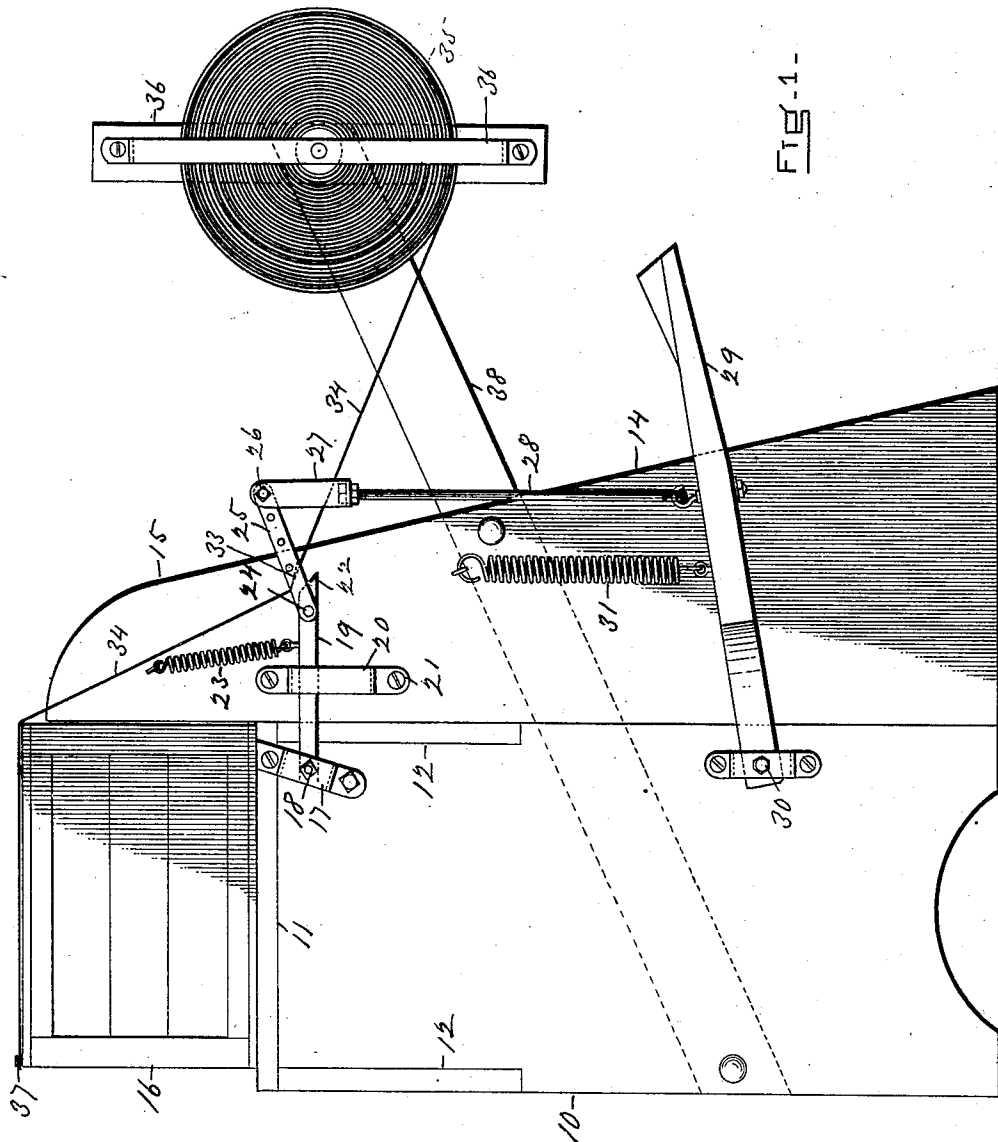


W. F. THOMPSON.
SHIPPING CASE STRAPPING MACHINE.
APPLICATION FILED AUG. 29, 1910.

977,487.

Patented Dec. 6, 1910.

3 SHEETS-SHEET 1.



WITNESSES=
M. A. Atwood.
Frank G. Parker.

