

May 16, 1961

R. H. CARLTON
SHOE DISPENSER

2,984,530

Filed Sept. 24, 1957

2 Sheets-Sheet 1

Fig. 2

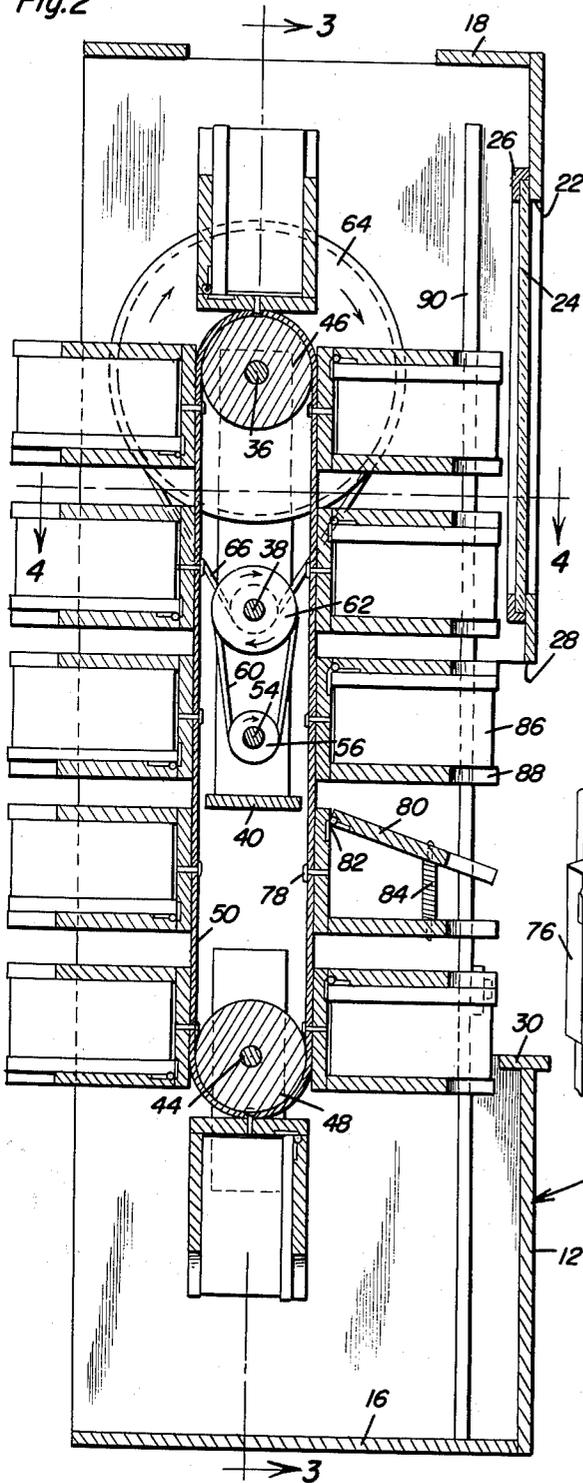
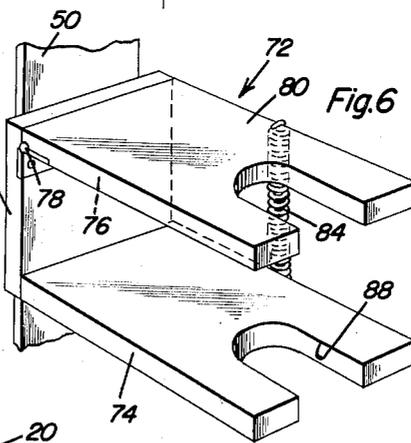
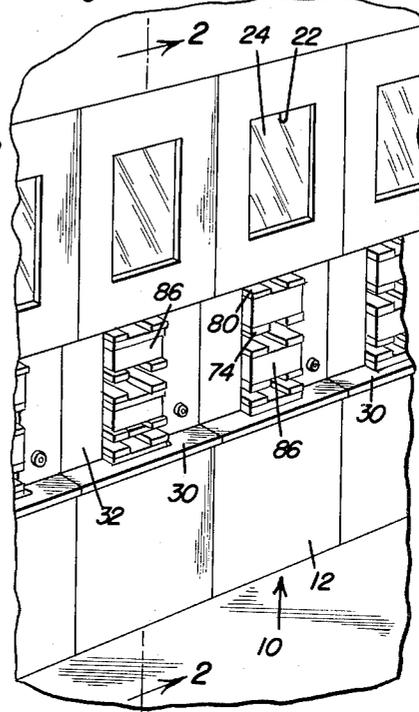


