Feb. 18, 1930. M. DAVEY 1,747,860

MEANS FOR USE IN THE SECURING OF LIDS TO FRUIT AND OTHER CASES

Filed Nov. 21, 1927

Fig. 4

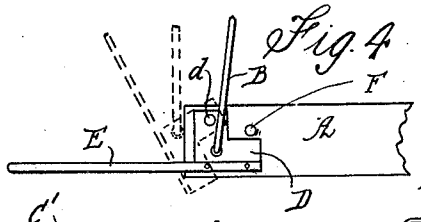


Fig. 1

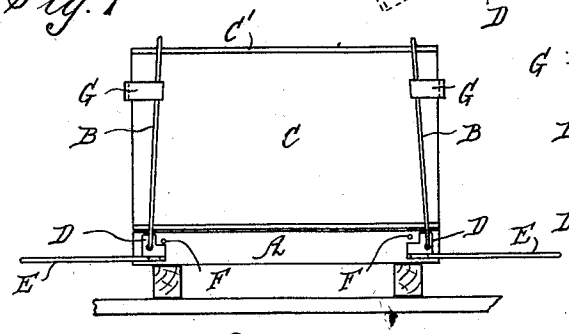


Fig. 2

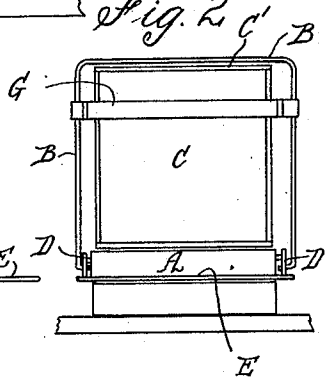


Fig. 3.

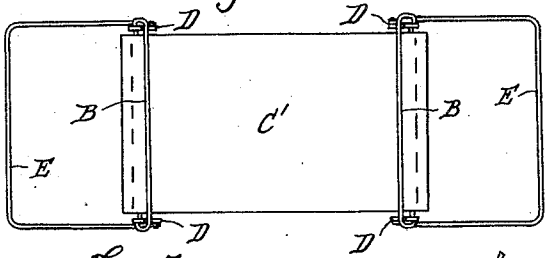


Fig. 5

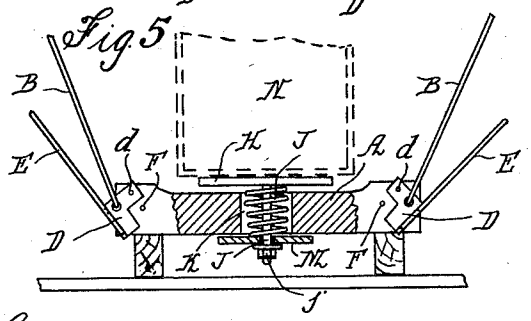
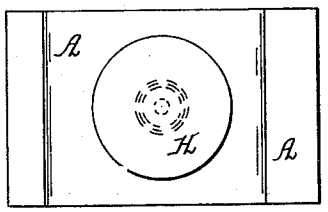


Fig. 6



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UNITED STATES PATENT OFFICE

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MEANS FOR USE IN THE SECURING OF LIDS TO FRUIT AND OTHER CASES

Application filed November 21, 1927, Serial No. 234,736, and in New Zealand December 22, 1926.

This invention relates to means that have been devised more particularly for use in securing the lids of fruit cases, to provide for such lids being drawn down on to the tops of the cases and held firmly while being fastened by the ordinary nails. The means devised may, however, be used in similar circumstances with other packing cases or boxes, more particularly those used for holding goods or articles that require to be pressed down by the lids in order to keep them firmly in the cases.

The means forming the subject of this invention are designed, in the working thereof, to clamp the lid members down on to the box or case top, forcing the two ends thereof hard down on to the top edges of the box or case ends and then to hold them thus positioned, while the nailing is effected to hold the lid permanently in position.

The invention also comprises a construction of apparatus that will provide facilities for wire binding the ends of the box or case while placed in the apparatus and after being freed from the said clamps.

The said apparatus is illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation showing a fruit case in position and with its lid clamped down ready for nailing.

Figure 2 is an end elevation, and

Figure 3 a plan thereof.

Figure 4 is a detail view, on an enlarged scale, showing the clamp carrying and operating means.