INVENTOR=
William F. Thompson
By
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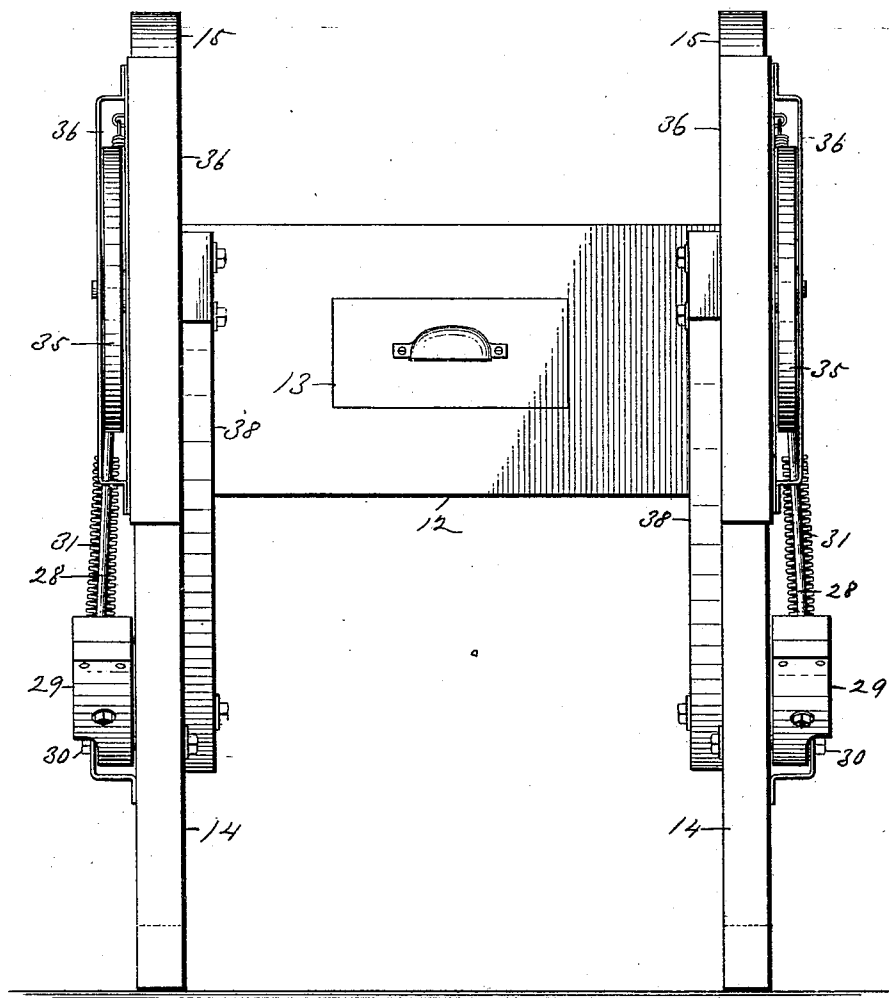


FIG. 2.

WITNESSES=

M. A. Atwood.
Frank G. Parker.

INVENTOR=

William F. Thompson

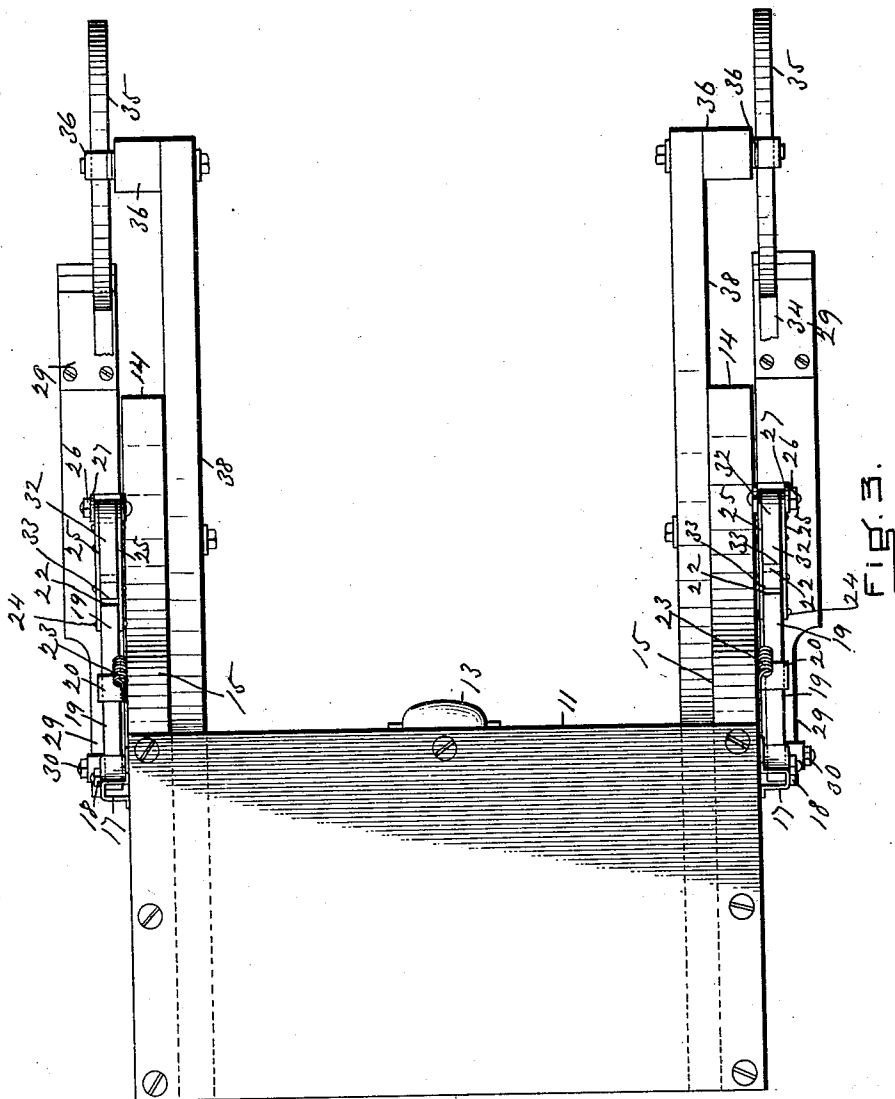
By *Samuel Williams* Atty.

