May 28, 1968 J. R. BRETZ ET AL 3,384,985

SHADOW BOX FOR DISPLAYING STACKED TRANSLUCENT SHEET MATERIAL

Filed July 6, 1965

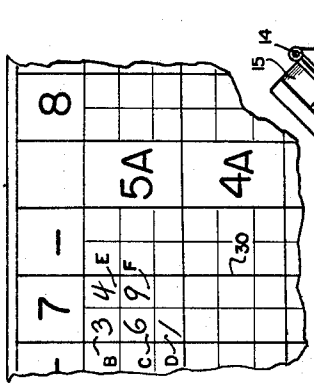


FIG. 4

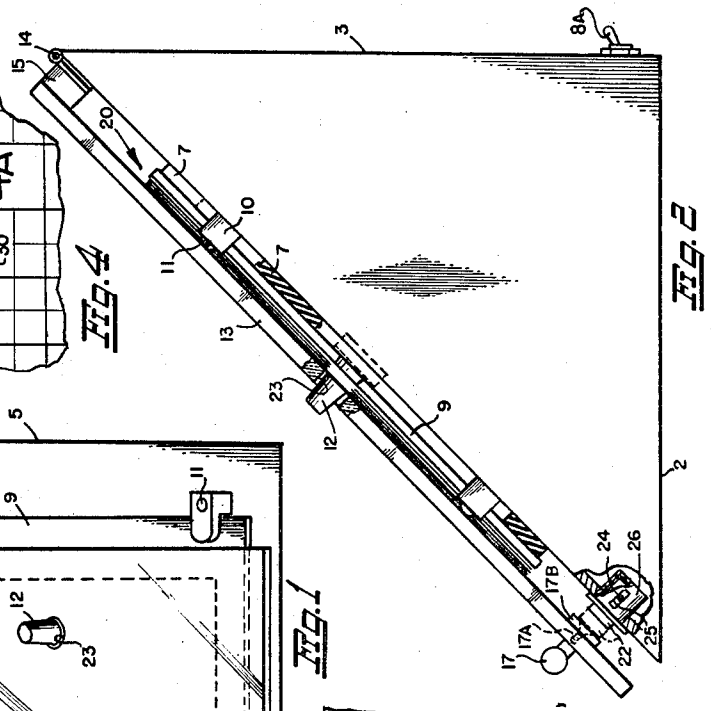


FIG. 2

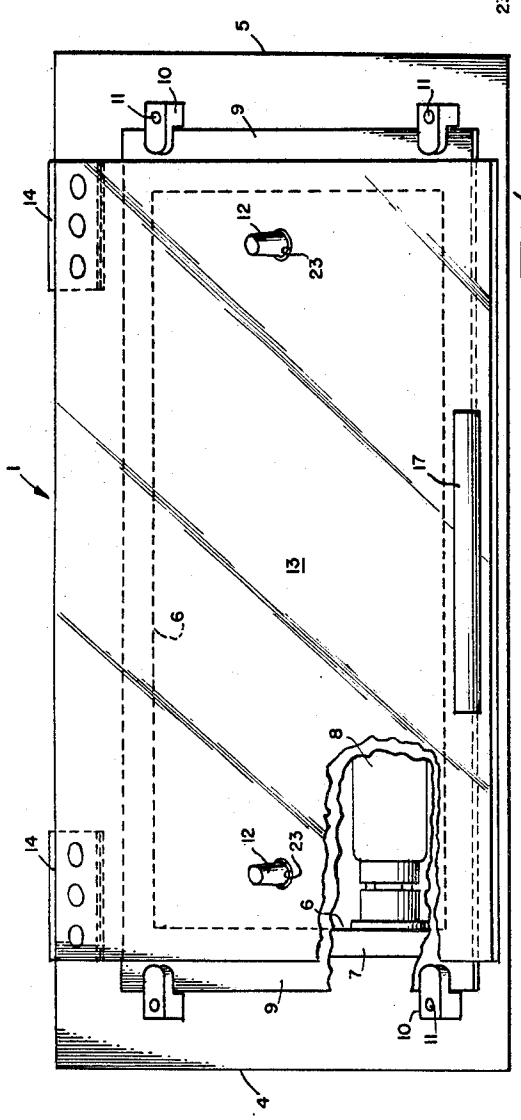


FIG. 1

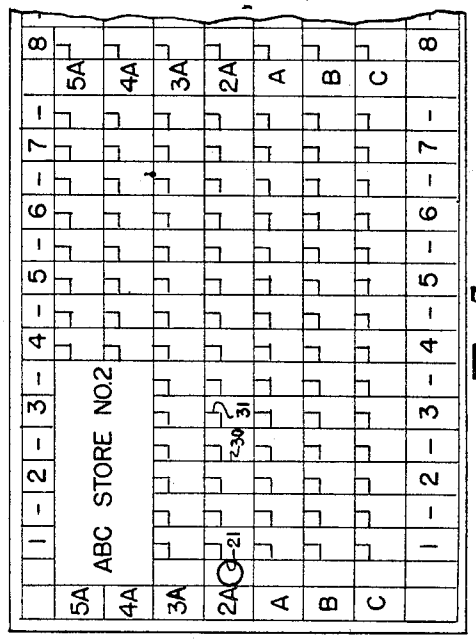


FIG. 3

JACK R. BRETZ
MICHAEL E. JENKINS
INVENTORS

BY J. D. Givens Jr.
AGENT

United States Patent Office 3,384,985 Patented May 28, 1968

3,384,985

SHADOW BOX FOR DISPLAYING STACKED TRANSLUCENT SHEET MATERIAL

Jack R. Bretz and Michael E. Jenkins, both of 7322 SW. 13th Drive, Portland, Oreg. 97219

Filed July 6, 1965, Ser. No. 469,565
4 Claims. (Cl. 40—106.1)

ABSTRACT OF THE DISCLOSURE

An illuminated display device upon which a plurality of superimposed, information bearing sheets of translucent paper may be stacked for simultaneous display to a viewer of the cumulative information. A translucent plate is yieldably mounted on the device to permit accommodation of various heights of stacks of translucent paper without disrupting the parallel relationship of the translucent plate to a transparent pressure plate. Accordingly, the uniform compaction of the translucent paper sheets permits light transmission therethrough for the display information borne on the several sheets. A magnetic latch biases the pressure plate downwardly against the stacked sheet material.

This invention relates to inventory display devices and particularly to an illuminated device having the characteristics of a shadow box. More particularly the invention comprehends utilization of such a device in a chain of stores located in a trade area or territory for quickly, conveniently and accurately determining the inventory carried by all the stores. The "at-a-glance" inventory display provided enables the balancing of on hand items between the several stores since quantity and location of a specific merchandised item are presented in one display. Also a composite inventory is provided from which the re-ordering of merchandise can be scheduled. Further, the units are particularly useful for size balancing of store inventories in shoe stores but no limitation of use in this respect is meant to be implied.

It is among the objects of this invention to provide a visual display device of the character described which is compact and of simple design. The structure of the device and the transparent sheets used herewith provide an economical unit for use by small or large chains of stores. Each store of a chain of stores maintains its own inventory sheets and distributes a duplicate sheet for each merchandised item to a central inventory station for the stores.

