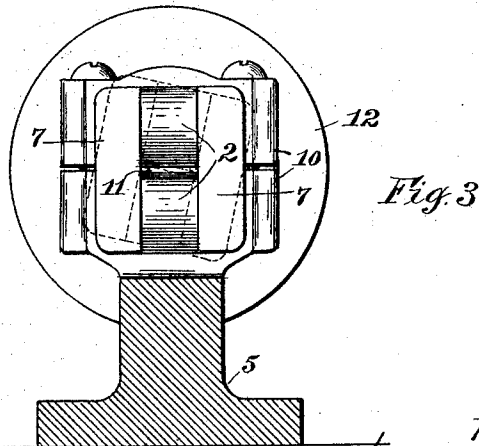
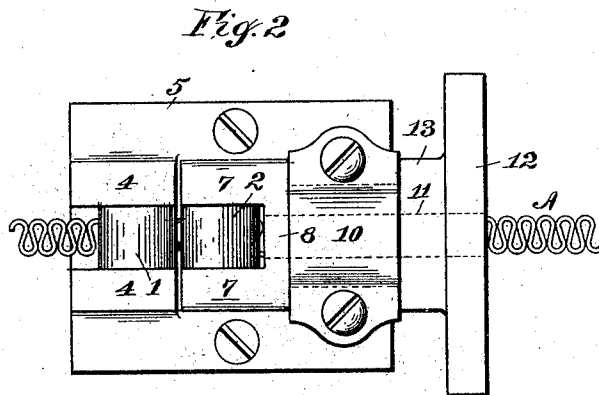
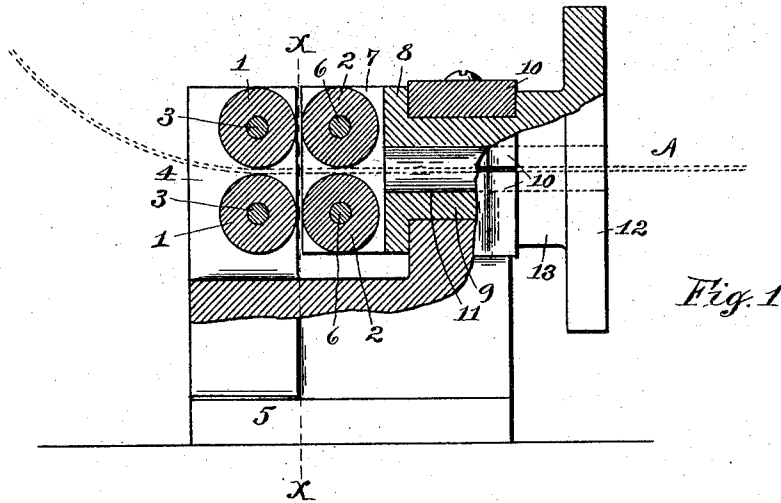


M. M. BEEMAN.
 DEVICE FOR UNTWISTING METAL STRIPS.
 APPLICATION FILED NOV. 30, 1908.

1,034,060.

Patented July 30, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

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DEVICE FOR UNTWISTING METAL STRIPS.

1,034,060.

Specification of Letters Patent.

Patented July 30, 1912.

Application filed November 30, 1908. Serial No. 465,138.

To all whom it may concern:

Be it known that I, MARCUS M. BEEMAN, a citizen of the United States, and resident of Meadville, in the county of Crawford, in the State of Pennsylvania, have invented new and useful Improvements in Devices for Untwisting Metal Strips, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention pertains to devices for use in the manufacture of stays or stiffeners for corsets and analogous wearing apparel, and more particularly to the class of stays which are composed of wire bent into a succession of loops or otherwise to form a flat flexible fabric or strip from which the desired lengths are cut to serve as stays or stiffeners. It has been found that the bending of the wire in this manner has a tendency to impart to the fabric or strip a twist which must be taken out in order that the stay lie flat in the garment. The twist also interferes with the removal of the strip from the reel upon which it is usually wound.

The present invention consists of a simple, convenient and inexpensive device for entirely relieving the strip of twist.

In the accompanying drawing Figure 1 is partly a side elevation and partly a sectional view of the strip untwisting device constructed in accordance with the invention; Fig. 2 is a plan view of the same; and Fig. 3 is a vertical sectional view taken on the line X—X, Fig. 1.

