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F. A. SINGLEY
DEVICE FOR ATTACHING METAL BALING
RIBBONS TO ANCHORAGE PLATES

2,458,747

2 Sheets-Sheet 1

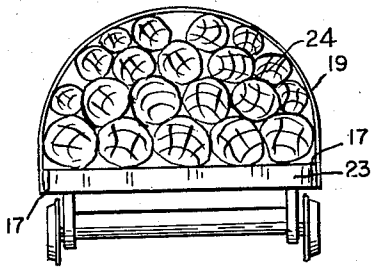


FIG. 1.

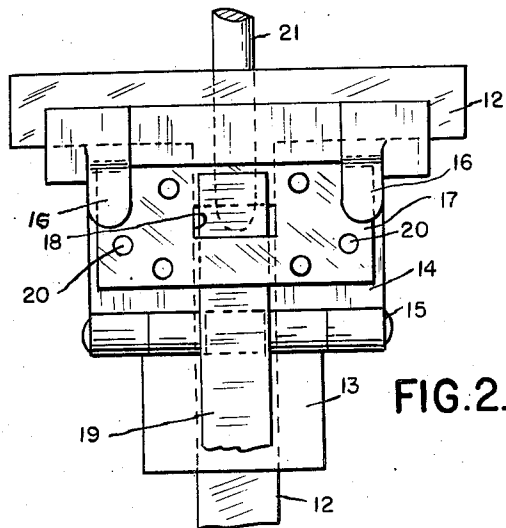


FIG. 2.



FIG. 4.

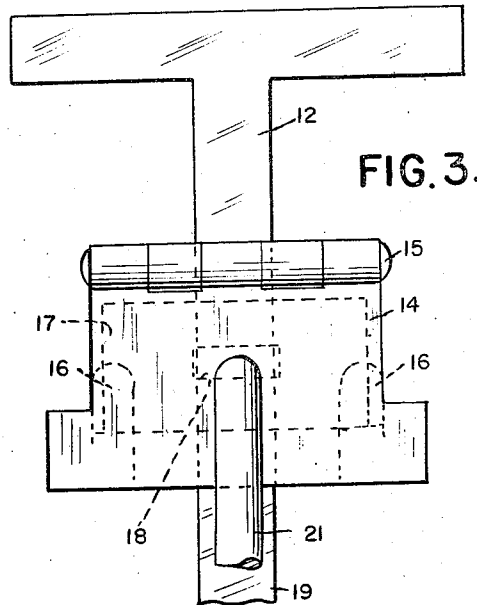


FIG. 3.

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FIG. 6.

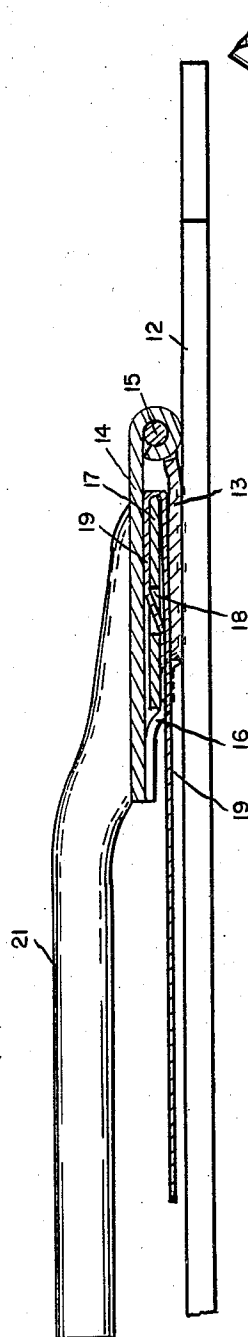
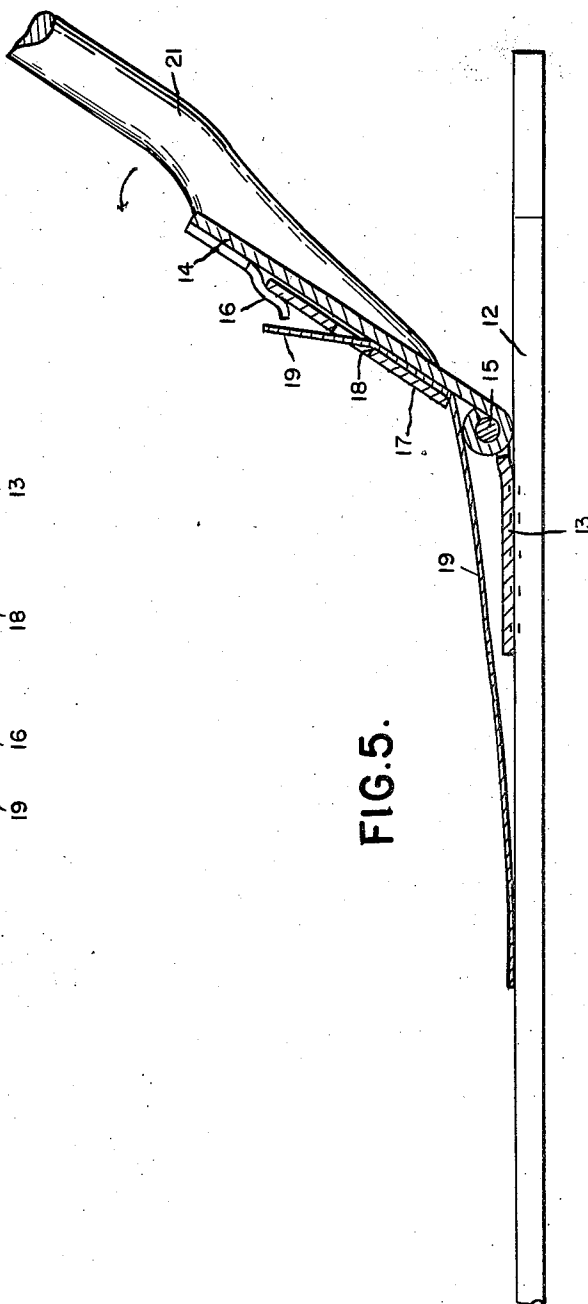


