Oct. 1, 1957 V. E. ORSINI ET AL 2,808,081

ROCKER CRADLE FOR NAIL BOXES

Filed Feb. 16, 1954 3 Sheets-Sheet 1

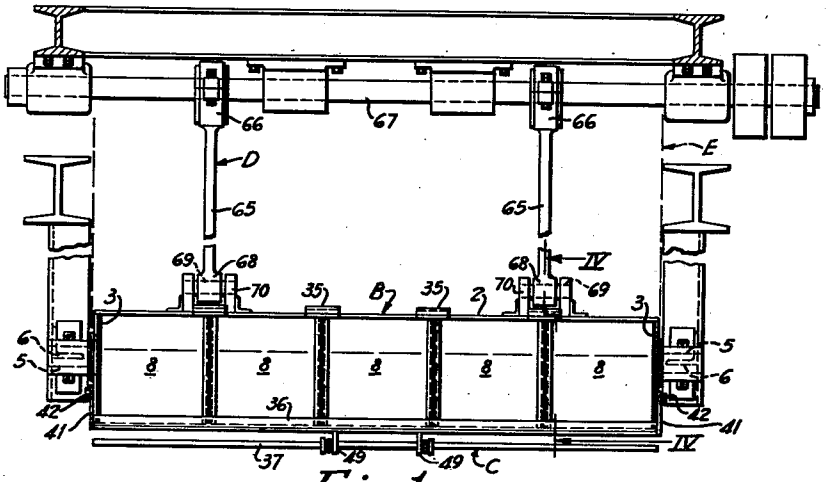


Fig. 1

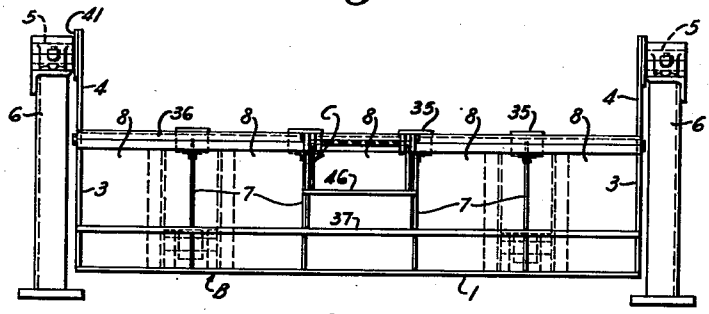


Fig. 2

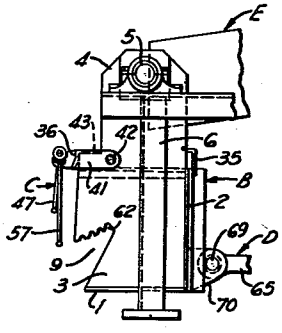


Fig. 3

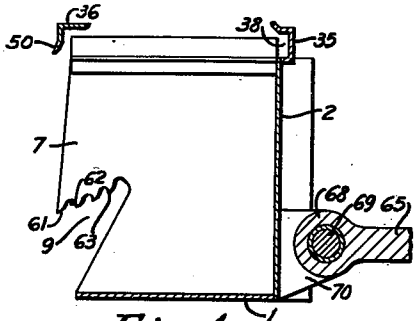


Fig. 4

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Oct. 1, 1957 V. E. ORSINI ET AL 2,808,081

