May 30, 1972 C. H. LITTLE 3,666,341

DRAWER FRONT CONSTRUCTION

Filed Nov. 13, 1970 2 Sheets-Sheet 1

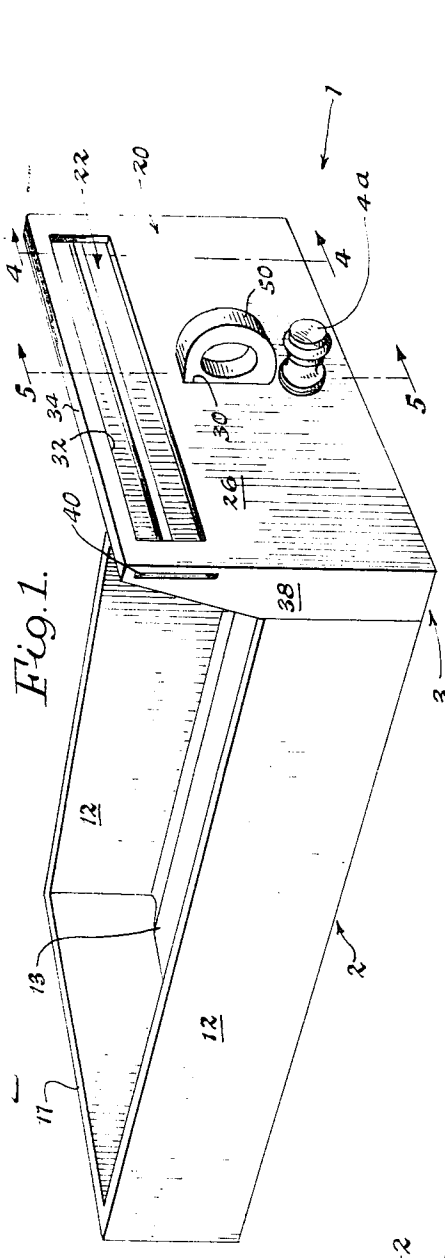


Fig. 1.

