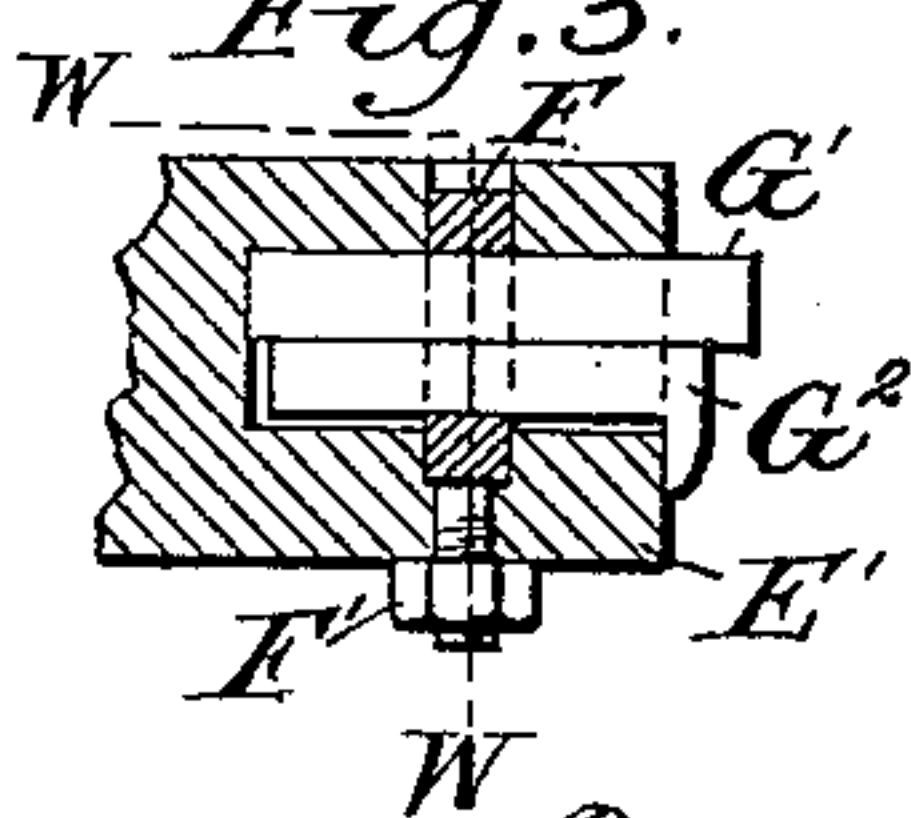


Fig. 4.