FIG. 5.



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DEVICE FOR ATTACHING METAL BALING
RIBBONS TO ANCHORAGE PLATESFred A. Singley, Detroit, Mich., assignor to Acme
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This invention relates to mechanism for quickly effecting the anchored wrapping of the end of a metal packaging ribbon about an anchorage plate, and has for its object an improved organization of parts whereby the operative correlation of the end, or of any selected portion, of a metal ribbon, about such an anchorage plate may be easily and reliably effected at any desired location, as for example a flat car in a railroad yard or siding, upon which a piled-up group of logs or telegraph poles is to be shipped, and which must be held firmly against lateral slipping or rolling while in transit.

The use of such a metal ribbon, in place of a cord or the like, for holding together for shipment a baled mass of material is of course, in and of itself, old, as well as various means and attachments for holding the ends of the thus positioned metal ribbons or strips tightly about the bale, carton or group of packages or articles concerned. And under some circumstances the anchorage of the ends of such a metal ribbon may be, and has been, effected by merely driving a spike or equivalent member through a hole near the end of the metal ribbon.

But for such a use—illustrative of one of several others—as the secure holding of a pile of logs or telegraph poles in position upon a flat car, so that they will not roll down or fall off during the ordinary displacing shocks or jarring incident to transit, it is desirable that some means of firmly though non-destructively anchoring the ends of the metal ribbon on either side of the supporting car floor be provided, the length of the intermediate portion of the strap which is to be drawn over the top of the load, in inverted U-shaped form, having first been determined by careful measurement and the metal ribbon length thus ascertained having been cut off accordingly, with proper allowance for the excess length called for to effect the anchoring wrapping of the ends about a base or anchorage plate, which can be secured to the sides of the car floor or platform by screws or spikes.

To this end the organization of parts herein disclosed is directed. It permits the accurate and effective bending of the packaging strip about an anchorage plate with a minimum of effort on the part of the operator, the resultant operative connection between these parts being so effective that, dependent only upon the tensile strength of the ribbon, the closely packed pile of logs or the like may be held firmly in position. And the herein-disclosed apparatus is equally adaptable to various widths and thicknesses of the metal

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ribbon employed, subject only to the condition that the kerf or aperture in the center of the anchorage plate employed be of adequate size for the passage of an end portion of the metal ribbon therethrough.

In the drawings:

Figure 1 is an end elevational view of a pile of logs or poles held in place upon a car platform by means of over-engaging metal ribbons, of the sort with which my improved apparatus is designed to deal.

Figure 2 is a plan view from above of my improved apparatus, with the parts in extended position before the ribbon-bending operation has been begun.

Figure 3 is a similar plan view, with the operative parts shown in the position occupied by them at the end of the first ribbon-bending operation.

Figure 4 is an edge elevational showing of the metal ribbon as plurally bent about an anchorage plate after repeated bending operations.

