Feb. 16, 1932. T. S. SCOTT 1,845,726

BOX MARKING MACHINE

Filed June 18, 1928

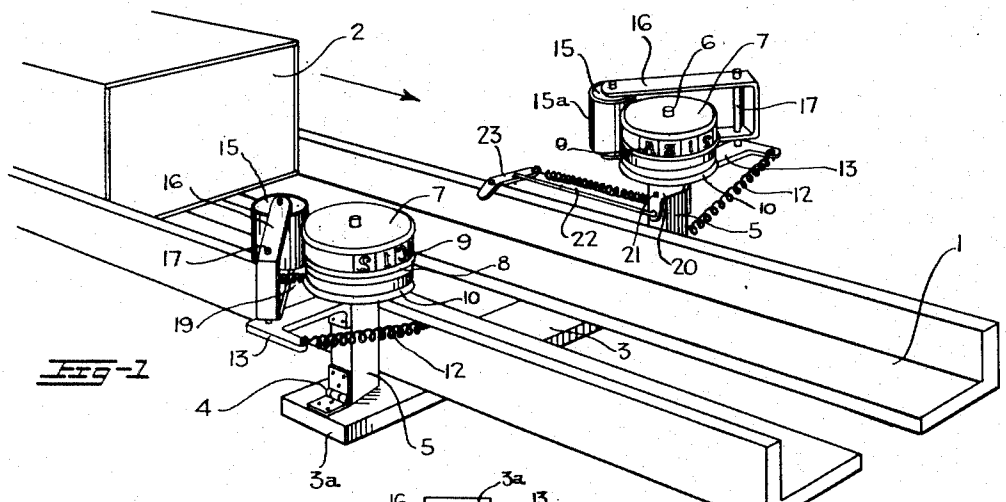


Fig-1

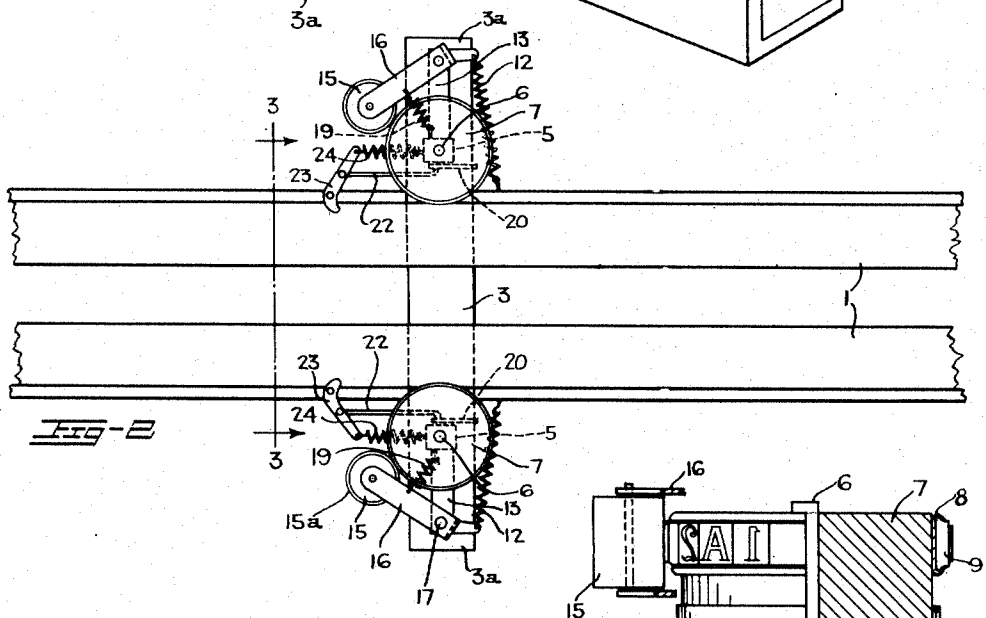


Fig-2

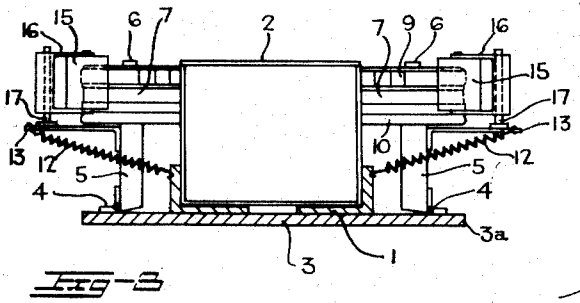


Fig-3

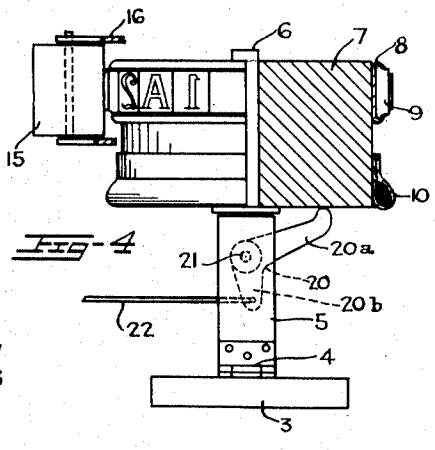


Fig-4

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UNITED STATES PATENT OFFICE

THOMAS S. SCOTT, OF CORDOVA, TERRITORY OF ALASKA

BOX-MARKING MACHINE

Application filed June 18, 1928. Serial No. 286,142.

This invention relates to improvements in box marking devices, and more particularly to box marking means of a character especially adapted for use in canneries where wooden boxes of packed or canned goods are required to be marked when delivered from the cannery chute.

Explanatory to the invention, it will be here stated that with the present-day improved methods of canning, a very elaborate system of box marking has grown into vogue and the matter of marking packed boxes, or cases, of goods with appropriate marks of identification has become quite a problem. It is now common practice to do this work by hand, first by marking one side of the box or case, then the other side. There are a great many disadvantages in this method, namely: It is very slow, requires many persons to carry on the work, is expensive and, when more boxes are marked than are required for a day's run, the markings on the extra boxes must necessarily be removed or covered over. Also, there is always confusion where hand marking is carried on.

In view of the above, it has been the principal object of this invention to provide a mechanically operating box marking mechanism that may be associated with the canning, or packing, line so as to receive the packed crates or boxes and to automatically mark them on both sides as they are delivered from the cannery chute.

It is also an object of the invention to provide a machine of the above character in which the type characters may be easily and readily changed.

A still further object is to provide a marking device that requires practically no attention while in operation.

More specifically, the invention resides in the provision of a box marking machine comprising a guide chute through which the boxes to be marked are delivered from the cannery line and adjacent which, at opposite sides, are rolls on which the type characters for printing are mounted; these rolls being disposed in positions for rolling contact with opposite sides of the boxes as they are delivered along the chute, and means is provided for inking the type characters as the rolls revolve in contact with the boxes' sides.