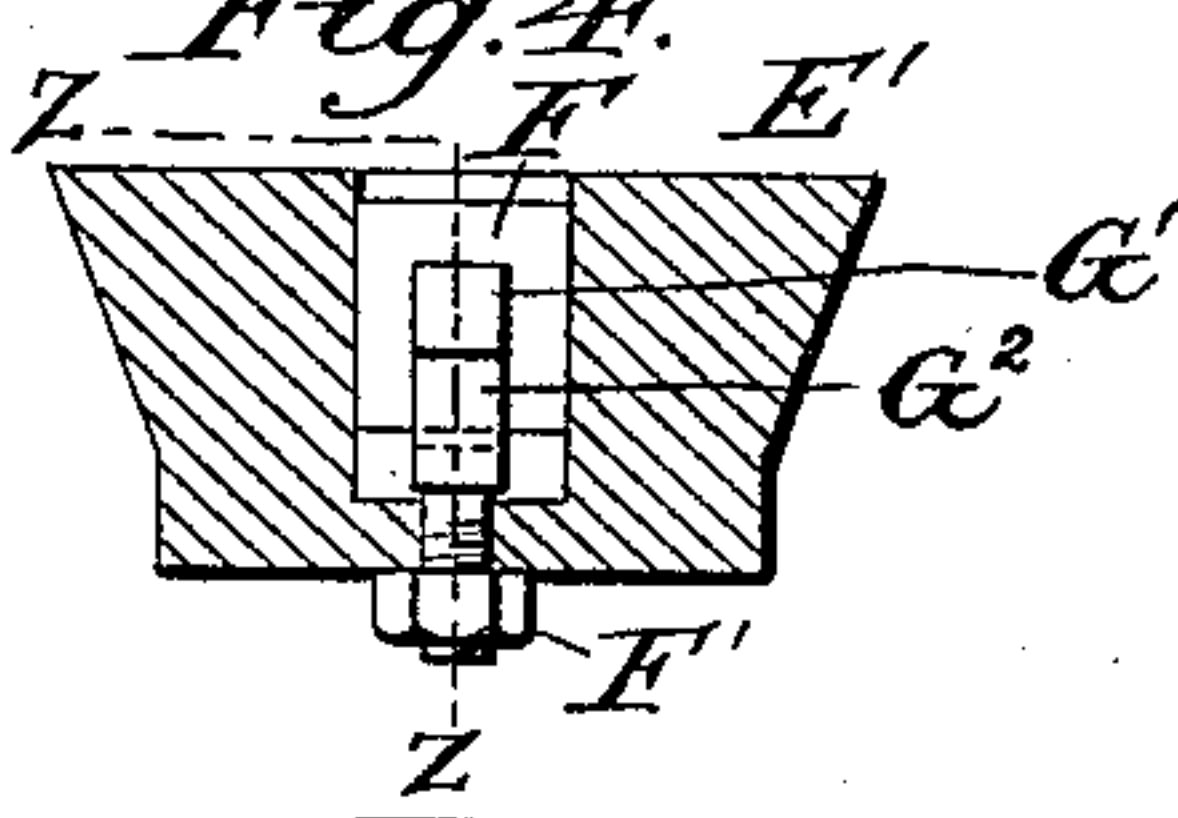


Fig. 5.

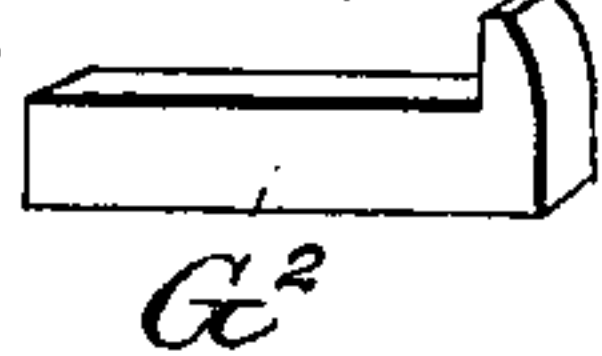
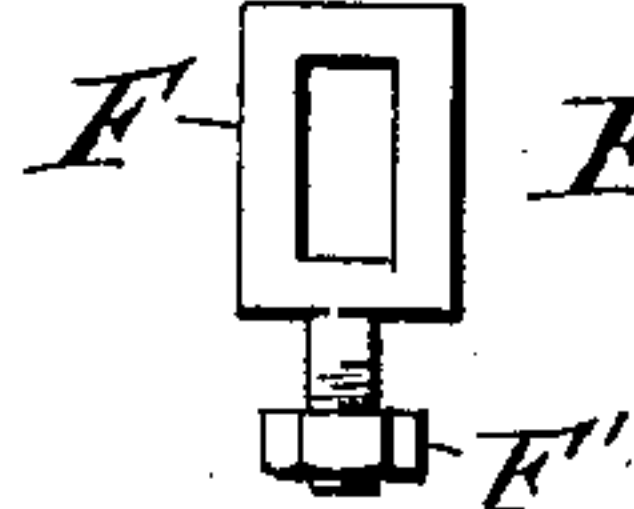


Fig. 6.



Witnesses:

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# UNITED STATES PATENT OFFICE.

MINARD M. SMITH, OF NEW YORK, N. Y.

DIE-HOLDER AND STRAIGHTENING DEVICE FOR WIRE-NAIL MACHINES.

SPECIFICATION forming part of Letters Patent No. 379,735, dated March 20, 1888.