Figure 5 is a side elevational view, partly in section, of the operative parts, in the positions occupied by them before the ribbon-bending operation has started, similarly to the plan view thereof in Figure 2.

Figure 6 is a similar side elevational view, partly in section, of the operative parts in the position attained at the end of the first ribbon-bending actuation, corresponding to the plan view thereof shown in Figure 3.

At 12 is shown a base or supporting member of any desired size or contour, to whose top surface is secured one of the hinge plates, as 13, of an ordinary hinge unit, whose other hinge plate portion, as 14, is pivotally correlated therewith by the pintle 15. Near the freely swinging outer edge of the plate 14 are positioned inwardly-facing clips or holding members, as 16, under which a lateral edge of an anchorage plate, as 17, may be slipped. The only requirement as to the dimensions of this latter is that it be of slightly less width than the distance between the hinged or pintled inner edge of the plate 14 and the inwardly-facing "pockets" or stops constituted by the clip members 16. The central portion of the anchorage plate 17 is provided with a kerf or slot 18, of adequately greater length than the width of the metal ribbon 19 proposed to be used. The terminal portion of the ribbon is passed through the slot 18 before the plate 17 is positioned against the face of the swingable hinge plate 14, with its edge slipped under the clip members 16. This position of the parts is brought out particularly in Figures 2 and 5, the slightly

S-turn bending of the metal ribbon being emphasized in Figure 5. The anchorage plate 17 is also provided with any desired number of screw or bolt holes 20, for anchoring the same to the side edges of a car platform after the metal ribbon has been properly drawn over and about the piled logs 24 on the car floor 23.

The swinging plate 14 is provided with a relatively fixed handle 21 which extends outwardly in a direction transverse to the hinge pintle 15. After the anchor plate 17 has been seated on the plate 14 with its outer edge extending beneath the clips 16 and with the ribbon 19 threaded through the aperture 18 of the anchor plate from the under side of the anchor plate, so that the ribbon extends over the base member and thence above the hinge and between the plate 14 and the inner portion of the anchor plate 17, as shown in Fig. 5, the handle 21 may be employed to swing the plate 14 downwardly about its hinge until it occupies a position above and substantially parallel to the base member as shown in Fig. 6. This operation wraps the ribbon about a portion of the anchor plate and doubles the ribbon upon itself, thus establishing an operative connection between the anchor plate and the ribbon. Under some circumstances even one such bending would suffice to hold the metal ribbon, in wrapped position about the anchorage plate, against displacement due to lengthwise tension upon the metal ribbon. But to effect further security in this respect, it is merely necessary to disengage the initially outer lateral edge of the anchorage plate from under the clips 16, which are in any event spaced further apart from one another than the breadth of the metal strip or ribbon 19, and the handle 21 and its attached swingable hinge plate having been moved back to the position illustrated in Figure 5, the opposite lateral edge of the anchorage plate 17, about which the end portion of the ribbon 19 has just been bent, is then slipped under the clips 16; and the handle 21 and its swingable hinge plate then being again actuated, from right to left in the positions shown in Figures 5 and 6, another folding of the metal ribbon 19 about the anchorage plate 17 is effected. Generally, a maximum of three such foldings or bendings of the metal ribbon 19 about the anchorage plate 17 amply suffices.

In speaking of the central positioning of the slot 18 in the anchorage plate 17, I do not wish to be understood as meaning that such positioning must be exactly central thereof, either lengthwise or crosswise. Indeed, the slot may not only be positioned much nearer one lateral edge of the anchorage plate than to the other, but if for any reason it is desired to attach two or more ribbons to an anchorage plate, arranged lengthwise therealong, my described method of and mechanism for effecting the bending of successive ribbons thereabout, in parallel relation to one another, makes it possible to effect this result by merely moving the anchorage plate lengthwise of edge after one ribbon has been secured in place, to the position of registry with the next positioned slot therein, through which the end of another metal ribbon is then passed, after which the above described ribbon-bending process is repeated; and so on as to as many separate metal ribbons as there are slots in the anchorage plate.

Then after measurement of the required length of the over-all dimension has been made, the opposite end of the suitably cut-off length of the metal ribbon 19 is similarly wrapingly bent

around another anchorage plate, and the thus-assembled parts are drawn tightly about the load by means of screws or bolts driven through the holes 20 in each anchorage plate, into the sides of the car platform 23.