Other objects of the invention reside in the various details of construction and in the combination of parts as is hereinafter described.

In accomplishing these objects, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of a box marking machine embodied by the present invention.

Figure 2 is a plan view of the same.

Figure 3 is a cross section taken substantially on the line 3—3 in Figure 2.

Figure 4 is an enlarged, sectional detail of one of the type carrying rolls.

Referring more in detail to the drawings—

1 designates a trough, or chute, along which the boxes or cases to be marked, as designated at 2, may be delivered from the cannery line; this trough being a continuation of or an extension that is attached to the cannery chute. In its preferred construction, it consists of two angular guideways providing horizontal base flanges and parallel, vertical side flanges which serve to guide the boxes properly between the printing devices.

Fixed to the underside of the guide chute is a transverse beam 3 having its opposite end portions 3*a* extended beyond the sides of the trough. Mounted on the end portions of the beam, by means of hinges 4, are vertical standards 5 provided at their upper ends with spindles 6 on which rolls 7 are mounted. Each of these rolls is equipped with an encircling band 8, the opposite edges of which are turned outwardly and then inwardly to provide a dove-tailed groove within which the base portions of the type characters 9 are seated, and the rolls are so held that when a box is delivered through the chute they will engage in rolling contact with its opposite side walls. The rolls 7 are also provided about their lower edges with encircling, padded bands 10 which contact with the box walls to provide substantial, frictional contact to insure rotation of the rolls without possible slippage. As is illustrated in Figure 4, the

type characters 9 may be made in individual pieces of rubber, with flanged base portions adapted to be removably applied to the dove-tailed groove provided by the bands 8. This construction permits easy and ready changing of the type characters whenever such is required.

The hinge mountings 4 of the standards 5 permit the standards to swing inwardly or outwardly, and coiled springs 12 are attached to the side flanges of the trough and to brackets 13 that are fixed to the standards so as to thereby maintain a certain desired pressure of the rolls and the type characters against the box sides and to thereby insure satisfactory printing.