Application filed May 31, 1887. Serial No. 239,926. (No model.)

*To all whom it may concern:*

Be it known that I, MINARD M. SMITH, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Wire-Nail Machines, of which the following is a specification.

My invention relates especially to those wire-nail machines in which the wire is seized by dies or grippers and held while being cut by other cutting-dies, or headed by the heading-die, or straightened, as in the machine patented by Hassall and Smith, No. 319,485, dated June 9, 1885, and others upon which the present invention is an improvement; and my invention consists of devices for holding and securing the gripping and cutting-off dies in their respective die-blocks, which are simple, effective, and not expensive to make, but at the same time are easy and quick of adjustment when it is necessary to change from a larger to a smaller wire, or vice versa, as in making different sizes of nails.

My invention consists of such devices and of the straightening mechanism of such machines as shall enable the operator to open the straightener and to close and secure it with facility, as when inserting the end of a fresh coil of wire, or to adjust it quickly and securely, as when changing the size of the wire, as described.

In the accompanying drawings, Figure 1 is a plan view of the straightener. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional view of the cutting-off block, taken on line Z Z of Fig. 4. Fig. 4 is a sectional view on line W W of Fig. 6. Fig. 5 is a perspective view of a detail. Fig. 6 is a detail of the clamp-bolt.

The same letters refer to the same parts throughout.

In this invention the wire is straightened by passing between grooved rolls A A', placed so as to force the wire to assume a waved line in passing. For this purpose the rolls A A' are placed in line on one side of the wire and a little distance apart, being fitted to run freely upon studs or shafts secured to the bed-plate B, while the rolls A' A' are placed upon the opposite side of the wire in position alternate to the rolls A A', and are fitted to run freely upon studs or shafts secured to the plate B', which is fitted to slide freely in a track provided for that purpose across the line of the

wire, bringing the rolls A' partly between the rolls A, as shown in Fig. 1.

The carriage B' is actuated and held in place by means of the cam-lever C, which forces the rolls A' against the wire W; or, if it is desired to open the straightener to facilitate the entrance of a fresh coil of wire, the cam-lever being swung around to the position C', a spring, B<sup>2</sup>, throws the carriage B' back, opening the straightener.

To enable the pressure of the rolls A' upon the wire W to be adjusted as desired for different sizes of wire, the cam-lever C is provided with a stud upon which it revolves, and which can be adjusted in a slot, B<sup>3</sup>, of the carriage B' by means of a screw, B<sup>4</sup>, and secured by the binding-nut B<sup>5</sup>, as shown.

The improvement in securing the cutting-off dies G' consists in securing them in the die-blocks E' by means of the clamp-bolts F, gib G<sup>2</sup>, and nut F', which draw the gib and dies back against the blocks E'. The object attained by the use of the gib G<sup>2</sup> is to not only re-enforce the die G' and distribute the pressure of the bolt F' upon the die-block E', but also to facilitate the placing and removing the cutting-die G', as occasion requires, as the removal of the gib G<sup>2</sup> leaves increased room in which to turn the die G'.

Having thus described the nature and use of my invention, I claim—

1. In a wire-nail machine, the combination of the straightening-rolls A A', bed-plate B, and carriage B', with the adjustable cam-lever C and spring B<sup>2</sup>, constructed and operated as and for the purposes herein shown and described.

2. In a wire-nail machine, the adjusting-screw B<sup>4</sup>, in combination with the carriage B', the bolt B<sup>5</sup>, and the plate B, cam-lever C, and slot B<sup>3</sup>, substantially as and for the purposes herein shown and set forth.

3. In a wire-nail machine, the combination of the die-block E' and clamp-bolt F' with the die G' and gib G<sup>2</sup>, constructed and operated substantially as and for the purposes herein shown and set forth.

Signed at New York, in the county of New York and State of New York, this 26th day of May, A. D. 1887.

MINARD M. SMITH.

Witnesses:

WM. H. HASTINGS,  
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