Fig. 1



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Fig. 3

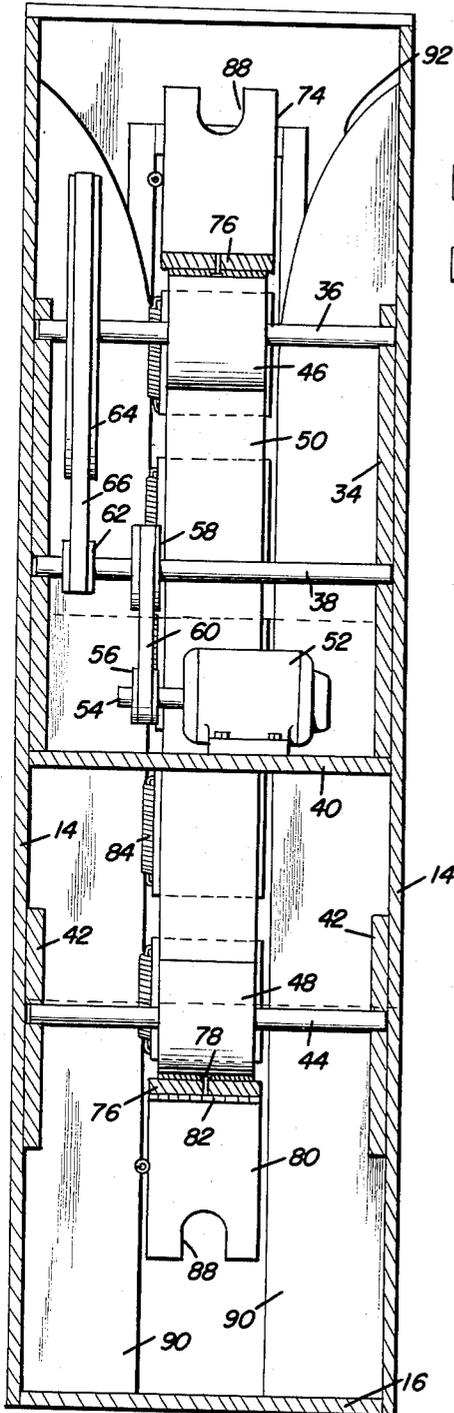


Fig. 4

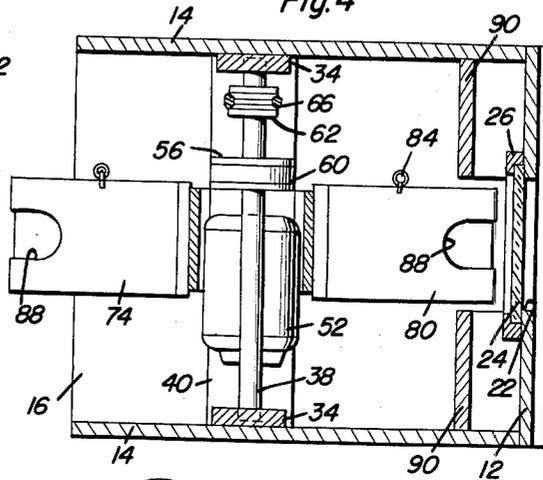
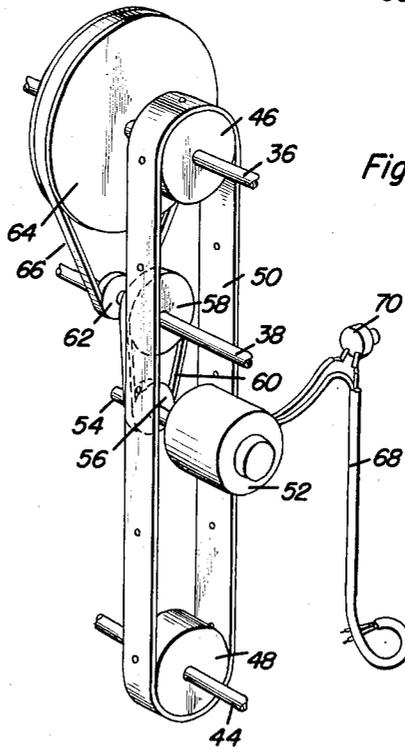


Fig. 5



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SHOE DISPENSER

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5 Claims. (Cl. 312—97)

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The present invention generally relates to a mechanism for dispensing articles and more particularly to a dispenser for shoes which are boxed in conventional shoe boxes.