ROCKER CRADLE FOR NAIL BOXES

Filed Feb. 16, 1954 3 Sheets-Sheet 2

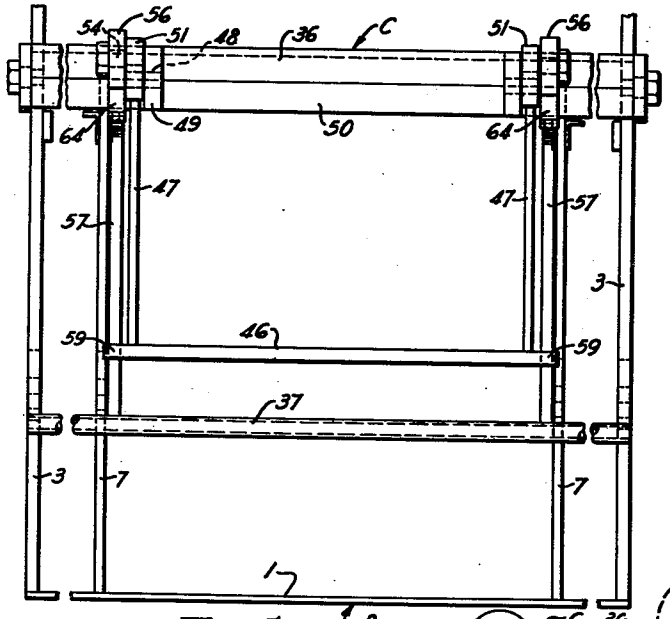


Fig. 5

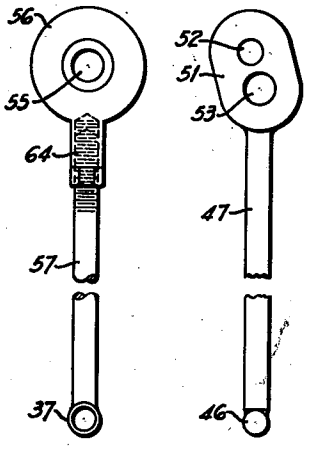


Fig. 7 Fig. 8

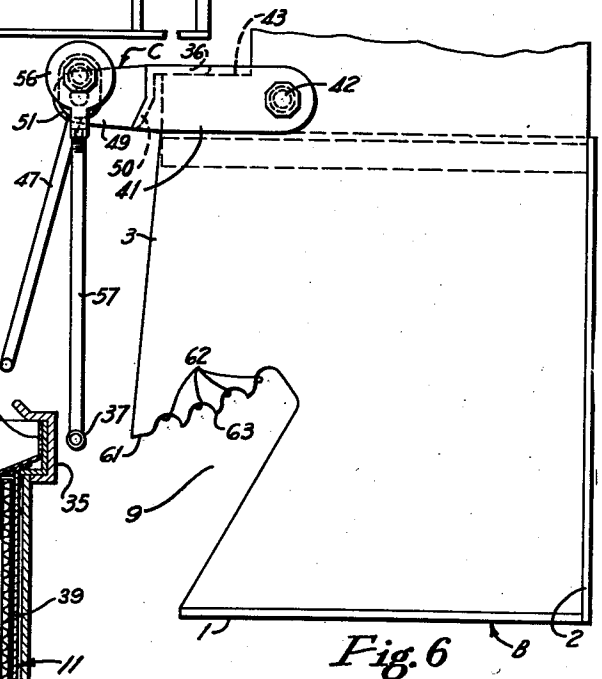


Fig. 6

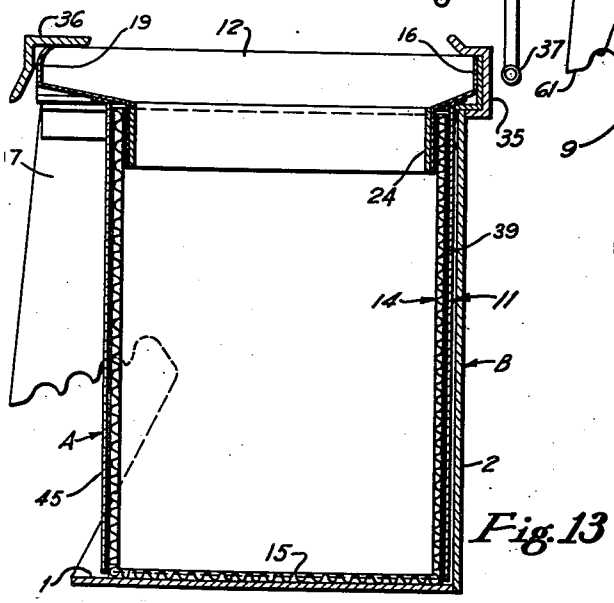


Fig. 13

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Oct. 1, 1957 V. E. ORSINI ET AL. 2,808,081

