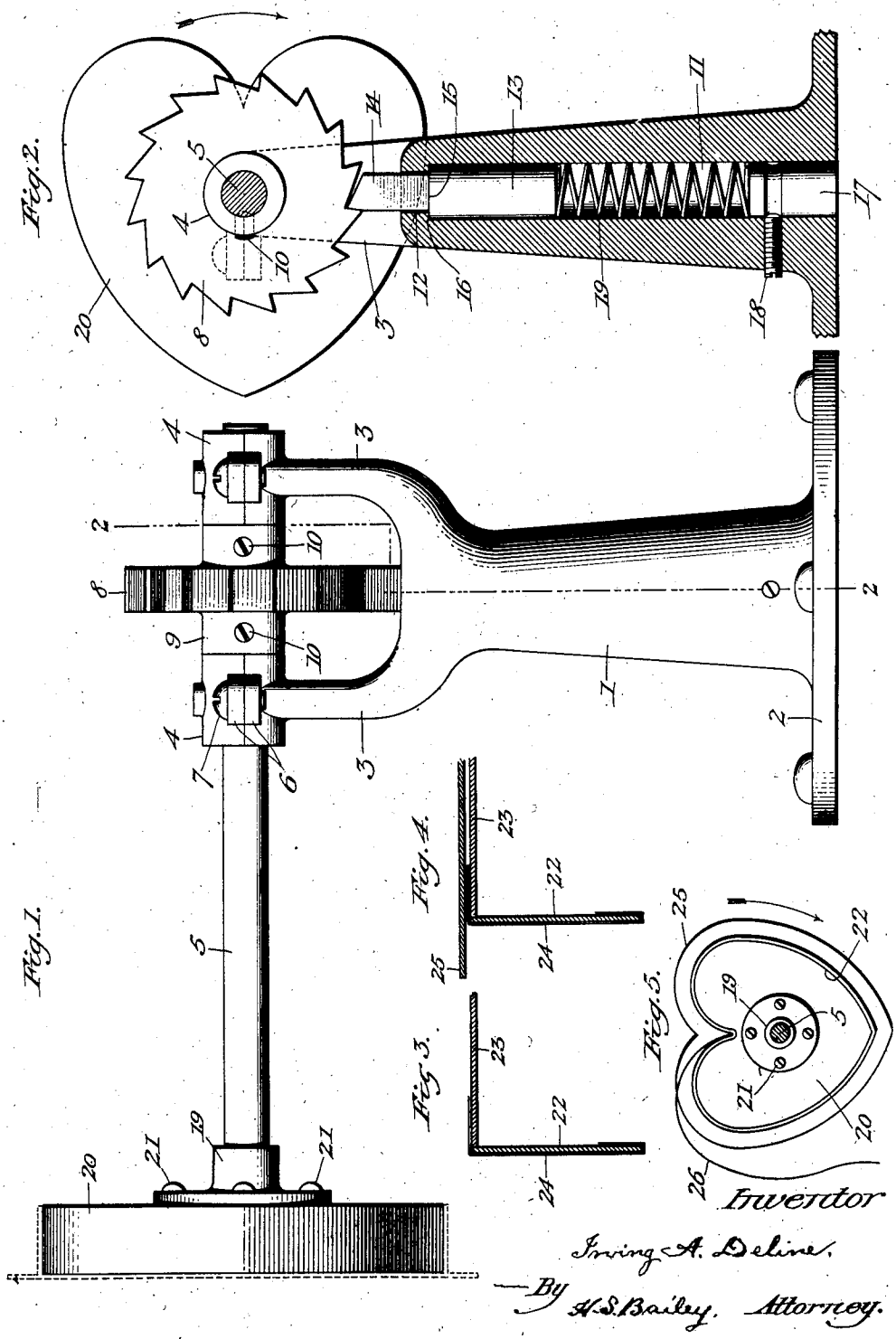
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BOX HOLDER TO FACILITATE THE HAND STRIPPING OPERATION IN THE PRODUCTION OF PASTEBOARD BOXES

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UNITED STATES PATENT OFFICE.

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BOX HOLDER TO FACILITATE THE HAND-STRIPPING OPERATION IN THE PRODUCTION OF PASTEBOARD BOXES.

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My invention relates to improvements in box holders to facilitate the hand stripping operation in the production of paste board boxes.

The main object of the invention is to provide a box-receiving form of any one of a variety of shapes, which is mounted to rotate in one direction, rotation in the opposite direction being prevented by a pawl and ratchet mechanism, whereby the form supporting a box, may be turned to enable a strip to be adhesively secured upon the band of said box, but movement thereof in the opposite direction is prevented when the strip is drawn upon at any time, to cause it to fit tightly about the band.

A further object of the invention is to provide a box-receiving form which is rigidly secured upon one end of a horizontal shaft, the opposite end portion of which is mounted in a standard and is provided with a ratchet wheel engaged by a spring-operated pawl in said standard, whereby the operator can employ both hands in applying a strip to the band of a box supported upon said form; the pawl and ratchet permitting the form to be turned in one direction only, to facilitate the placing of a strip about the band, and to hold the form against reverse rotation when the strip is drawn upon.

These objects are accomplished by the mechanism illustrated in the accompanying drawings in which:—

Fig. 1, is a side elevation of the improved box holder, and

Fig. 2, is a vertical sectional view on the line 2—2 of Fig. 1.