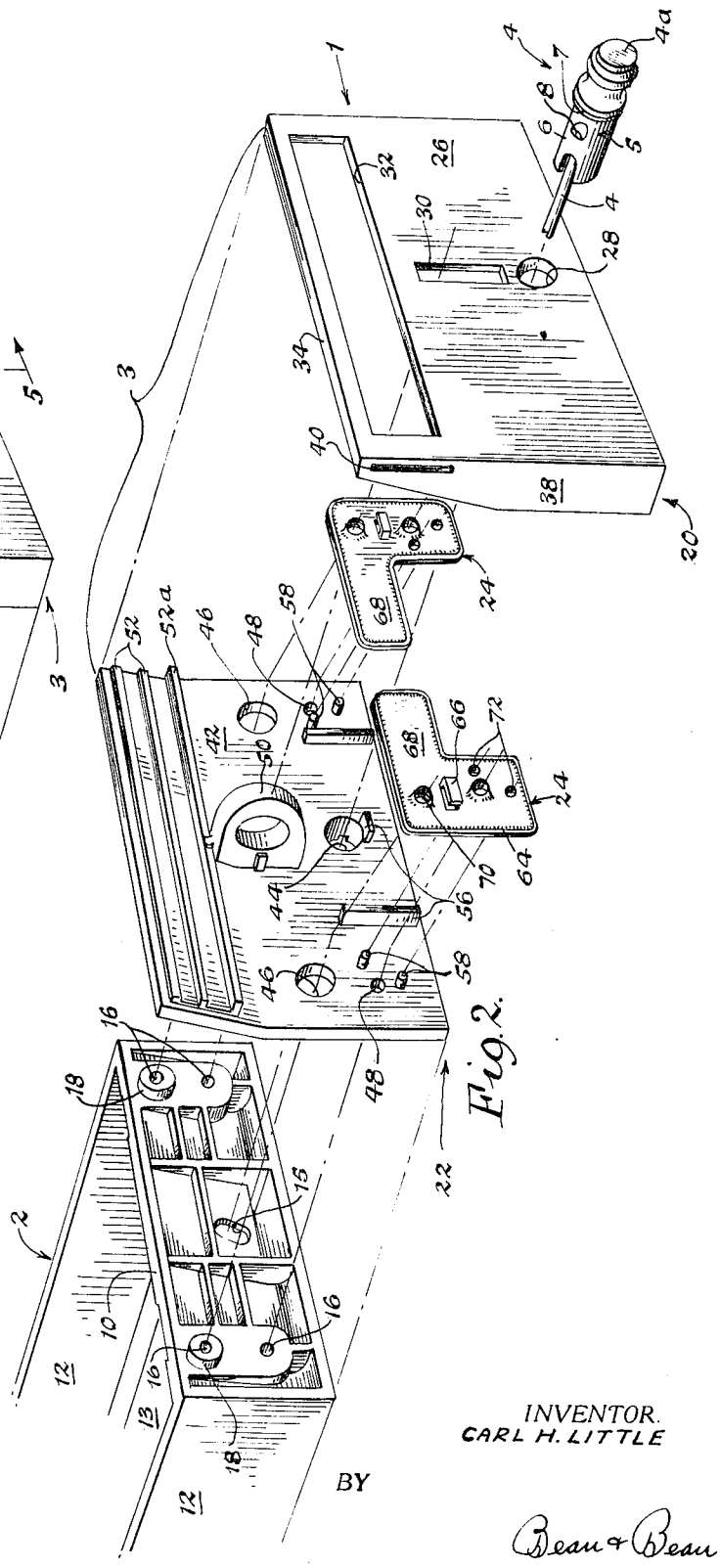


Fig. 2.

INVENTOR.
CARL H. LITTLE

BY

Bean & Bean
ATTORNEYS

May 30, 1972 C. H. LITTLE 3,666,341

DRAWER FRONT CONSTRUCTION

Filed Nov. 13, 1970 2 Sheets-Sheet 2

Fig. 3.

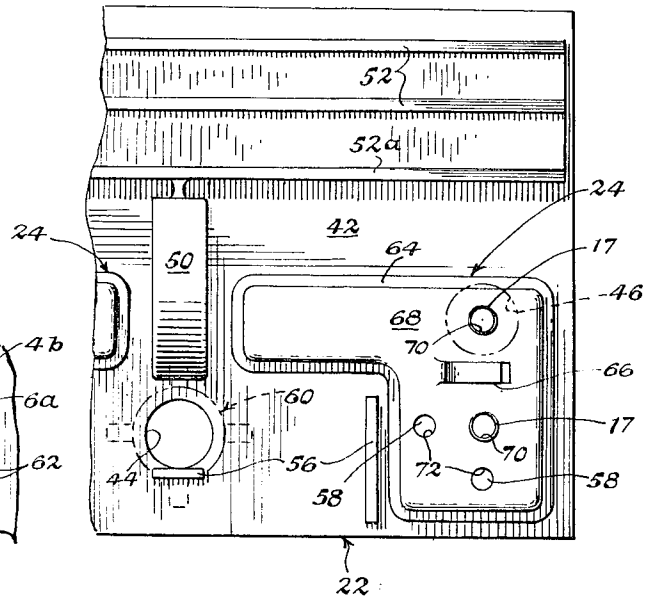



Fig. 6.

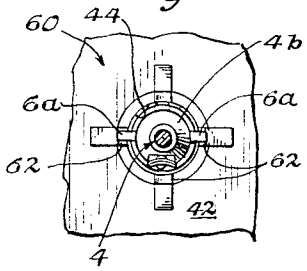



Fig. 4.

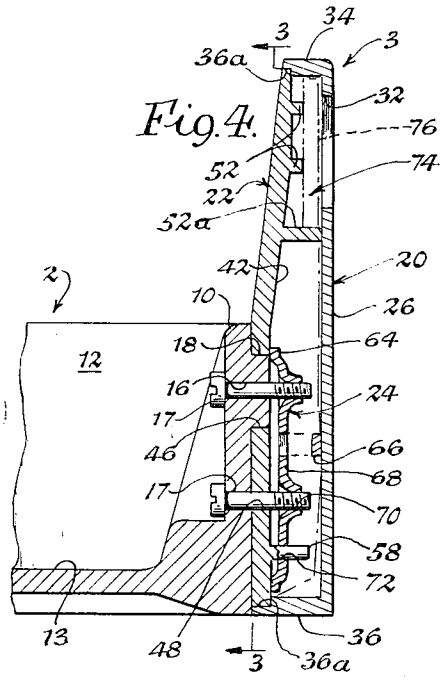
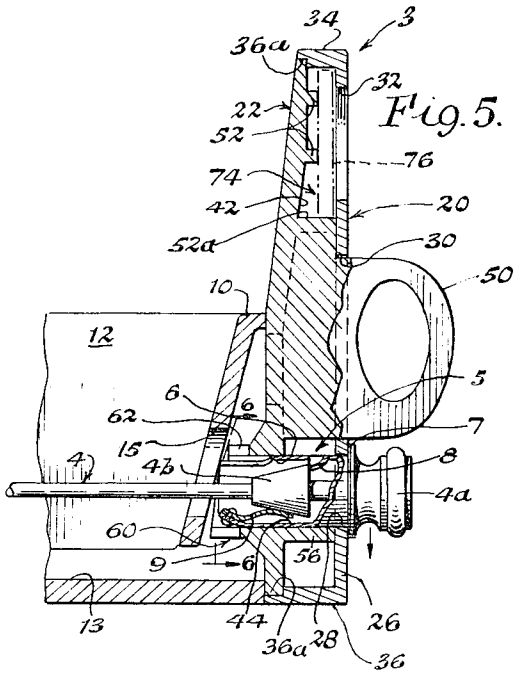