The comparative lightness of weight of the above-described organization of parts, as well as the reliable action upon the metal ribbon 19 in effecting the wrapping of the latter about an anchorage plate, makes my device so easily usable at any selected place, regardless of any other shop equipment, that its utility will be easily understandable.

What I claim is:

1. Mechanism for securing a metal packaging ribbon to an anchor plate, comprising, in combination with a base member, a hinge having one of its pivotally correlated plates secured to said base member, a manually actuatable handle secured to the freely-swinging one of said hinge plates, and anchor-plate-engaging clips extending inwardly from the vicinity of the outer marginal edge of said freely-swinging hinge plate, adapted to hold a centrally apertured anchorage plate, through which a metal packaging ribbon has been passed, against displacement by induced swing of said freely swinging hinge plate and its actuating handle, thereby permitting the wrapping of the metal ribbon thereabout.

2. In combination with a base member, a hinge member having one of its pivotally correlated plates secured thereto, and having the outer marginal edge of its freely swinging plate provided with inwardly extending clip members beneath which a lateral edge of an apertured anchorage plate is adapted to be positioned, and an actuating handle secured to said last mentioned freely swinging hinge plate, whereby a metallic ribbon which has been passed through the aperture in the thus positioned anchorage plate may be bent thereabout while said anchorage plate is held against displacement by the described inward swing of said handle and its attached hinge plate.

3. A device for effecting the wrapping about an apertured anchorage plate of a metal packaging ribbon which has been positioned through the aperture therein, comprising, in combination with a base, a hinge member, one pivotally correlated plate portion of which is secured to the base while the freely swinging plate portion is provided with an actuating handle and with inwardly extending clip units, whereby, when the outer marginal edge of the anchorage plate, with its aperture-traversing metal ribbon, has been positioned under said clips, said anchorage plate is held in position while the induced inward swing of the handle and of the freely swinging edge of its hinge plate effects the bending of the metal ribbon about the anchorage plate.

4. Means for effecting the repeated bending of a metal packaging ribbon about an anchorage plate through whose apertured center portion a selected portion of such ribbon has been passed, comprising, in combination with a pivotally correlated hinge, one plate portion of which is adapted to be non-displaceably secured to an appropriate base, an actuating handle attached to the freely swinging portion of the hinge, securing members positioned along the freely swinging edge of the second one of said hinge plates, whereby an anchorage plate positioned upon the latter with its marginal edge extending under said securing members is held against displacement while the manually induced swing of said

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handle and its attached hinge plate effects the wrapping of the metal ribbon about the anchorage plate.

5. The combination, with a hinge member, one of whose pivotally correlated plate portions is fixedly positioned upon a suitable base, and the freely swinging edge portion of the other of which is provided with inwardly extending clip members, of a handle member operatively connected to said freely swinging hinge plate, said clip members being adapted to hold an engaged apertured anchorage plate against displacement while the manually induced swing of said handle member and of its attached hinge plate effects the wrapping about said anchorage plate of a metal ribbon, a selected portion of which has been preliminarily passed through the aperture in the anchorage plate.

6. A device for securing a metal packaging ribbon to an anchor plate, comprising a base member, a swinging plate hinged on said base plate and having a socket directed toward its hinge to receive the edge of an anchor plate seated on said movable plate and having an aperture through which a metal ribbon has been passed, and a handle on said movable plate for swinging said plate about its hinge with said anchor plate seated thereon, whereby said ribbon is wrapped about said anchor plate.

7. A device for securing a metal packaging ribbon to an anchor plate, comprising a base member, a swinging plate hinged on said base plate and having securing means on its outer part for engaging and holding the outer edge of an anchor plate seated on said swinging plate and having an aperture through which a metal ribbon has been passed with a part of the ribbon lying between the swinging plate and a part of

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the anchoring plate and with the ribbon extending between the inner edge of said anchor plate and said hinged connection, and means for swinging said swinging plate toward said base member and thereby wrapping said ribbon about said anchor plate.

8. A device for securing a metal packaging ribbon to an anchor plate, comprising a base member, a swinging plate hinged on said base plate and having reversely bent clips on its outer part adapted to hook over the outer edge of an anchor plate seated on said swinging plate and having an aperture through which a metal ribbon has been passed with a part of the ribbon lying between said swinging plate and a part of said anchor plate and with the ribbon extending between the lower edge of said anchor plate and said hinged connection and over said base member, and a handle secured to said swinging plate for swinging said swinging plate to a position above and parallel to said base member, whereby said ribbon is wrapped around a part of said anchor plate.

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