

J. SHIPWAY.

MACHINE FOR STRAIGHTENING SCRAP IRON, &c.

No. 494,603.

Patented Apr. 4, 1893.

FIG. I.

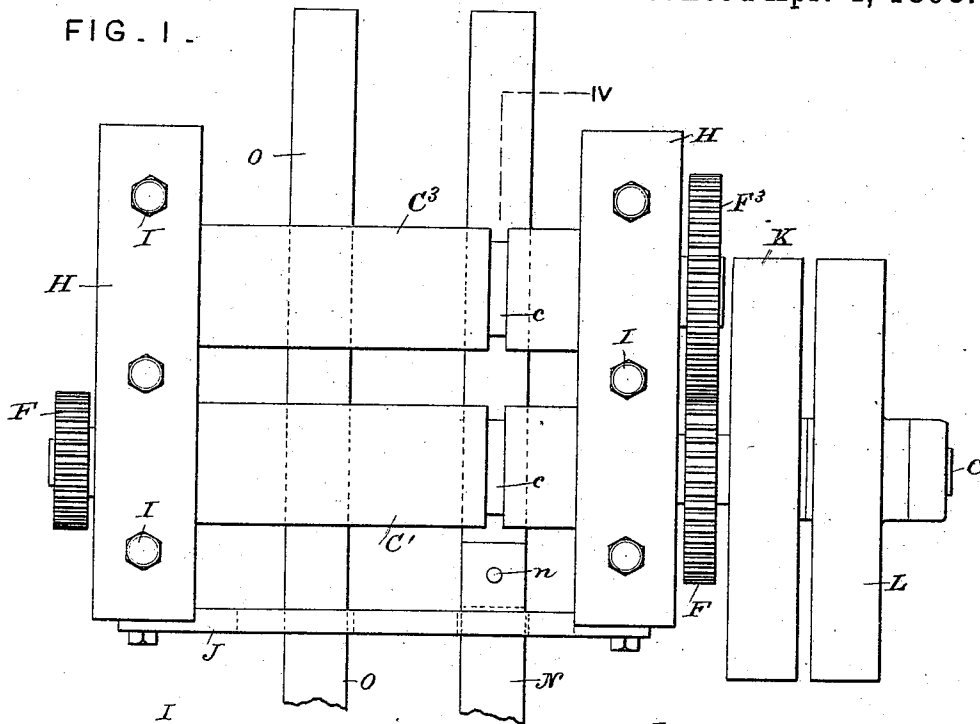
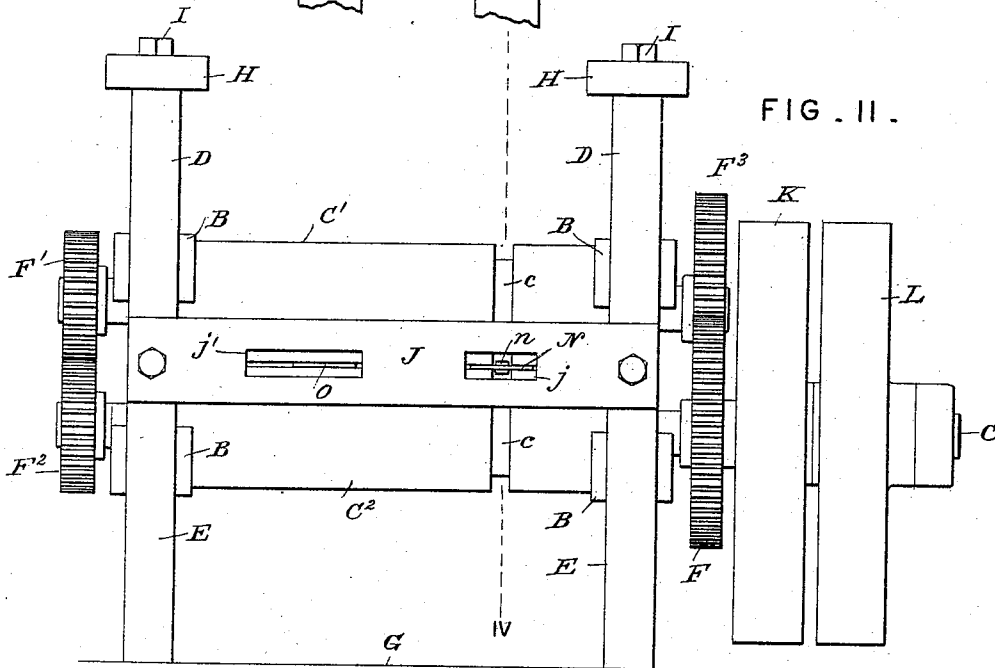