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3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

WILLIAM F. THOMPSON, OF MELROSE, MASSACHUSETTS, ASSIGNOR TO WALTER E. PIPER, OF MELROSE, MASSACHUSETTS.

SHIPPING-CASE-STRAPPING MACHINE.

977,487.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed August 29, 1910. Serial No. 579,534.

To all whom it may concern:

Be it known that I, WILLIAM F. THOMPSON, a citizen of the United States, residing at Melrose, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Shipping-Case-Strapping Machine, of which the following is a specification.

This invention relates to a new and improved machine for use in applying the straps, which are usually constructed of sheet metal strips, to a shipping-case for the purpose of holding the parts of the case together during transportation. These metallic strips are usually supplied in rolls which are mounted in a frame which constitutes a reel (not new in this invention), and in strapping the cases the strips of metal are cut from the roll and tacked by the operator to the top, bottom, and sides of the case next the ends thereof. It is found difficult to keep the strips sufficiently taut that they will lie smoothly on the surfaces of the case, and hence bind it tightly.

In my present invention I provide means for holding the case and for rendering and retaining the metallic strap smooth and taut upon the case as it is fed from the reel while the operator or operators are nailing the straps in position around the case next its ends. By thus keeping the metallic strap taut and smooth, it is not necessary to use as many nails as are used at present. Ordinarily there are at least sixteen or twenty nails driven through the strap and into the case at each end, but in strapping the case by the aid of my device there need be but two nails on the bottom, the sides, and the top at each end, that is to say, a nail through the strap on the opposite side of each bend or corner, making eight nails on each strap—there being two straps, one at each end of the case, thus making sixteen nails in all. Moreover as the sheet metal straps are applied perfectly smoothly to the case, there is less danger of their being loosened, torn off, or of their injuring other packages of merchandise, or persons who are handling the cases. It is evident also that much time is saved in applying the straps to a case, as the machine does the tightening as fast as the operator drives in a nail.

The nature of my invention is fully described below, and illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of a machine embodying my invention, the case being in position and the initial nail having been driven into it through the strap. Fig. 2 is a front view of the machine without the case in position thereon, and Fig. 3 is a plan view of the same.

Similar numerals of reference indicate corresponding parts.

Reference-numeral 10 represents vertical side supports which sustain the bed or table 11 screwed or otherwise secured to said supports. Preferably there are front and rear walls 12 extending down from the portion 11 in which may be supported an ordinary drawer 13. In front of these uprights or vertical supports 10 are a pair of forward extensions or braces 14, the upper ends of which extend at 15 for a distance above the table 11 which would be approximately a little less than the depth of an ordinary shipping-case, one of which is illustrated at 16. These extensions or braces 14 may be secured to the main portion of the frame in any ordinary manner, and are preferably broader at their lower ends.