The device embodies two guides consisting preferably of opposed pairs of closely arranged rollers 1, 1 and 2, 2, those of each pair being disposed one above the other with an intervening space for the passage of the wire strip, indicated at A. The rollers 1, 1 are journaled on stationary support consisting of a pair of parallel upright plates 4, 4 between which the rollers are located, said plates being preferably formed integral with and at one end of a cast metal base 5 which is designed to be fastened to a suitable support. The rollers 2, 2 are journaled on parallel shafts 6, 6 mounted in an adjustable support consisting of a pair of parallel plates 7, 7, one on each side of said rollers and formed integral with a plate 8 which is secured to or formed on one end of a hol-

low shaft or sleeve 9 disposed at right angles to the shafts of the rollers 2, 2 and rotatably supported in a suitable bearing 10 on the base 5, and provided with a longitudinal bore 11. The axis of the hollow shaft or sleeve 9 is in line with the plane of the passes between the pairs of rollers, and the bore 11 forms a passage for the strip B to be untwisted. Said sleeve projects beyond the bearing 10, and the projecting end is provided with a collar 12 preferably formed integral therewith and which forms a hand wheel by means of which the sleeve and parts carried thereby can be rotated. On the inner side of said collar is a hub 13 bearing against the outer end of the bearing 10, said hub and the aforesaid plate 8 holding the sleeve against endwise movement.

In the operation of the device, the sleeve or hollow shaft 9 is turned, if found necessary, to set the axes of the rollers 2, 2, into parallelism relatively with the axes of the rollers 1, 1 as shown in Figs. 1 and 2 of the drawings. The operator then inserts the strips between the two pairs of rollers and through the bore of the sleeve 9 as indicated by dotted lines in Fig. 1, and shown by full lines in Fig. 2. After the strip is thus inserted, the operator turns the sleeve or hollow shaft 9 by means of the hand-wheel 12 to adjust the rollers 2, 2, *i. e.*, to incline the axes of said rollers relative to the axes of the rollers 1, 1, either to the right or left, opposite to the direction of the twist in the strip, and then proceeds to draw the said strip through the device, whereby the cooperating pairs of rollers tend to impart a reverse twist to the strip.

The rollers 2, 2, are held in their adjusted position by tightening the usual screws of the bearing 10 sufficiently to provide a frictional hold of the bearing on the sleeve or hollow shaft 9 whereby the latter is prevented from turning. A skilled operator can readily determine the amount of adjustment required by observing the degree of twist of the inserted strip and the condition of the strip as it leaves the device.

While the best results are obtained by drawing the strip through the device by hand, it is obvious that suitable mechanism may be employed for the purpose. The device may be combined with the strip-forming machine or operated separately.

What I claim is:—

1. A device for untwisting metal strips comprising two pairs of similarly arranged rollers located in close proximity, one pair of rollers being mounted on a fixed support and the other pair of rollers being mounted on a rotatable support including a hollow shaft or sleeve arranged at right angles to the axes of the rollers and having the axis of its bore in the plane of the pass between the rollers and forming a passage for the strip being untwisted, a bearing in which said sleeve is rotatably mounted, means for rotating said sleeve to vary the inclination of the axis of the one pair of rollers relative to the axis of the fixed pair of rollers, and means for holding said sleeve and support in adjusted position.

2. A device for untwisting metal strips comprising two pairs of similarly arranged rollers located in close proximity, one pair of rollers being mounted on a fixed support and the other pair of rollers being mounted on a rotatable support including a hollow shaft or sleeve arranged at right angles to the axes of the rollers and having the axis of its bore in the plane of the pass between the rollers and forming a passage for the strip being untwisted, a bearing in which said sleeve is rotatably mounted, means for rotating said sleeve to vary the inclination of the axis of the one pair of rollers relative to the axis of the fixed pair of rollers, and means for causing said bearing to frictionally hold said sleeve and support in adjusted position.

3. A device for untwisting metal strips comprising two adjacent pairs of parallel rollers through which the strip may be

drawn, those of one pair being arranged horizontally and one above the other, the rollers of the other pair being similarly arranged and having a rotatable support, a horizontal shaft disposed at right angles to the axes of the last named rollers and having its axis in the plane of the passage between the rollers, said shaft being rigidly connected at one end to the rotatable support and provided with a longitudinal bore to accommodate the strip and operative for turning the rotatable support to incline the rollers thereof in relation to the first mentioned pair of rollers, and a hand-wheel connected to the opposite end of said shaft for the purpose set forth.

4. In a device for untwisting metal strips, the combination of a base formed with two parallel upright plates, two pairs of parallel rollers through which the strip is adapted to be drawn, one pair of rollers being supported between said plates and arranged one above the other, a horizontal shaft journaled upon the base and disposed at right angles to the rollers and formed with a longitudinal bore for the passage of this strip, a second pair of parallel plates rigidly connected with one end of said shaft, the other pair of rollers being mounted between the latter pair of plates and arranged one above the other, said shaft being operative for turning the latter supporting plates to incline the rollers thereon relative to the first mentioned pair of rollers, and a hand-wheel on said shaft for the purpose set forth.

MARCUS M. BEEMAN.

Witnesses:

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