FIG. II.



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FIG. III.

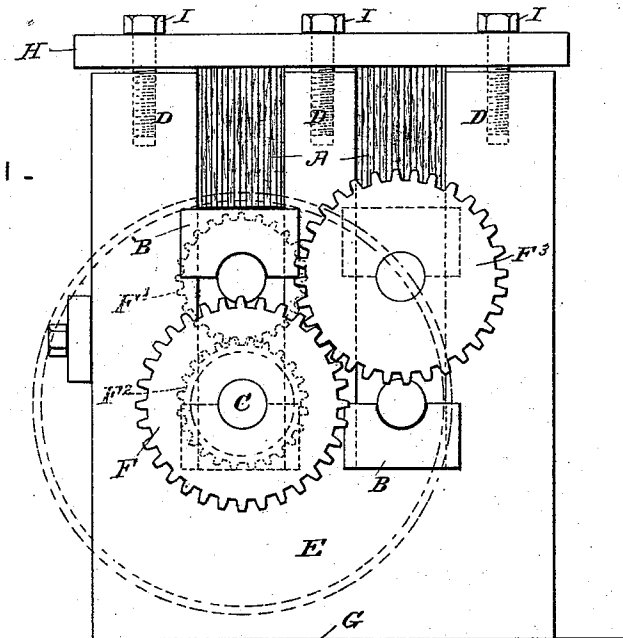
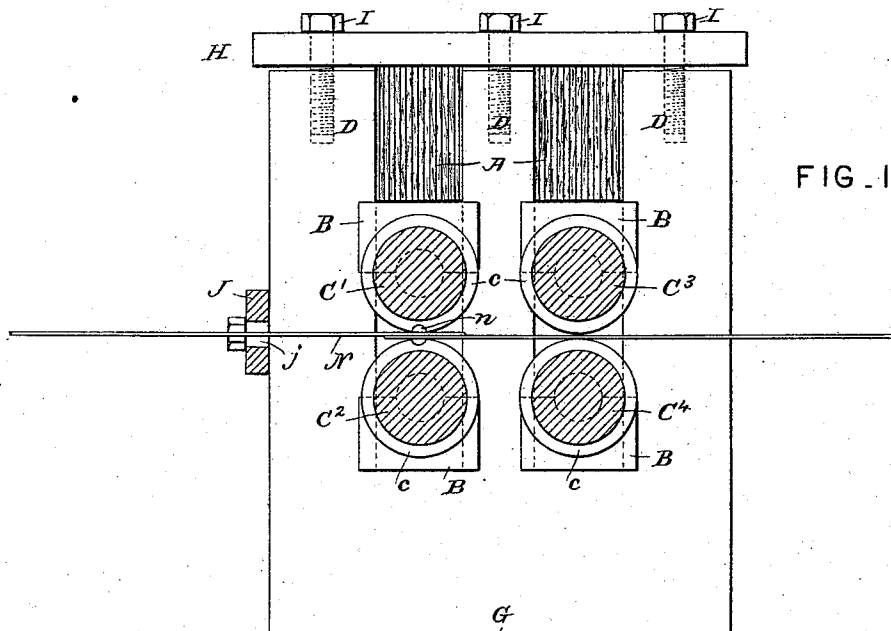


FIG. IV.