An object of the present invention is to provide a shoe dispenser which may be operated by a potential buyer for movement of a desired style and size pair of shoes to a position for access whereby the potential customer may serve himself without benefit or aid of a shoe salesman so that his selection may be carefully made without any persuasive sales talk, after which his selection may be carried to a cashier, where it may be paid for thus providing an arrangement enabling customers to select a pair of shoes of desired style, color and size without requiring the services of a salesman.

Another object of the present invention is to provide a shoe dispenser housed in an attractive cabinet which is driven electrically by a switch operated by a potential customer for moving a desired pair of shoes to a position for access thereto.

A further object of the present invention is to provide a shoe dispenser having novel means for grippingly engaging a shoe box and yet permitting easy access thereto.

A further important object of the present invention is to provide a shoe dispenser which is extremely simple in construction, easy to operate, easy to refill, attractive and long lasting but relatively inexpensive to manufacture.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a plurality of shoe dispensers constructed in accordance with the present invention;

Figure 2 is a longitudinal, vertical sectional view taken substantially upon a plane passing along section line 2—2 of Figure 1 illustrating the details of construction of the dispenser of the present invention;

Figure 3 is a longitudinal, sectional view taken substantially upon a plane passing along section line 3—3 of Figure 2 illustrating further structural details of the shoe dispenser;

Figure 4 is a transverse, plan sectional view taken substantially upon a plane passing along section line 4—4 of Figure 2 illustrating further structural arrangements of the shoe dispenser;

Figure 5 is a schematic perspective view showing the drive mechanism for the shoe dispenser; and

Figure 6 is an enlarged perspective view illustrating the details of the shoe box gripping mechanism.

Referring now specifically to the drawings, the numeral 10 generally designates the shoe dispenser of the present invention. The dispenser 10 includes a vertically elongated cabinet having a front wall 12 and side walls 14 with the back being open and with the cabinet being also provided with a bottom 16 and top member 18. The

cabinet in general is designated by the numeral 20 and may be constructed of any suitable material such as metal or wood and is vertically elongated and relatively narrow in width whereby a multiplicity of shoe dispensers may be arranged in side-by-side relation generally as illustrated in Figure 1.

The front wall 12 is provided with an enlarged viewing opening 22 adjacent the upper end thereof provided with a transparent panel 24 of glass, plastic or the like with the panel 24 being held in position by a peripheral rabbeted frame 26 extending around the periphery of the panel 24 and secured to the inner surface of the front wall 12 thus providing a viewing window for the front panel or wall 12 of the cabinet 20.

Below the viewing window or panel 24 is provided another enlarged opening 28 which is in the form of an access opening and which extends partially into the side walls 14 thus providing a recessed delivery chamber in the side walls that extends entirely across the front of the chamber. The access opening 28 is enlarged both vertically and horizontally with the bottom edge of the opening 28 having a ledge or shelf member 30 secured thereto. The side edges of the access opening 28 are partially closed by panels 32 which extend inwardly from the bottoms of the recesses in the side walls to a position adjacent the articles to be dispensed thus providing an intermediate wall which affords a neat appearance and closes all unnecessary areas of the dispenser.

Disposed against the inner surface, and secured thereto, of the side walls 14 is a plurality of vertically extending bracket members 34 journaling transverse shafts 36 and 38. A transverse supporting plate 40 extends between the side walls 14 immediately below the ends of the vertical brackets 34. Also, vertical brackets 42 are provided below the transverse plate 40 for journaling a shaft 44 therein.

The shaft 36 is provided with a cylindrical roller 46 thereon while the shaft 44 is provided with a cylindrical roller 48 with the rollers 46 and 48 being disposed in vertically aligned and spaced relation for receiving an endless flexible conveyor or belt 50 which encircles the rollers 46 and 48 respectively and is provided with two spaced parallel vertical runs which are substantially parallel to the front wall 12.

An electric motor 52 is mounted on the transverse supporting plate 40 and provided with a drive shaft 54 having a V-belt pulley 56 thereon which is in alignment with a larger V-belt pulley 58 mounted on the shaft 38 for receiving an encircling V-belt 60 for driving the shaft 38 at a reduced speed from the drive shaft 54. The idler shaft 38 is also provided with a smaller V-belt pulley 62 which is in vertical alignment with an enlarged V-belt pulley 64 mounted on the shaft 36 with a V-belt 66 encircling the pulleys 62 and 64 for driving the shaft 36 at a greatly reduced speed in relation to the idler shaft 38. Thus, the electric motor 52 may be employed for driving the endless belt 50 at a relatively slow linear speed. The motor 52 is provided with an electrical conductor 68 having a push-button switch 70 therein for selectively closing and opening the electrical circuit to the motor 52. The electrical conduit 68 may be attached to any suitable electrical source and may be provided with a male plug for insertion into a conventional female outlet. The switch 70 is located in one of the panels 32 so that the push button switch 70 may be actuated for operating the belt 50.

