

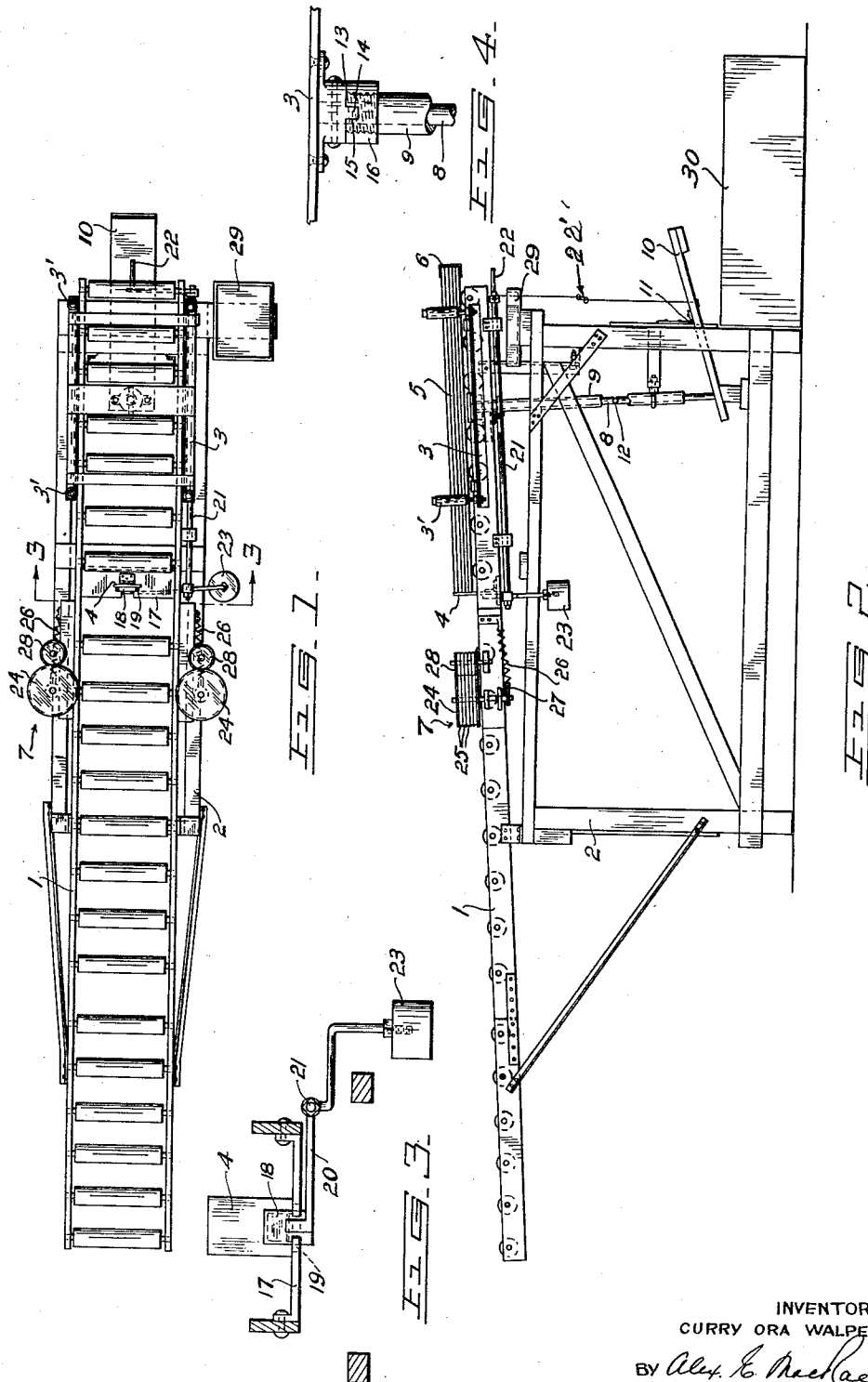
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BUNDLING APPARATUS

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BUNDLING APPARATUS

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2 Claims. (Cl. 100—57)

This invention relates to bundling apparatus and more particularly to apparatus for bundling wall-board lath and the like.

An object of the invention is to provide an apparatus by means of which an operator from one operating position may readily apply bundling clips at various points on the edges of a stack of wallboard lath units or the like. Another object is to provide means for automatically affixing trade names or the like to the various elements of the stack.

The invention will be described with reference to the accompanying drawing in which:

Figure 1 is a plan view of the apparatus,

Figure 2 is a side elevation,

Figure 3 is a partial section on line 3—3 of Figure 1, and

Figure 4 is an enlarged end elevation of a platform positioning means.

In the drawing, 1 is a slightly inclined roller conveyor carried by framework 2, 3 is an elevating platform for the lath bundles, 4 is a trip plate adapted to hold the bundles against movement on the conveyor during the clip applying operation, 5 indicates a bundle in clip applying position on the conveyor, 6 is a clip applied thereto and 7 is a marking means for the bundles. The clip may be of the character disclosed in United States Patent No. 2,021,037, dated November 12, 1935.