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UNITED STATES PATENT OFFICE.

JESSE SHIPWAY, OF MEMPHIS, TENNESSEE.

MACHINE FOR STRAIGHTENING SCRAP-IRON, &c.

SPECIFICATION forming part of Letters Patent No. 494,603, dated April 4, 1893.

Application filed October 11, 1889. Serial No. 326,716. (No model.)

To all whom it may concern:

Be it known that I, JESSE SHIPWAY, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Machine for Straightening Scrap-Iron and Cotton-Ties, of which the following is a specification.

The subject of my invention is a machine consisting of two pairs of rolls geared together and having simultaneous movement, the upper rolls being mounted in sliding boxes pressed down by gum or other suitable springs upon their companion rolls beneath under the force of caps secured by adjusting screws, to apply the necessary pressure to the rolls; the whole being mounted in a suitable frame and provided with feed guides, and each of the rolls being formed near one end with a circumferential groove to permit the passage of the rivets of spliced ties or other bands.

In order that the invention may be more fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a plan view of the machine. Fig. II is a front elevation. Fig. III is a side elevation with the fast and loose band pulleys removed and their position indicated in dotted outlines. Fig. IV is a vertical section on the line IV—IV, Fig. I.

A, A, represent strong springs preferably made of gum elastic bearing upon boxes B which slide in vertical guides D formed in the frame or housing E and carry the bearings of the upper rolls C', C² so as to hold the same down with any necessary force in contact with the companion rolls C² C⁴ respectively. The shaft C of the roll C² is extended in each direction beyond the frame or housing and has keyed to it in front a cog wheel F gearing with a corresponding cog wheel F³ on the shaft of the roller C³. On the rear end of the shaft of the roll C² is keyed a cog wheel F² gearing with a corresponding cog wheel F' on the shaft of the roll C' so as to cause the rolls C' and C² to rotate in unison.

The frame E is mounted upon a suitable bed or table G. The springs A are surmounted by cap plates H held down by set screws I

tapped into the frame or housing E and applied with variable pressure to the springs so as to regulate the force of compression between the rolls C', C² and C³, C⁴. Near one end of each of the rolls is formed a circumferential groove *c* to pass the rivet, in straightening spliced bands or ties.

J represents a guide plate with suitable throats or openings *j, j'*, for the entrance of the ties or bands.

K is a fast pulley keyed to the forward end of the shaft C of the roll C².

L is a corresponding loose pulley on the same shaft, to which the driving belt M is shifted in the customary manner to stop the machine.

To illustrate the operation, I have shown at N a spliced band with rivets *n*, the passage of which is permitted by the grooves *c* in each of the rolls; and at O a simple plain band or scrap passing through the smooth portion of the rolls.

From the above description it will be understood that the spliced bands are passed through the throat or guiding aperture *j* to carry the rivets through the grooves *c* in straightening a band, while short ties or scraps without splices are passed through the guiding aperture *j'*, and the smooth portion of the rolls.

The parts of the machine may be made in any preferred proportions, but I have found in practical operation that an effective machine is constructed with a base or bed of three feet square; a frame of eighteen inches in height; rollers of six inches diameter, and band pulleys of twenty-four inches diameter and six inches face. By a machine of this construction I am enabled to straighten crooked or kinked ties or other bands, and scrap iron, with great facility and rapidity, applying the necessary pressure through the springs A by means of caps and cap screws.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent;

In a machine for straightening cotton ties bands and scrap-iron, the combination of the paired rollers, those of a pair being held

yieldingly in contact with each and provided with opposite plain surfaces and with opposite grooves out of the range of the pressing or operating portions of the opposite plane
5 surfaces of the rollers, and the guide bar having openings or throats arranged in a plain intermediate of the rollers and in alignment

with the plain surfaces and the grooves of the latter, respectively, substantially as described.

JESSE SHIPWAY.

Witnesses:

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C. W. METCALF.