Figure 5 is a side elevation, partly in section, and,

Figure 6 a plan of an alternative form of table having means embodied therein to permit of the wire binding of a case ends.

The invention comprises a table or platform A of the required length and width to form a support for the case to rest upon. At each end of this platform a metallic frame B is disposed, such frame being shaped with two side members and a cross bar extending between their top ends, and adapted to pass up on each side of a case C placed on the platform and across its top. The bottom end of each side member is pivotally attached to a disc plate D pivoted at *d* to that side of the platform A, the attachment being made at a point eccentric to the plate's own turning pivot *d*.

By rotating both plates D therefore, the height of the frame B may be varied, and this movement is so adjusted that when the plates are in one position, the frame B exceeds the height of the case on the platform, in order that it may be swung in over the case end, as in Figures 1 to 3, or swung out to clear it, as in Figure 5. When in another position the height is such as to draw the frame down on to the case lid C′, the release and clamping effects being produced by turning the two plates on their pivots *d*. This turning is effected by means of a bow shaped handle E combined with both plates and it is so placed that when drawing the frame down, the pivotal attachments of the frame B will pass slightly beyond the centres of pull, in a well known way, in order that the frame B will lock in the clamping position and hold itself there. Each plate D is prevented from turning too far by means of a stop pin F fixed to project from the side of the table A. In this manner the lid C′ placed on the case C will be drawn downward thereon at each end and tightly held.

The said operation of the clamping frames may be performed by hand on each frame separately, or may be performed on both frames simultaneously by the operation of a pedal lever arranged beneath a supporting table and to which both handles are connected by ropes carried over suitable guide pulleys.

The clamping frame B at each end is adapted to be turned in beyond the lid edge sufficiently far to allow for the clearance necessary for driving in the nails. To provide for this clearance being accurately obtained, and also for it being made uniform in each instance of use, the clamping frame, near its upper end, is provided with an outset stop bar G that engages the case end, when the frame is swung up over its lid and prevents it being swung in further than the amount necessary to provide the said clearance.

In the form of the invention shown in Figures 5 and 6 provision is made for the case C, while being supported on the table, being turned across it so that its two ends will project free beyond the sides of the table and thereby afford facility for placing binding wires round the ends. It is essential for this purpose that the width of the table should be less than the length of the case.

The table top in this case is depressed in its central portion and within the depression a disc plate H is arranged. Such plate is fixed to the upper end of a spindle J which passes down through an aperture K in the table and through a bearing plate M fixed to the table at the bottom of such aperture. A helical spring N is arranged within this aperture and surrounds the spindle J. This spring is in compression between the disc plate H and the bearing plate M and lifts such plate normally upward above the level of the table surface. The supporting strength of this spring and the level to which the plate H is raised, is regulated by means of the nut *j* screwed on to the lower end of the spindle and engaging the underside of the said bearing plate.

This strength is adjusted so that it will sustain the weight of a filled case placed on the disc plate and hold such case just free of the table's surface in order that the case and plate may be swung round to any angle thereon. The case may therefore be disposed longitudinally with the table so that the lid clamping means may be used thereon in the manner before described. In such action the case ends are drawn down on to the table surface to engage solidly therewith, the supporting spring N being compressed by the downward force exerted by the clamping means. Or, the case, when freed from the clamps, may be swung transversely across the table, as indicated by the dotted lines in Figure 5.

The depression made in the top of this table may extend almost throughout its whole length so that the longitudinal bulge caused in the case bottom by the solid packing of the fresh fruit in the case, may be accommodated. The table in the form of appliance shown in Figures 1 to 3 may be similarly depressed between its ends, for a similar purpose.

I claim:—

1. Apparatus of the type described, comprising a supporting table having a central portion disposed beneath the plane of its end portions, a rotatably mounted depressible platform arranged over said central portion and adapted in its normal position to support a packing case above the plane of said end portions, and releasable means for depressing said platform and firmly positioning a packing case carried thereby on the end portions of said platform.

2. Apparatus of the type described, comprising a supporting table having a central portion disposed beneath the plane of its end portions, a rotatably mounted platform arranged over said central portion, a depressible coiled spring disposed beneath said platform and adapted in its normal position to hold said platform, together with a packing case mounted thereon, above the plane of said end portions, and means for controlling the extension of said platform above said plane.

In testimony whereof, I affix my signature.

MASON DAVEY.