A further object is to provide such a device capable of presenting a display to the viewer, composed of a series of inventory sheets superimposed on one another with means for compacting the sheets to provide a translucent, legible display of the indicia carried by each sheet.

The foregoing and 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 and in which:

FIGURE 1 is a front elevational view of an illuminated inventory display device made in accordance with our invention and with fragments broken away to reveal underlying parts.

FIGURE 2 is an end elevational view of FIGURE 1.

FIGURE 3 is a fragmentary plan view of a typical inventory sheet used in conjunction with the display device, and

FIGURE 4 is a composite view of fragments of identical inventory sheets showing various inventory indicia inscribed thereon in accordance with that kept by different stores to which the sheets are assigned.

With continuing reference to the drawings wherein like reference characters designate like parts reference numeral 1 indicates generally a box-like structure having a bottom wall 2, rear wall 3, and side walls 4 and 5 which are substantially triangular in elevation.

The walls define an opening 6 provided with a surrounding frame of foam rubber 7 of approximately one-eighth inch thickness. Provided within the opening is a light source in the form of a pair of fluorescent lights one of which is indicated at 8 in electrical circuit through a switch (not shown) with a source of current.

A plate 9 of translucent Plexiglas provides a closure for the opening 6 and is securely held against the foam rubber frame 7 by clips 10 secured to the structure by screws as at 11. A pair of projections 12 are carried by the plate 9 and extend outwardly therefrom to provide sheet positioning means.

A transparent pressure plate 13, preferably of Plexiglas, is hingedly attached to the front wall of the structure by a pair of hinges 14 and is spaced outwardly therefrom along its top edge by spacer blocks or strips 15. Adjacent the bottom edge of the pressure plate 13, a finger grip 17 is provided for convenient raising and lowering of the pressure plate. The projections 12 provide placement guides for stacked inventory forms or sheets indicated generally at 20 (FIGURE 4) which are stabilized when so positioned by means of corresponding apertures 21 provided within each of the stacked sheets. Openings 23 in the pressure plate 13 receive the projections 12 when the plate is in surface contact with the stack of inventory sheets 20.