Fig. 3, is a fragmental sectional view showing the band and top portion of a box united by a strip.

Fig. 4, is a view similar to Fig. 3, with the addition of an extension top, and

Fig. 5, is an end view of a form having a box thereon, and showing a strip as being secured about the band of the box.

In the manufacture of paste board boxes, particularly boxes requiring an ornamental or artistic finish, it is necessary to place around the band of the box, a strip of fabric or paper to match the character and color of the material with which the top of the box is covered, this strip being in addition to the regular strip which units the top and band of the box. This kind of stripping is usually done by hand, the box being placed upon a form of the same shape, which is held in one hand while the stripping is done with the other hand. Such a method is both slow and awkward, and the improved device is designed to eliminate these disadvantages, by the provision of a suitable rotary box holder, which is mounted in a standard, thus permitting the operator to use both hands in affixing the strip to the band, as will now be particularly described.

Referring to the accompanying drawings:

The numeral 1 designates a cast metal standard having a flange base 2 which is adapted to be screwed to a bench or table, and the upper end of the standard is yoke shaped, as shown, the two branches 3 thus formed terminating at their ends in hub-like divided bearings 4 in which is rotatably supported one end portion of a horizontal shaft 5. The opposing edges of the divided bearings are formed with lugs or ears 6 having threaded apertures to receive screws 7 by means of which the bearing apertures can be contracted to fit snugly around the shaft. A ratchet wheel 8 having a hub 9, is rigidly secured upon that part of the shaft lying between the bearing 4, the ends of the hub abutting against the adjacent ends of the bearings and thus preventing endwise movement of the shaft. The wheel is held upon the shaft by set screws 10 which pass through the hub and engage the shaft. The standard is formed with a round hole 11 which extends from its lower end to within a short distance of its upper end and then terminates in a square aperture 12 which extends through the upper end of the standard. A cylindrical stem 13 fits slidably in the hole 11 and the upper end of this stem terminates in a pawl 14 which extends through the square aperture 12 in position to engage the teeth of the ratchet wheel. A shoulder 15 is formed at the junction of the upper end of the stem and the pawl, and this shoulder bears against a shoulder 16 at the junction of the upper end of the hole 11 with the square aperture 12 and thus defines the upward movement of the pawl. The lower end of the hole 11 is closed by a plug 17 which is held in place by a set screw 18, and a coil spring 19 is interposed between the plug 17 and the stem 13, and normally holds the stem at the limit of its upward movement so that the pawl 14 will successively engage the teeth of the ratchet

wheel when the same is turned. A flanged hub 19 is secured upon the outer end of the shaft 5 and a box form 20 of any required size and shape is secured to the flange of this hub, preferably by screws 21 to permit of the removal of the form when desired, and the attachment of some other form.

The form used corresponds in size and shape to the style of boxes to be shipped, the form shown being heart shaped.

The box, as ordinarily made, comprises the band 22, the top or bottom 23 which is secured to the band by a strip 24, and the extension top or bottom 25 which is glued to the ordinary top or bottom; the manner of connecting the strip to the band and then to the top, and the manner of securing the extension top to the regular top, forming no part of the present invention.

In the production of boxes of a highly ornamental character, it may be desired to cover the extension tops with paper or silk of a special design, and in this event, the box band must be covered with a strip 26 of material corresponding in color and design to the cover on the top, and this strip 26 is in addition to the regular strip 24 which unites the band to the top, and the present invention is designed to facilitate the placing of strip 26 around the band. In practice, the box, or rather, the upper half, of the box is placed upon the form, as shown in dotted lines, Fig. 1, and in full lines, Fig. 5, and one end of a strip 26 which has previously been coated with glue on one side, is applied to the band, the strip being wide enough to extend about one half of an inch beyond the edge of the band.

The form is then turned in the direction of the arrow, and at the same time, the strip is held taut so that it will fit smoothly and tightly around the band; the ratchet wheel preventing reverse movement of the form when the strip is drawn upon. When the strip has been secured upon the band, the box is removed and the extended portion of the strip is folded in over the edge of the band and against the inner face of the same, which completes the operation.

When it is desired to place strips upon the bands of perfectly round boxes, means are employed to prevent slipping of the box upon the form. Such means, however, are not shown or described as they form no part of the present application.

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

1. In a device of the character described, a standard having an axial hole extending through the same, a shaft mounted in the upper end of said standard having a ratchet wheel rigidly mounted thereon, a spring-actuated pawl in said axial hole in engagement with the ratchet wheel, and a box-receiving form removably secured upon one end of said shaft.

2. In a device of the character described, a standard adapted to be secured to a support and having an axial hole extending through the same and formed with a shoulder near its upper end, a plunger-form of pawl in said axial hole which extends through the upper end of the standard and an abutment on the pawl which engages said shoulder to limit the upward movement of the pawl, a removable plug in the lower end of the axial hole and a coil spring interposed between said plug and the pawl, said standard having branch arms in its upper end provided with alined bearings; a shaft mounted at one end in said bearings, a ratchet wheel on said shaft which is engaged by said pawl and a box-receiving form on the opposite end of said shaft.

In testimony whereof I affix my signature.

IRVING A. DELINE.