ROCKER CRADLE FOR NAIL BOXES

Filed Feb. 16, 1954 3 Sheets-Sheet 3

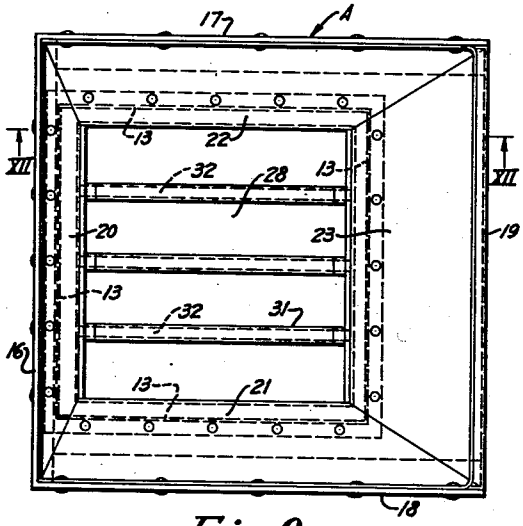


Fig. 9

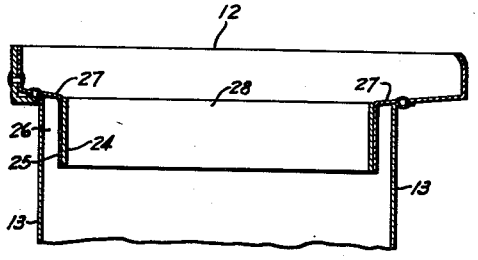


Fig. 12

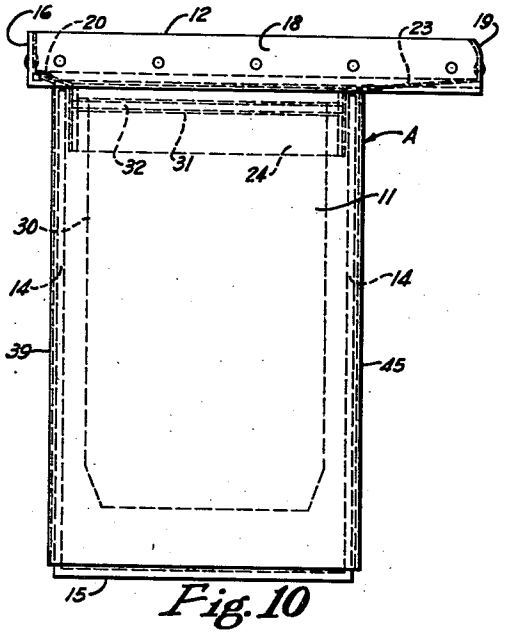


Fig. 10

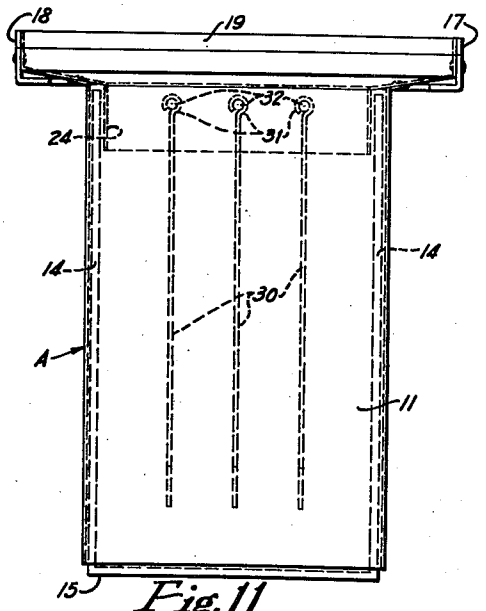


Fig. 11

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2,808,081

ROCKER CRADLE FOR NAIL BOXES

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Application February 16, 1954, Serial No. 410,608

16 Claims. (Cl. 141—72)

This invention relates to a vibrating apparatus for packing nails in containers, and more particularly, to an improved arrangement of apparatus for vibrating paperboard boxes while being filled with nails. In a manner to be described, the apparatus of this invention comprises a rocker cradle in the nature of a compartmented tray having provisions for the reception and vibration of a plurality of paperboard boxes while filling such boxes with a charge of nails.

Paperboard boxes, as distinguished from conventional wooden nail kegs, have advantages which are desirable in the packaging of nails in the customary hundred pound lots. The paperboard boxes of course cost less than the conventional wooden nail kegs and, in addition, are more adaptable to use with modern handling equipment. The packages, being square, may be stacked on pallets for storage and for movement by fork-lift trucks.

Vibration of the containers while being filled with nails is necessary in order to compact the nails into a minimum amount of space. In the absence of vibration, hundred pound lots of nails of different sizes would each have a different volume and require containers tailored to the size of nail. It would thus be necessary to provide as many different sizes of containers as there are different sizes of nails to be packaged. By vibrating the containers, it is possible to use a given size container for the packaging of several sizes of nails. It is thus possible through vibration to use a relatively few concontainers of selected sizes for the many different sizes of nails to be packaged.

Apparatus for vibrating conventional wooden nail kegs while being filled with nails is customarily comprised of a shoe of arcuate shape which is placed against one side of the keg and against which the keg is held by a chain while a vibratory motion is imparted to the shoe. Since paperboard boxes do not have the strength of conventional wooden nail kegs, this type of vibrating apparatus obviously is not useable for vibrating paperboard boxes. Various proposals have been made for the purpose of vibrating paperboard boxes while being filled with nails but none of such proposals has proved entirely satisfactory.

One of the principal objects of this invention is to provide a vibrating apparatus which is particularly adapted for use with paperboard boxes in the packaging of nails.

Another object of the invention is to provide a rocker cradle in the nature of a compartmented tray on which a plurality of paperboard boxes may be supported and vibrated while filling the boxes with a charge of nails.

A still further object of the invention is to provide a filling hopper which both facilitates handling of the paperboard boxes and reinforces the boxes while they are being vibrated and filled with nails.

A still further object of the invention is to provide a rocker cradle on which a plurality of paperboard boxes respectively having reinforcing hoppers of the character

referred to may be placed and held against movement with repsect to the cradle while the cradle is vibrated.

Another object of the invention is to provide in a vibrating cradle of the character referred to a novel arrangement of mechanism for locking the plural container boxes thereon and against movement with respect thereto during vibratory movement of the cradle.

Other objects and advantages of the invention will be apparent from the following description.

In the drawings there is shown a preferred embodiment of the invention. In this showing:

Figure 1 is a plan view of an apparatus constructed in accordance with the principles of this invention;

Figures 2 and 3 are respectively front and side elevational views of the apparatus shown in Figure 1;

Figure 4 is a sectional view taken along the line IV—IV of Figure 1;

Figure 5 is an enlarged and fragmentary front elevational view of a portion of the apparatus shown in Figure 2 and showing in detail the structure of the locking mechanism for holding the boxes in position on the rocker cradle of this invention;

Figure 6 is a side elevational view of the locking mechanism shown in Figure 5;

Figures 7 and 8 are respectively enlarged detail views of the locking levers shown in Figures 5 and 6;

Figures 9, 10 and 11 are respectively top, side and front views of a box reinforcing hopper;

Figure 12 is a partial sectional view taken substantially along the line XII—XII of Figure 9; and

Figure 13 is an assembled sectional view illustrating the relative positions of a paperboard box and its reinforcing housing or hopper with respect to the rocker cradle when supported in position thereon for vibration thereby.