Rigidly secured to the outer surface of each upright portion 10 and to the corresponding edge of the table 11 is a plate 17 to which there is pivotally secured at 18 a swinging bar 19 which extends through the raised or looped portion 20 of a vertical plate 21, and whose outer end is beveled as illustrated at 22. This bar 19 is held normally in a raised position near the upper end of the loop 20 by a spring 23 secured to the outer surface of the portion 15 of the extension or brace 14. At 24 the bar or arm 19 is pivotally secured to and between the pair of bars 25 which are pivotally connected at their outer ends at 26 to the upper end of a bar 27 connected with a link 28 which is pivotally secured at its lower end to the treadle 29 hinged at 30 to the upright or side support 10, and held normally raised by a spring 31 secured to the upright 14. Rigidly held between the two bars 25 (Fig. 3) is a central bar 32 beveled at its end at 33 to correspond with the bevel 22 at the end of the bar 19. Figs. 2 and 3. The parts 17 to 33 inclusive are duplicated on the opposite sides of the machine. A metallic strap 34 extends from a coil 35 supported in a frame 36 from which the strap is fed to the case 16.

In practice a case, as 16, which is to be strapped is placed on the table 11 and pressed against the upright edge of the portions 15 of the extensions or braces 14. The parts being in the position illustrated, (which is their normal position), the metallic band or strap 34 is drawn between the two side bars 25, and between the beveled end 33 of the central bar 32 and the beveled end 22 of the bar 19, said beveled ends and the extended ends of said bars 25 surrounding the strap. The end of the strap is then carried over the case to the farther edge of its top, as illustrated in Fig. 1, and nailed at 37 to said top next the farther corner. The treadle 29 is then pressed down, pulling down the strap 34 until the bars 25 and 32 are in line with the bar 19 and held in such line by their correspondingly beveled ends 33 and 22. As the projecting portion of the bar 19 extends far enough between the bars 25 to practically reach the beveled end 33, the strap is necessarily gripped very firmly between the two adjacent beveled ends. Further downward pressure on the treadle 29 completely straightens the portion of the strap 34 which is above said beveled ends, rendering the portion on the upper surface of the case perfectly smooth. The operator then drives a nail through the strap into the case near the front edge or corner thereof, and releases the treadle which is pulled up by the spring 31, releasing at the same time the bar 19 which is raised as far as the loop 20 will allow by the spring 23. The rod 28 is at the same time raised and lifts the outer ends of the parts 25 and 32 until the parts assume the position illustrated in the drawings. The case is then given a quarter turn onto its bottom or side as the case may be and a nail driven through the strap near the farther end of the part which is then uppermost, the case pulled forward against the parts 15, the treadle 29 again depressed, and a single nail driven through the strap into the portion of the upper side of the case next the forward corner—and so on until the strap is carried entirely around the case, when it is cut off. Preferably therefore there are eight nails driven into the portion of the part of the strap which encircles the

case near one end, viz., one nail on each side of each corner, although in some cases one nail at each corner is sufficient.

I prefer to provide two reels or frames 36 each containing a coil of wire, one being located in front of each set of mechanism, and the frames preferably supported by bars 38 secured to the machine, so that a workman may be located at each end of the case, and both ends be strapped at the same time.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is:—

1. In a shipping-case strapping-machine, a frame adapted to support a case in position for being strapped, a jointed lever supported at one of its outer ends by the frame and having its inner ends near the joint correspondingly beveled, a treadle pivotally connected at one end to the frame, a rod or link connecting the outer end of the treadle with the outer end of the jointed lever opposite that end which is connected with the frame, and mechanism for holding said treadle and jointed lever normally in raised position.

2. In a shipping-case strapping-machine, a frame adapted to support a case in position for being strapped, a jointed lever supported at one of its outer ends by the frame and having its inner ends near the joint adapted when the lever is straightened to grip and hold firmly the strap, a treadle pivotally connected at one end to the frame, a rod or link connecting the outer end of the treadle with the outer end of the jointed lever opposite that end which is connected with the frame, and mechanism for holding said treadle and jointed lever normally in raised position, whereby after the strap has been secured at any point to the case downward pressure upon the treadle will grip said strap and stretch that portion which is between the jointed lever and the case.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM F. THOMPSON.

Witnesses:

HENRY WILLIAMS,
M. A. ATWOOD.