Ink is applied to the type by means of inking rolls 15 which are revolubly carried at the swinging ends of yoke-like mounting arms 16 which, in turn, are pivotally mounted by vertical pins 17 fixed in the outer ends of the brackets 13; these latter being extended horizontally from the standards 5 and beyond the mounting rolls, as is best shown in Figure 3. The inking rolls have covers of felt, or other absorbent material, as designated at 15*a*, that is suitable for holding the printing ink, and the rolls are held in contact with the type by means of coiled springs 19 which are attached to the arms 16 and to the mounting standards 5.

I have also provided means for preventing the type rolls from turning except when boxes are moving in contact therewith and which are operated automatically by the boxes are moving in contact therewith and which are operated automatically by the boxes in passing the rolls. These holding devices consist of bell crank levers 20 that are pivotally mounted by pins 21 on the standards 5 directly below the type rolls. One arm of each bell crank, as designated at 20*a*, is adapted to engage with the underside of its corresponding roll to hold the latter against turning and its other arm, 20*b*, is connected by means of a link 22 with a lever 23 that is pivotally mounted on the adjacent side flange of the chute. Coiled springs 24 are attached to the standards and to the levers 23 so as to hold the latter yieldably in such positions that the arms 20*a* of the bell cranks are caused to press upwardly against the type rolls to prevent free rotation. The inner ends of the levers 23 project into the chute so as to be engaged by the boxes in passing and to be moved thereby so as to rock the levers and bell cranks and to release the latter from the type rolls so that the latter may revolve free when engaged by the boxes. As soon as the levers 23 are disengaged by the boxes, the bell cranks are snapped back against the type rolls to stop them and to hold them in proper position for the next oncoming box.

With the device so constructed, its operation would be as follows: Proper, or desired, type characters are first mounted on the type rolls by applying the flanged base portions of the type within the dove-tailed grooves of the roll encircling bands 8, and then the ink rolls are properly inked so that ink may be transferred therefrom to the type when the latter is brought into contact with the rolls. The boxes to be marked are then delivered through the chute and, in passing the levers 23, they move the latter so that through the connecting links 22 the bell cranks 20 are released from the type rolls. Then, as each box passes between the type rolls, the latter are drawn yieldably into contact with the side walls thereof by the springs 12 and are caused to roll thereon. This causes the type to be impressed first against the ink rolls and then against the box sides so as to print the desired characters on the box. As soon as a box disengages the levers 23, the holding devices 20 are released to engage the rolls 7 to hold the type in proper position for the next box.

Printing devices of this character may be made to accommodate boxes of various widths and heights and, by hingedly mounting the standards 5 on which the type rolls are carried, the latter will automatically adjust themselves to any slight variation in the box. Such devices greatly facilitate the marking of boxes since they provide for marking each box immediately as it leaves the cannery chute; they eliminate any possibility of mistakes in marking the boxes; avoid the possibility of marking too many boxes and do the work automatically and without confusion.

It is readily apparent that various details of construction and combinations of parts could be changed without departing from the spirit of the invention and, for this reason, it is not desired that the claims be limited only to the specific details of construction herein illustrated.

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

1. A box marking device comprising a guideway along which boxes may be delivered for marking, rolls mounted at opposite sides of the guideway for rolling contact with boxes passing between them, type characters mounted by said rolls, means for applying ink to the characters and means releasable by boxes delivered through the guideway for preventing free rotation of the rolls.

2. A box marking device comprising a guideway along which boxes may be advanced for marking, rolls mounted at opposite sides of the guideway for rolling contact with opposite sides of boxes delivered between them, means for mounting type characters on the rolls for contact with the box walls, means for applying ink to the characters, a holding latch for each roll and release levers for the

latches mounted in the guideway for contact by boxes delivered through the latter.

3. A box marking device comprising a guideway along which boxes may be delivered for marking, standards hingedly mounted at opposite sides of the guideway, rolls mounted at the upper, swinging ends of the standards for rolling contact with the opposite side walls of boxes delivered through the guideway, resilient means connected with the standards for drawing the rolls against the box walls, type characters mounted by the rolls for engaging the box walls, an inking roller associated with each character roll, yieldable means for causing the inking rolls to be drawn against the character rolls, a latch associated with each character roll for preventing free rotation thereof and a release mechanism for the latches adapted to be actuated by boxes delivered through the guideway.

Signed at Cordova, Alaska, this 26th day of May, 1928.

THOMAS S. SCOTT.