Generally stated, the apparatus of this invention comprises a reinforcing housing and filling hopper A (see Figures 9, 10 and 11) which is assembled on each paperboard box to be filled with nails, a rocker cradle B on which the assembled paperboard boxes and reinforcing filling hoppers A are supported and vibrated, a locking mechanism C for securing the box assemblies in supported positions on the cradle B and against movement with respect thereto, and an eccentric drive D for imparting a vibratory movement to the cradle B. In a manner to be described, the reinforcing hoppers A facilitate handling of the boxes and their emplacement on the rocker cradle B. The rocker cradle B provides a vibrating support for the assembled boxes and reinforcing hoppers A and is in the nature of an open-fronted and compartmented tray providing a plurality of compartments in each of which an assembled box and hopper A is received. After a box assembly is in inserted in each cradle tray compartment, the locking mechanism C is actuated to secure the box assemblies against movement with respect to the cradle B. The eccentric drive D is then operated to vibrate the cradle B and the boxes thereon while a charge of nails is fed into each of the boxes through their hoppers A. The nails are fed to the boxes from the apron or table E (see Figure 3) of a rotating tumbler type nail cleaning mechanism (not shown). The structure of the apron or feed table E and the nail cleaning mechanism which supplies the nails thereto is conventional and forms no part per se of this invention. Accordingly, it has not been illustrated in detail and it will be sufficient to point out that the feed table E extends over the entire length of the rocker cradle B as indicated by the broken line in Figure 1 so that an operator can direct the movement of nails into each of the boxes on the cradle by means of a small hand rake.

The cradle B is fabricated of sheet metal and, as

shown in Figures 1 through 4, comprises a horizontal bottom-wall 1 having a vertical back-wall 2 projecting upwardly from the rear edge thereof, and vertical end-walls 3 projecting upwardly from the end edges thereof. As best shown in Figures 2 and 3, the upper portions 4 of the end-walls 3 extend above the upper edge of the back-wall 2, and have connections at their upper ends with pivots 5 journaled on supporting standards 6 respectively positioned at opposite ends of the cradle B. In this manner, the cradle walls 1, 2 and 3 form a tray having openings along the entire length of its front and top and which is mounted for pivotal movement on the supporting standards 6.

Partitions 7 are arranged at spaced intervals along the length of the tray and together with the end-walls 3 form a plurality of compartments 8 in each of which a box to be filled with nails is received in a manner to be described. Each of the partitions 7 is a sheet metal panel which is normal to and has its back and bottom edges secured to the tray walls 1 and 2. The partitions 7 and the lower portions of each end-wall 3 each have a similar peripheral contour with a recess 9 of the configuration shown in Figures 3 and 4 for locking purposes in a manner to be described.

Prior to insertion of paperboard boxes in the cradle compartments 8, each box has assembled thereon one of the reinforcing housing and filling hoppers A which are constructed as shown in Figures 9 through 12. As shown in these figures, each of the units A comprises a sheet metal housing or sleeve 11 of rectangular shape having a funnel 12 secured to the top thereof. The reinforcing housing or sleeve 11 is square and is comprised of sheet metal side-walls 13 forming a sleeve-like structure open at its top and bottom. In Figures 10 and 11, a paperboard box, designated by the numeral 14, is illustrated in its assembled position within the housing 11, the box 14 being telescopically received and having a snug fit within the housing 11. The housing 11 has a length such that the bottom 15 of the box extends a slight distance below the lower edge of the housing. In a manner to be described, the housing 11 is made in various sizes respectively corresponding to the sizes of the boxes to be filled with nails.

The hopper has a reinforcing rim about the upper edge of the housing 11 which is comprised of a back flange 16, side flanges 17 and 18, and a front flange 19, the flanges 16—19 respectively having funnel parts 20, 21, 22 and 23 which slope inwardly and downwardly with respect to the upper edge of the housing 11. The inner edges of the funnel parts 20, 21, 22 and 23 have a depending lip or flange 24 of rectangular shape, the sides of which are spaced inwardly and parallel to the walls 13 of the housing 11. The sides of the flange 24 are spaced from the housing walls 13, as best shown in Figures 12 and 13, a distance corresponding to the wall thickness of the paper box 14 so that its outer surface 25 has a snug fit with the inner surface at the upper edge of the box 14 on which the unit A is assembled, the upper edge of the box 14 being received in the space 26 as shown in Figure 13. The inner portions 27 of each of the funnel parts 20—23 form a closure at the upper end of the space 26 and act as abutments which engage with the upper edges of the box 14 to limit downward sliding movement of the housing 11 with respect to the box 14. When assembled on the box, the parts 20, 21, 22 and 23 together with the depending flange 24 form the funnel 12 which has an opening 28 of rectangular shape through which nails may be charged into the box 14.