Mounted on the belt 50 is a plurality of shoe box carrier or clamping assemblies generally designated by the numeral 72 which include a horizontally disposed bottom plate 74 and a vertically disposed mounting plate 76 at the rear edge thereof with the mounting plate 76 being rigid with the bottom plate 74 and secured to the flexible

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belt 50 by fastening members 78. Hingedly attached to the upper edge of the mounting or rear plate 76 is a top plate 80 secured thereto by a hinge member 82. A tension coil spring 84 extends between the side edges of the bottom plate 74 and the top plate 80 for urging the top plate 80 towards the bottom plate 74 thus clampingly securing a shoe box 86 therebetween. Each of the plates 74 and 80 is provided with a U-shaped notch 88 in the free edge thereof for providing areas for gripping the tops and bottoms of the boxes 86 for facilitating the removal thereof. As clearly seen in Figure 2, a multiplicity of shoe box carrying assemblies 72 are provided and means comprising vertically elongated and laterally spaced strips 90 defining a delivery slot are provided on each side wall 14 adjacent the front wall for guiding the vertical movement of the carrying assemblies 70 as they pass the viewing window 24. It will be noted that the vertical strips 90 extend from adjacent the top member 18 downward to the bottom 16 and that portions of the vertical strips 90 form back panels 32 for the access opening 28 on opposite sides of the carrying assemblies 72, the forward ends of said carrying assemblies extending forwardly therebeyond. Further, the shelf member 30 is notched so as to provide an opening through which the portions of the carrying assemblies that extend beyond the back panels 32 may pass into that portion of the cabinet 20 disposed below the access opening 28. The vertical strips 90 are provided with outwardly curved upper ends 92 for funneling or guiding the carrying assemblies 72 and maintaining the same in vertical alignment during movement past the viewing window.

Therefore, with attention drawn to Figures 1 and 2, it will be seen that the vertically elongated strips or intermediate wall, the access opening, and the shelf define the delivery chamber into which a portion of the article carrying assemblies project and from which articles carried by the article carrying assemblies may be withdrawn without a person having to reach into the housing where he might be hurt by moving machinery or sharp objects contained therein.

Each dispenser may have a particular size or a particular style of shoe therein which may be designated by a proper style number. After a potential customer has selected a desired size and style, he may proceed to the correct dispenser and serve himself the desired pair of shoes. After inspection and trying the shoes on, he may take them to a cashier for purchase thereof. This eliminates the necessity of several shoe salesmen whereby a single person may replenish the shoes in several machines thus reducing overhead and making the customer more satisfied with his purchase inasmuch as he was not subjected to sales talk and will undoubtedly be more satisfied with his purchase.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

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What is claimed as new is as follows:

1. A dispenser for articles comprising a hollow housing, said housing having a front wall, an intermediate wall parallel to and disposed rearwardly of said front wall, an access opening in said front wall, a shelf extending at substantially right angles from and disposed between the lower edge of said access opening and said intermediate wall, said intermediate wall comprising a pair of vertically elongated and laterally spaced strips extending from opposite sides of said housing defining a delivery slot therebetween, said shelf having a notch in its rear edge aligned with said slot, said access opening, said vertically elongated strips and said notch defining a vertically extending delivery chamber recessed in the front wall of said housing, an endless flexible conveyor disposed in said housing having at least one vertical run, drive means for said flexible conveyor, control means for said drive means, and a plurality of article carrying means carried by said flexible conveyor, means mounting said vertical run in said housing for movement aligned with said delivery chamber and disposed so as to pass at least a portion of the article carrying means on said vertical run through said delivery slot into said delivery chamber.

2. The combination of claim 1 wherein each of said article carrying means includes a mounting plate secured to said flexible member, a first clamp plate rigid with said mounting plate at one end thereof and perpendicular thereto, a second clamping plate hingedly attached at one end to the other end of the mounting plate, spring means urging the other end second clamping plate towards the first clamping plate for grippingly engaging opposed surfaces of an article disposed therebetween.

3. The combination of claim 2 wherein each of said clamping plates is provided with an inwardly extending notch in the outer edge thereof for facilitating the gripping of and removal of articles from between the clamping plates.

4. The combination of claim 1 wherein the front wall of the housing is provided with a viewing area in vertical spaced relation to the access opening for viewing the articles before they reach the access opening.

5. The combination of claim 1 wherein said housing is provided with guide means along opposite sides of said vertical run for guiding said article carrying means.

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