(No Model.)

W. BILLINGS.

APPARATUS FOR BENDING METAL STRIPS.

No. 352,909. Patented Nov. 23, 1886.

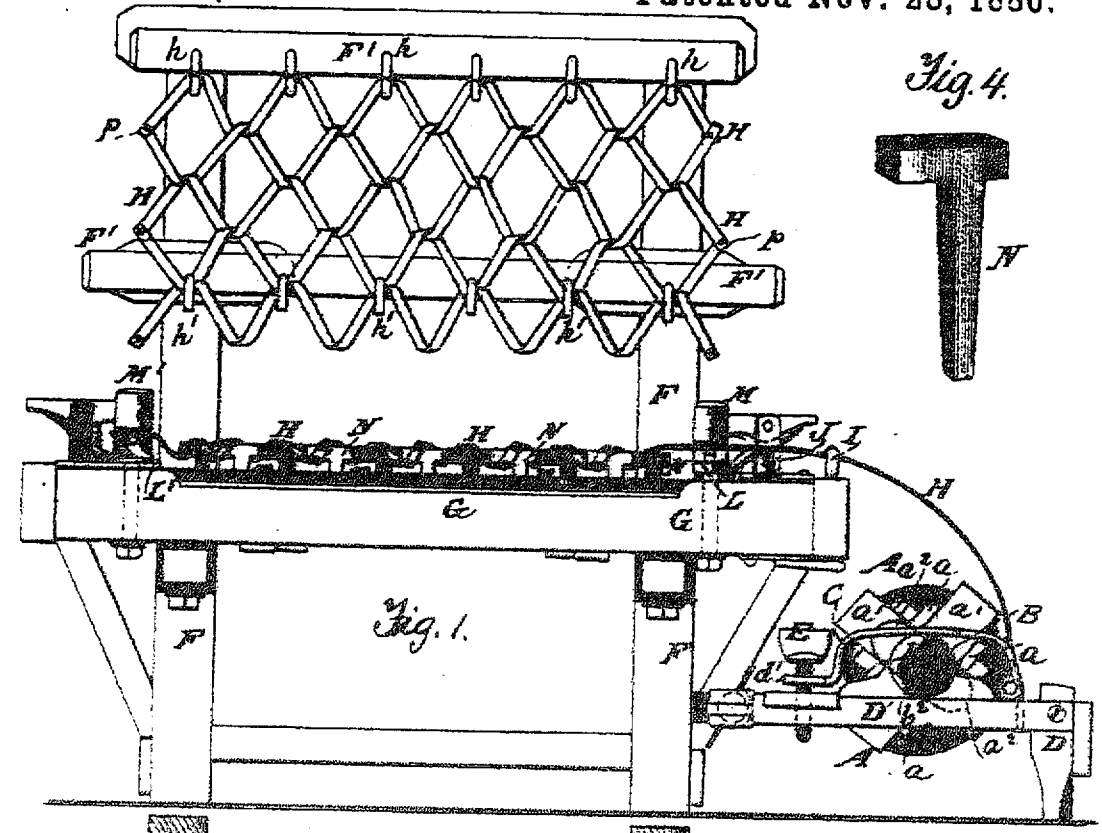

Fig. 1.

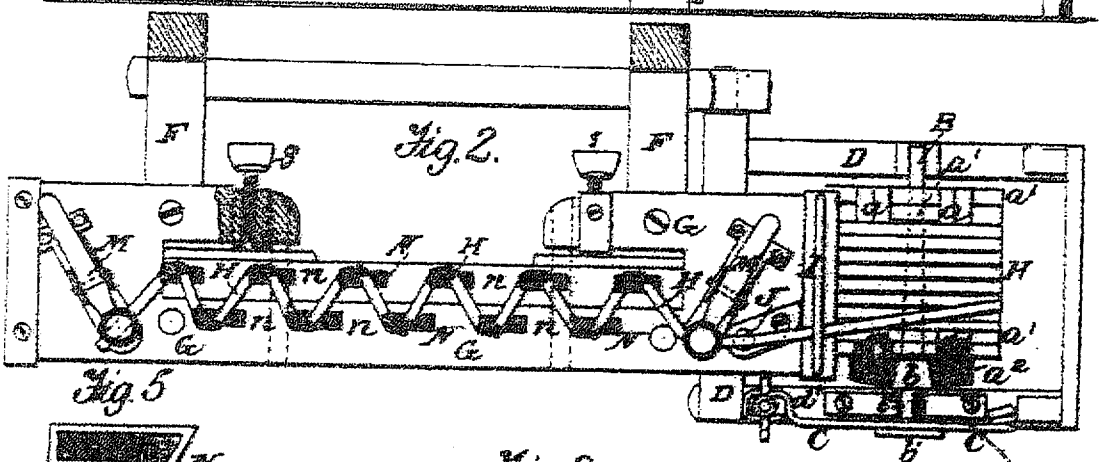

Fig. 2.