A plurality of vertical parallel distributing baffles 30 are mounted in a position depending from the funnel flange 24. The baffles 30 extend from front to rear of the opening 28 and have a length and width slightly less than the interior dimensions of the box 14. Each of the baffles has an eyelet 31 at its upper end in which a pivot bar 32 is received. The pivot bars mounting the baffles 30 have their ends secured to opposite sides of the depending flange 24 adjacent the rear and front flanges 16 and 19. The distributing baffles 30 improve the compacting action of the vibrating movement on the nails being filled in the box 14.

As indicated above, a relatively few different sizes of boxes are required for packaging different sizes of nails. The boxes are square and have the same vertical height but their cross-sectional area is varied to provide the volume necessary for the different nail sizes. This requires that units A be provided with sleeves 11 of a size corresponding to the size of the box to be used, a set of a plurality of units A being provided for each of the different box sizes. Referring to Figure 9, it will be noted that the funnel parts 21, 22 and 23 at the sides and front of the hopper are wider than the back funnel part 20. For larger sized boxes, the width of the funnel parts 21, 22 and 23 is made smaller to provide larger openings 28 and thus accommodate or adapt the hopper for sleeves 11 of a larger size, and this can be done without changing the width of the funnel part 20 which is the same in all of the hopper units A. The rim of the hopper A as defined by the flanges 16—19 has a peripheral contour which is the same in all cases regardless of the size of the opening 28 and sleeve 11 attached thereto which is determined by the size of the box over which the sleeve 11 is positioned. The spacing of the flanges 16—19 and their vertical position is kept the same regardless of the size of the reinforcing housing 11 and box received therein in order to render the locking mechanism C effective to secure the boxes in a position supported on the cradle B.

The locking mechanism C (Figures 1 and 2) includes holding elements 35 at the rear of the cradle tray B and holding elements 36 and 37 at the front of the cradle B. The holding elements 35 are channel sections of relatively short length respectively secured to the upper edge of the back-wall 2 in positions straddling each partition member 7. The channel sections 35 provide forwardly opening pockets 38 (see Figure 4) in which the back hopper flange 16 is received when a unit A is inserted in one of the compartments 8 with the back-wall 39 of the sleeve 11 abutting against the tray back-wall 2 as shown in Figure 13. Since the height of the housings 11 is the same for the different sized boxes, it will be apparent that the flanges 16 of the different units A will always fit in the channel openings 38 with the bottom 15 of the box resting on the bottom-wall 1 of the cradle tray. While the elements 35 are shown as being relatively short metal channel sections, it will be understood that a single channel extending over the entire length of the upper edge of the back-wall 2 may be employed if desired.

The front locking element 36 is comprised of an angle section which extends over the entire length of the rocker cradle and has mounting arms 41 (Figures 3 and 6) at its ends extending inwardly and pivoted at 42 to the tray end-walls 3. Each end-wall has a horizontal ledge 43 which engages with an end of the angle section 36 to limit downward pivotal movement thereof beyond the position shown in Figure 3 when no box assemblies are in the compartments 8. To mount a box assembly in the compartment 8, the angle section 36 is pivoted upwardly from the position shown in Figure 3 to a position in which it clears the hopper A of the box assembly so that the box assembly may be moved to a position in which the rear flange 16 of the hopper A is received in pocket 38 in one of the holding channels 35 as described above. Upon lowering of the angle section 36, it engages over the front flange 19 of the hopper A as shown in Figure 13 in which position it is effective to secure the hopper A including the back flange 16 against movement with respect to the holding channel 35, and to maintain the back-wall 39 of the housing 11 engaged with the rocker cradle back-wall 2.

The locking element 37 is a tube which is locked in a position engaging the front side 45 of the sleeve housing 11 and assists the action of the locking element 36 in holding the sleeve 11 in position with its back side 39 engaged with the cradle tray back-wall 2. The mounting and operation of the locking tube 37 will be best understood by reference to Figures 5 through 8 which show the structure by which it is mounted and actuated to an operative latching position. In this showing, the numeral 46 designates a manually operable locking bar which has lever arms 47 connected with its ends, the upper ends of the levers 47 having connections to pivots 48 carried by brackets 49 secured to the front flange 50 of the pivotally mounted angle section 36. As best shown in Figure 8, each lever 47 has at its upper end a hub 51 having an opening 52 which is eccentrically located with respect to the pivot opening 53 in which the pivot mounting pin 48 is received. As shown in Figure 5, pivot pins 54 are mounted in the eccentric openings 52 and have their outer ends extending through openings 55 (Figure 7) in hubs 56 respectively connected with the upper ends of mounting rods 57, the lower ends of the mounting rods 57 being connected with and supporting the locking tube 37. By reason of the eccentric location of the openings 52 and pivot pins 54 therein, the rods 57 are raised and lowered to move the locking tube 37 to and from a locked position upon rotation of the levers 47 by the manual operating bar 46. When the bar 46 is rotated in a clockwise direction from the position shown in Figure 6, the locking tube 37 is lowered to move it out of its locked position in a manner to be described, and when the bar 46 is rotated in a counter-clockwise direction to return it to the position shown in Figure 5, the tube 36 is elevated to a locked position. When the tube 37 is in its locked position, the ends 59 of the bar 46 engage against the bars 57, and in this position, the tube 37, rod 46, and axis of the pivot openings 53 and 55 lie substantially in a common plane so that vibration is ineffective to rotate the bar 46 and release the locking tube 37 for movement out of its latched position.