It will be noted in FIGURE 2 that the finger grip 17 is secured to the pressure plate 13 by flat head screws 17A which also secure a metal plate 17B to the underside of the pressure plate to provide an armature normally within the magnetic field of a pair of permanent magnets carried by the box-like structure. The magnetic cores 22 of the latches are capable of movement toward and away from the plate 17B by means of a pin 24 slidable within a slot 25 in the wall of the magnet housing 26. The self adjustable feature of the latches permits various sized stacks of inventory sheets since regardless of the thickness of the stack the latches will serve to hold the pressure plate 13 in surface bearing contact thereagainst.

It will be understood that, necessary to the functioning of this device, is a means permitting a series of superimposed sheets to be uniformly compacted to thereby provide a translucent assembly of sheets. Although not shown, the hinges 14 could be of the floating type, adjustable to varying stack thicknesses between the pressure plate 13 and the plate 9. In the form of the invention shown wherein the hinges 14 have fixed hinge pins, the resilient foam rubber 7 will compress unevenly to compensate for either more or less than the optimum number of sheets.

A typical translucent inventory sheet is best illustrated in FIGURE 3 and may be of onion skin, parchment or other translucent paper and for example, divided into boxes reading from 1 through 14 horizontally across the top and bottom of the sheet and from 5A through C vertically downward at spaced intervals lengthwise of the sheet. The horizontal numerals refer to shoe sizes and the vertical numerals and letters indicate shoe widths. Each sheet bears the quantity and sizes for only one style and color of shoe.

Within each block indicated at 30 is provided a single internal square 31 within which a numeral is inscribed indicating inventory quantities. Inventory sheets of other stores of the chain are similar except that the internal square 31 is located differently within the block 30 from the square location shown in FIGURE 3. For example, and as illustrated in FIGURE 4, the squares 31 of each

of the various stores are located differently relative to the blocks **30**. The square marked B represents store **2**, C store **3**, D store **4**, E store **5**, and F store **6**. In actual use the viewer will become readily familiar with the relationship of the square and the store represented thereby.

The light transmitted through the stacked sheets will cause each of the internal squares **31** on each sheet and the marking therein to be clearly depicted. Thus, "at-a-glance" the inventory as well as the balance or distribution thereof for a chain of stores may be determined.

While we have shown particular forms of embodiment of our invention, we are aware that many minor changes therein will readily suggest themselves to others skilled in the art without departing from the spirit and scope of the invention. Having thus described our invention, what we claim as new and desire to protect by Letters Patent is:

1. In an illuminated display device of box-like construction having illuminating means housed therein and an opening formed in one wall thereof, the improvement of

a foam rubber member disposed upon one wall of the device adjacent the perimeter of the opening therein,

a translucent plate yieldably supported by said resilient member to overlie said opening in spaced relationship from the wall of the device,

placement guides associated with the translucent plate for locating a plurality of superimposed indicia-bearing translucent sheeets,

a plurality of translucent sheets each sheet bearing information on an area thereof different from another of said sheets,

a transparent pressure plate hingedly attached to said device and adapted to bear upon said translucent sheets and indirectly upon said translucent plate supporting said sheets whereby the yieldably mounted translucent plate by reason of its being supported by said resilient member along with the sheets carried thereby will yieldably move into parallel relationship with the pressure plate to achieve uniform light transmission through said translucent sheets, this being accomplished throughout various stacked thicknesses of said translucent sheets.

2. The invention as claimed in claim **1** wherein translucent plate carries said placement guides and said transparent pressure plate is relieved to clear said guides.

3. The invention as claimed in claim **1** wherein the said one wall of the display device is provided with a latch component for cooperation with a second latch component carried by said transparent pressure plate.

4. The invention as claimed in claim **3** wherein said latch components comprise a magnetic latch having a movable magnetic core carried by said one wall of the device for cooperation with a metal plate carried by said transparent pressure plate whereby said movable core will be capable of exerting a biasing effect on said pressure plate while the latter is at variously spaced distances from the said one wall of the device.

References Cited

UNITED STATES PATENTS

1,478,504	12/1923	Adler	40—106.1
1,776,477	9/1930	O'Keefe	40—106.1
2,682,463	6/1954	Olsen	40—106.1 X
2,699,619	1/1955	Fink	40—106.1
2,952,478	9/1960	Lortie	282—29.2

LAWRENCE CHARLES, *Primary Examiner.*