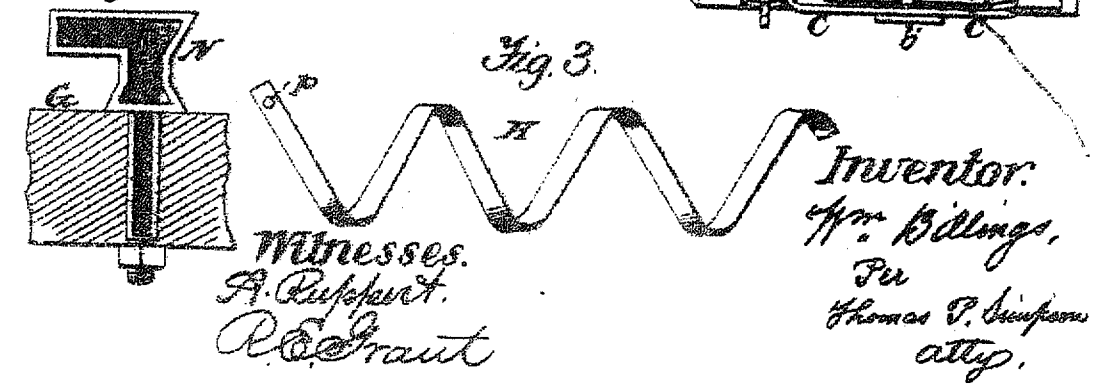

Fig. 3.

Fig. 5

Fig. 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

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APPARATUS FOR BENDING METAL STRIPS.

SPECIFICATION forming part of Letters Patent No. 352,909, dated November 23, 1886.

Application filed April 9, 1886. Serial No. 198,319. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BILLINGS, a citizen of the United States, residing at Dover, in the county of Bureau and State of Illinois, have invented certain new and useful Improvements in Apparatus for Bending Metallic Strips; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

Figure 1 of the drawings is a plan view of my invention; Fig. 2, a side elevation thereof, and Fig. 3 a perspective view of the article made. Figs. 4 and 5 are detail views of two formers which I use.

In the drawings, A represents a spool, on which the strip of sheet metal is wound in many lengths of rail. This is formed of the longitudinal bars *a*, the cross-bars *a'*, and the plate a^2. Through the cross-bars *a'*, and at their junction, passes the spindle B, which has a non-round collar, *b*, preferably with four tapering sides. The spindle B has the disk *b'* on one end, parallel thereto a collar, *b*, and between the two the journal b^2. The object of the disk is to conveniently receive the pressure of the wire spring C, and being itself fast on the spindle, the latter is held while the desired length of strip for a rail is kept taut to be punched and cut off. This spindle is taken from its open bearings, and one of the spools A full of the rail metal is passed upon it, so that the collar *b* enters a correspondingly-shaped hole in the plate a^2, which is made fast by dowels to the cross-bars *a'*, the latter being rigidly connected with the bars *a*. Thus it will be seen that the spindle when rotated must carry the spool. The spindle being placed in the bearings, a wire spring, C, having an end loop, *d'*, is clamped down by a thumb-screw, E, onto the disk *b'*, to prevent the spindle with its spool from turning after a rail length has been unwound.

The frame D is hinged to frame F, so as to turn up over the long table G after the spool and spindle have been removed. This enables the whole to be handled more conveniently.

g g are screws for setting or adjusting the former-plate *n*, and may be used with or without an intermediate washer.

The rail metal H is carried up from the spool over the end of table G and under the keeper or guide I; then over the chisel J; then between the die and punch L M. It is then carried over and under the formers or bars N, arranged alternately in two parallel rows on supports *n*, and, finally, between the punch and die L' M'. Now the punches are struck to make the end holes, *p p*, (shown in Fig. 3 of the drawings,) and the rail-sheet is forced down on the chisel to cut off the desired length of rail. After each rail is shaped, the holes punched, and the rail cut off from the spindle-strip it is hung up on the rack F, the first one upon the hooks *h*, the next one upon the first, the third one upon the second, and the fourth upon the third, thus forming a panel. The lower row of hooks, *h'*, serves to hold the rails at a proper tension until they acquire the proper set, when the panel is removed from the rack-bars F'. Of course any desired number of rails may be used in a panel.

The metallic strip or wire rails are galvanized, and the panels are preferably placed on frames before shipping.

Having thus described all that is necessary to a full understanding of my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. The combination, with the spool and its frame, guide, and table, of the two parallel rows of formers N, arranged to alternate, as shown and described.

2. The combination, with the table, guide, and formers, of the punches and dies, arranged as and for the purpose set forth.

3. The combination, with the table, guide, punches, dies, and formers, of the chisel, arranged as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM BILLINGS.

Witnesses:
DICK STEELE,
JOHN SWEITZER.