It will be recalled that the cradle tray end-walls 3 and partition walls 7 are provided with recesses 9 of a similar shape. As best shown in Figure 6, the upper edge 61 of the recess 9 is provided with a plurality of locking notches 62 for reception of locking tube 37. The notches 62 and particularly their tips 63 are positioned along an arc the center of which is substantially concentric to the path of swinging movement of the tube 37 about its pivot supports 54. To lock the tube 37 in a selected one of the recesses 62, the operating bar 46 is pulled outwardly to rotate it in a clockwise direction and lower the tube 37 to a position in which it will clear the tips 63 along the edge 61 of the recess 9 so that it may be swung inwardly into a position engaged with the outer side 45 of a box reinforcing housing 11 in the compartments 8. The locking bar 46 is then rotated in a clockwise direction, and its return rotation in this manner is effective to raise the locking tube 37 into engagement with similar recesses 62 in each of the partitions 7 and cradle end-walls 3.

In connection with the description of the hopper reinforcing unit A shown in Figures 8 through 11, it will be recalled that units A are provided with sleeves 11 of different sizes and in which the front walls 45 of the sleeves are located at relatively different positions with respect to the sleeve back-wall 39. The notches 62 as shown in Figure 5 are spaced from each other in such manner that the locking tube 37 will engage the front surface 45 on the sleeves of the different sizes provided. For the sleeve 11 used on the smallest size of box, the tube 37 will engage in the notch 62 at the innermost end of the recess 9, and its engagement in the other notches will be dependent upon the size of box being filled and the size of the reinforcing sleeve 11.

As shown in Figure 7, the upper ends of the mounting bars 57 have threaded connections at 64 with the hub 56 by which the position of the locking bar 37 with respect to the hub 56 may be adjusted. This adjustment enables the vertical position of the locking tube 37 to be varied so that it will engage snugly in the recesses 62.

After boxes having reinforcing hopper units A assembled thereon are positioned in each of the compartments 8 and the mechanism C has been actuated to lock each of the box assemblies including the reinforcing hopper units A against movement with respect to the cradle B, the apparatus is in condition for vibration of the cradle and filling a charge of nails into each of the boxes. The vibrating mechanism D for vibrating the cradle B comprises a pair of actuating shafts 65 respectively having an eccentric driving connection 66 at one end thereof of a drive shaft 67 which is effective to reciprocate the bars 65 over a short path upon rotation thereof. The other ends 68 of the bars 65 have pivotal connections with pins 69 which have their ends supported in brackets 70 secured to the cradle tray back-wall 2. It will be recalled that the rocker cradle B is pivotally supported by the pivots 5 in the supporting standards 6 and is thus mounted for movement relative to the supporting standards 6. By reason of this mounting, the eccentric drive D is effective to impart a vibrating movement to the rocker cradle B which is transmitted to the paperboard boxes being filled with nails through the hopper units A, the units A being secured against movement with respect to the rocker cradle B by the locking mechanism C.

Attention is particularly directed to the manner in which the hopper units A facilitate handling of boxes before and after filling with nails. In operation, the units A are assembled on empty boxes by sliding the sleeves 11 downwardly over the sides thereof to a position in which the upper box edges abut against the under side of the funnel portions 20—23. Thereafter, frictional engagement of the hopper sides 11 with the side surfaces of a box is effective to maintain it assembled in the hopper, while the flanges 16—19 furnish a convenient hand grip for handling the assembled hoppers and boxes both during insertion in the compartments 8 and removal therefrom after filling with nails. Removal from the compartments is effected simply by sliding the assembly outwardly over the cradle tray bottom 1 and onto conveyor rollers (not shown) for delivery of the boxes to a station where closures therefor may be applied. After a box has been filled with nails and removed from a compartment 8, its hopper unit A may be readily removed by pulling upwardly on the hand grips provided by the flanges 16—19, the weight of the nails in the box being effective to hold the box against upward movement with its reinforcing housing 11.

While one embodiment of our invention has been shown and described it will be apparent that other adaptations and modifications may be made without departing from the scope of the following claims.

We claim:

1. An apparatus for filling a paperboard box with nails and the like comprising a sleeve-like reinforcing housing open at its top and bottom in which the box is received, a cradle having a bottom-wall and a back-wall projecting upwardly from the rear edge of said bottom-wall, said cradle forming a support for said housing and the box received therein with the bottom of said box supported on said bottom-wall and said housing engaged with said back-wall, an anchoring bar having a pivotal connection with said cradle for movement to and from a position in which it is effective to hold said housing engaged with said back-wall, and means for imparting a vibratory movement to said cradle.