The platform 3 is mounted adjacent the receiving end of the conveyor 1 and in its normal lowered position the upper surface thereof is slightly lower than the conveyor surface plane to permit passage of the bundles thereover. Means are provided for elevating the platform and comprise a central standard 8 which carries the platform and which slides within a sleeve 9 and a foot lever 10 secured to the base of standard 8 and hinged to the framework 2 at 11. The platform is adapted to be swung "end for end" when in raised position and for this purpose a ball joint 12 is formed in the standard 8 whereby the platform with the upper portion of the standard 8 may be rotated. Means are necessarily provided for accurately positioning the platform in its lowered position and as shown in Figure 4 comprise a bracket 13 surrounding the standard 8 and secured to the platform and having lugs 14 adapted to engage corresponding grooves 15 in a bracket 16 carried by the top of sleeve 9. The platform 3 may be provided with a number of vertical rollers 3' against which the edges of the bundle may abut.

The trip plate 4 is hinged to a member 17 ex-

tending across the conveyor 1 and carried thereby and means are provided for maintaining the plate in bundle holding position and for allowing the same to trip whereby the bundle may continue along the conveyor. As shown in Figure 3, this means includes a second plate 18 extending through a slot 19 in the member 17 and slidably engaging the trip plate 4 to form a support therefor. The plate 18 is carried by a lever 20 mounted on a shaft 21 extending to the front of the conveyor and provided with a handle 22. A counterweight 23 is also carried by the shaft 22 and normally maintains the plate 18 in engagement with the trip plate 4. It will be observed that rotation of the shaft 21 by means of handle 22 against the action of the counterweight will move the plate 18 by means of lever 20 downwardly out of engagement with the trip plate and thus allow the latter to be tripped. A slip connection 22' may be provided between the handle 22 and foot lever 10 whereby the handle 22 may be operated by the foot lever 10.

The marking means 7 consists of a pair of vertically mounted printing wheels 24 on either side of the conveyor provided on their peripheries with a series of surfaces 25 which may be grooved as shown to correspond with the rounded edges of the lath units in the bundle and which are provided with raised lettering comprising the matter desired to be imprinted on the edges of the individual units of the bundle. A spring 26 having one end attached to a crank arm 27 fixed to the wheel shaft and the other end attached to frame 2 serves to return the wheel to its original position after each printing operation, during which the wheel rotates, against the action of the spring 26, by frictional engagement with the edges of the lath units and effects the desired printing. An inking wheel 28 may be provided for the printing wheel.

A clip tray 29 and an operator platform 30 may be provided as shown.

In operation, the individual elements of the bundle are placed on the front end of the conveyor in the position shown in Figure 2, the trip plate 4 and the vertical rollers 3' serving to accurately position the elements in the bundle. One or more clips are then applied with a suitable tool to the extending end of the bundle. The tool may be of the character shown in United States Patent No. 1,990,763 of February 12, 1935. The foot lever 10 is operated to elevate the platform 3 which engages and raises therewith the bundle. The platform with the bundle is then swung "end for end" and lowered into place

when the required clips are applied to the other end of the bundle. The trip plate 4 is then allowed to trip and the bundle passes down the conveyor by gravity between the printing wheels

5 24 to the discharge end.

I claim:

1. Apparatus for bundling a stack of structural elements comprising an inclined conveyor adapted to receive the elements of the stack at the upper end thereof, means adapted normally to restrain said elements from movement along the conveyor, said means being arranged to hold the stack with one end projecting beyond the upper end of the conveyor whereby bundling means may be applied to said projecting end, means for reversing the longitudinal position of the stack on the conveyor with its other end projecting beyond the upper end of the conveyor whereby bundling means may be applied thereto, means for maintaining the lateral edges of said elements in alignment during assembly of the elements on the conveyor and application of said bundling means, and means for releasing said restraining means whereby said stack may proceed along the conveyor.

2. Apparatus for bundling a stack of structural elements comprising an inclined conveyor adapted to receive the elements of the stack at the upper end thereof, a trip plate carried by the conveyor and arranged to engage one end of said elements and to hold the same with the other end projecting beyond the upper end of the conveyor, said projecting end being adapted to receive bundling means, a platform mounted adjacent the upper end of the conveyor and having a surface adapted for stack engagement normally positioned below the stack engaging plane of the conveyor, means for moving the platform into stack engaging position, means for rotating the platform when in stack engaging position to reverse the longitudinal position of the stack whereby bundling means may be applied to its opposite end, vertically mounted rollers on either side of said platform for maintaining the lateral edges of the elements of the stack in alignment, and means for allowing said trip plate to be tripped by stack engagement to allow the stack to proceed along the conveyor.

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