2. An apparatus for filling a paperboard box with nails and the like comprising a sleeve-like reinforcing housing open at its top and bottom in which the box is received, a cradle having a bottom-wall and a back-wall projecting upwardly from the rear edge of said bottom-

wall, said cradle forming a support for said housing and the box received therein with the bottom of said box supported on said bottom-wall and said housing engaged with said back-wall, an anchoring bar having a pivotal connection with said cradle for movement to and from a position in which it is effective to hold said housing engaged with said back-wall, releasable latching mechanism for locking said anchoring bar against movement out of its said holding position, and means for imparting a vibratory movement to said cradle.

3. An apparatus for filling a paperboard box with nails and the like comprising a sleeve-like reinforcing housing open at its top and bottom in which the box is received, a reinforcing rim secured to and extending about the upper edge of said housing, a cradle having a bottom-wall and a back-wall projecting upwardly from the rear edge of said bottom-wall, said cradle forming a support for said housing and the box received therein with the bottom of said box supported on said bottom-wall and with said housing engaged with said back-wall, an anchoring flange secured to said back-wall and engaged with a back edge of said reinforcing rim when said box is in a position supported on said cradle, an anchoring bar having a pivotal connection with said cradle for movement to and from a position in which it is engaged with a front edge of said reinforcing rim for holding said reinforcing rim against movement out of an anchored position with its back edge engaged with said anchoring flange, and means for imparting a vibrating movement to said cradle and to the box and reinforcing housing mounted thereon.

4. An apparatus as defined in claim 3 characterized by the provision of a manually operable latch for locking said anchoring bar against pivotal movement out of its said reinforcing flange engaging and holding position.

5. An apparatus for charging boxes with nails and the like comprising a cradle in the form of a tray having an unobstructed opening at the front thereof, said tray including a bottom-wall and a pair of end-walls and a back-wall respectively projecting upwardly from the edges of said bottom-wall at opposite ends and the back thereof, a plurality of partitioning members at laterally spaced intervals of said bottom-wall and projecting forwardly from said back-wall and dividing said tray into a plurality of compartments, each box to be charged having a sleeve-like reinforcing housing telescopically engaged over its outer surfaces, each of said compartments being adapted to receive a box to be charged with its bottom supported on said bottom-wall and its reinforcing housing engaged with said back-wall, an anchoring bar having mounting arms at its ends respectively provided with pivotal connections to said tray end-walls and mounting said bar for pivotal movement to and from a position in which it is effective to hold each reinforcing housing engaged with said back-wall and to prevent movement of each box in said housings with respect to said tray, and means for imparting a vibratory movement to said cradle.

6. An apparatus for charging boxes with nails and the like comprising a cradle in the form of a tray having an unobstructed opening at the front thereof, said tray including a bottom-wall and a pair of end-walls and a back-wall respectively projecting upwardly from the edges of said bottom-wall at opposite ends and the back thereof, a plurality of partitioning members at laterally spaced intervals of said bottom-wall and projecting forwardly from said back-wall and dividing said tray into a plurality of compartments, each box to be charged having a sleeve-like reinforcing housing telescopically engaged over its outer surface, a reinforcing rim secured to and extending about the upper edge of each of said housings, each of said compartments being adapted to receive one of said housings and box therein, anchoring flanges secured to said tray back-wall and engaged with the back edge of the reinforcing rim on each housing received in one of said compartments, an anchoring bar having mounting arms at its ends respectively provided with pivotal connections to said tray end-walls and mounting said bar for pivotal movement to and from an operative position in which it is engaged with the front edges of each reinforcing rim on the housings received in said compartments, engagement of said anchoring bar with said reinforcing rims being effective to hold the reinforcing rims against movement with respect to said anchoring flanges and to maintain said housings engaged with said back-wall, and means for imparting a vibrating movement to said cradle and thereby to each box and reinforcing housing in said compartments.

7. An apparatus for charging boxes with nails and the like comprising a cradle in the form of a tray having an unobstructed opening at the front thereof, said tray including a bottom-wall and a pair of end-walls and a back-wall respectively projecting upwardly from the edges of said bottom-wall at opposite ends and the back thereof, a plurality of partitioning members at laterally spaced intervals of said bottom-wall and projecting forwardly from said back-wall and dividing said tray into a plurality of compartments, each of said compartments being adapted to receive a box to be charged, a support having pivotal connections with said tray end-walls at the upper edges thereof and mounting said tray for pivotal movement with respect thereto, and means for holding boxes positioned in said compartments against movement with respect to said tray during vibratory pivotal movement thereof comprising a bar having mounting arms at its ends respectively provided with pivotal connections to said end-walls and mounting said bar for pivotal movement to and from an operative position in which it extends across the openings at the front of said compartments.

8. In combination, an apparatus for filling a paperboard box with nails and the like comprising an assembly including a box to be filled and a sleeve-like structure open at its top and bottom and having telescopic engagement with and reinforcing the box side-walls, a cradle having a bottom-wall and a back-wall projecting upwardly from the rear edge of said bottom-wall, said assembly being supported on said cradle with its back side engaged with said back-wall and the bottom of the box supported on said bottom-wall, a support on which said cradle is mounted for vibrating movement relative thereto, and means connected with said cradle and releasably engaged with and holding said assembly against said back-wall during vibratory movement of the cradle.

9. In combination, an apparatus for filling a paperboard box with nails and the like comprising an assembly including a box to be filled and a sleeve-like structure open at its top and bottom and having telescopic engagement with and reinforcing the box side-walls, a cradle having a bottom-wall and a back-wall projecting upwardly from the rear edge of said bottom-wall, said assembly being supported on said cradle with its back side engaged with said back-wall and the bottom of the box supported on said bottom-wall, a support on which said cradle is mounted for vibrating movement relative thereto, and an anchoring member mounted on said cradle for movement to and from a position in which it is engaged with the front side of said assembly and is effective to hold said assembly engaged with said back-wall.

10. In combination, an apparatus for filling a paperboard box with nails and the like comprising an assembly including a box to be filled and a sleeve-like structure open at its top and bottom and having telescopic engagement with and reinforcing the box side-walls, a reinforcing rim secured to and extending about the upper edge of said structure, a cradle having a bottom-wall and a back-wall projecting upwardly from the rear edge of said bottom-wall, said assembly being supported on said cradle with its back side engaged with said back-wall and the

bottom of the box supported on said bottom-wall, a support on which said cradle is mounted for vibrating movement relative thereto, and an anchoring member mounted on said cradle for movement to and from a position in which it is engaged with said rim and thereby effective to hold said assembly engaged with said back-wall.

11. In combination, an apparatus for filling a paperboard box with nails and the like comprising an assembly including a box to be filled and a sleeve-like structure open at its top and bottom and having telescopic engagement with and reinforcing the box side-walls, a filling hopper secured to the upper edge of said sleeve-like structure including a reinforcing rim having funnel parts connected with its inner edge and with the top edge of said structure, said funnel parts having inner edges defining a filling opening for charging materials into said box, a cradle having a bottom-wall and a back-wall projecting upwardly from the rear edge of said bottom-wall, said assembly being supported on said cradle with its back side engaged with said back-wall and the bottom of the box supported on said bottom-wall, a support on which said cradle is mounted for vibrating movement relative thereto, and an anchoring member mounted on said cradle for movement to and from a position in which it is engaged with said rim and thereby effective to hold said assembly engaged with said back-wall.

12. In combination, an apparatus for filling a paperboard box with nails and the like comprising an assembly including a box to be filled and a sleeve-like structure open at its top and bottom and having telescopic engagement with and reinforcing the box side-walls, a reinforcing rim secured to and extending about the upper edge of said structure, a cradle having a bottom-wall and a back-wall projecting upwardly from the rear edge of said bottom-wall, said assembly being supported on said cradle with its back side engaged with said back-wall and the bottom of the box supported on said bottom-wall, an anchoring flange secured to said back-wall and engaged with the back edge of said reinforcing rim when said assembly is supported on said cradle, a support on which said cradle is mounted for vibrating movement relative thereto, and an anchoring member mounted for movement on said cradle to and from a position in which it is engaged with a front edge of said reinforcing rim for holding said reinforcing rim against movement out of an anchored position with its back edge engaged with said anchoring flange.

13. An apparatus as claimed in claim 12 characterized

by the provision of manually operable mechanism for locking said anchoring member out of its rim holding position, said latching mechanism including an operating member mounted for movement on said cradle to and from a position engaged with the front of said assembly for holding it against movement with respect to said back-wall.

14. An apparatus as defined in claim 13 characterized by said reinforcing rim having funnel parts connecting it with the upper edge of said sleeve-like structure and defining a filling opening for charging materials into the box of said assembly.

15. In combination, an apparatus for charging boxes with nails and the like comprising a cradle in the form of a tray having an unobstructed opening at the front thereof, said tray including a bottom-wall and a pair of end-walls and a back-wall respectively projecting upwardly from the ends and back of said bottom-wall, a plurality of partitioning members at laterally spaced intervals of said bottom-wall and projecting forwardly from said back-wall and dividing said tray into a plurality of compartments, an assembly including a box to be charged and a sleeve-like structure open at its top and bottom and having telescopic engagement with and reinforcing the box side-walls, each of said compartments being adapted to receive one of said assemblies with its back side engaged with said back-wall and the bottom of its box supported on said bottom-wall, and an anchoring member mounted on said cradle for movement to and from a position in which it is effective to hold each assembly engaged with said back-wall, and a support on which said cradle is mounted for vibrating movement relative thereto.

16. An apparatus as claimed in claim 15 characterized by said support comprising supporting standards positioned outwardly of each of said tray end-walls and respectively having pivotal connections with the upper ends of said end-walls.

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