Fig. 5.




INVENTOR.
CARL H. LITTLE

BY

Bean & Bean
ATTORNEYS

United States Patent Office 3,666,341 Patented May 30, 1972



3,666,341

# DRAWER FRONT CONSTRUCTION

Carl H. Little, Jamestown, N.Y., assignor to Weber-Knapp Company, Jamestown, N.Y.

Filed Nov. 13, 1970, Ser. No. 89,312
Int. Cl. A47b 88/00
U.S. Cl. 312—330 6 Claims

## ABSTRACT OF THE DISCLOSURE

A two-part plastic front construction for library card drawers or the like, wherein a rear half of the front carries a tray pull or handle for projection forwardly through an opening in a forward half of the front. The front is mounted on and force applied to the tray pull transferred to the card tray body by metal reinforcing brackets positioned between the halves prior to assembly thereof. The halves are provided with aligned openings to receive a card follower or holding rod mounting latch device retained therein by by a guide-retainer formed integrally with and projecting rearwardly from the rear half.

## BACKGROUND OF THE INVENTION

Library card trays are conventionally formed by mounting a solid wood front on a tray body formed of wood, metal or plastic. While attempts have been made to replace wooden fronts and ones formed of plastic, such constructions have not met with acceptance in the trade for various reasons, including their inability to withstand the rigors of use in a library.

## SUMMARY OF THE INVENTION

The present invention is directed towards a plastic front construction particularly adapted for use on library card trays, which is designed to withstand the rigors of use in a library.

The plastic front of the present invention is formed with rear and forward halves, which are bonded together about their marginal edges to form an essentially hollow, rectangular front construction. The halves cooperate to define a drawer contents identifying card holder, and are provided with aligned openings to receive a card follower or holding rod mounting latch device, which is retained therein by a guide-retainer fixed to the rearwardly facing surface of the rear half.

A particular feature of the present front construction is that of permitting the tray pull or handle, which is carried by the rear half to freely project forwardly through the forward half, and providing a pair of metal brackets, which are pre-positioned within the front during assembly, and serve both to mount the assembled front on and to transfer forces applied to the tray pull directly to the card tray body. This construction greatly reduces the loadings which would otherwise be imposed on the front, thereby permitting the front and particularly the forward half to be of thin sectioned, light weight design.

## DRAWINGS

The nature and mode of the present invention will be more fully described in the following detailed description taken with the accompanying drawings wherein:

FIG. 1 is a perspective view of a library card drawer embodying the front construction of the present invention;

FIG. 2 is an exploded perspective view of the front construction shown in FIG. 1;

FIG. 3 is a view taken generally along line 3—3 in FIG. 4;

FIG. 4 is a sectional view taken generally along line 4—4 in FIG. 1;



FIG. 5 is a sectional view taken generally along line 5—5 in FIG. 1;

FIG. 6 is a sectional view taken generally along line 6—6 in FIG. 5.

## DETAILED DESCRIPTION

Referring more particularly to the drawings, **1** designates a library card drawer or the like, which generally comprises a tray body **2** dimensioned to receive a stack of library catalog cards, not shown; a tray front **3**; and an assembly including a catalog card holder rod **4** extending rearwardly through front **3** into tray body **2**, and a follower rod latch device **5** mounted within front **3**.

Holder rod **4** and latch device **5** are of a construction similar to that described in U.S. Pat. 3,260,263. More specifically, it will be seen by referring to FIG. 5, that latch device **5** includes a tubular metal holder **6**, which is formed to define an upstanding annular end rim or flange **7** and an inwardly deformed locking lip **8**; and a spring metal finger **9**, which is suitably fixed inwardly of holder **6** in axially spaced relationship to lip **8**. Also, by reference to FIG. 5, it will be seen that follower rod **4** includes an end mounted knob portion **4***a* and a conically shaped operator portion **4***b* spaced axially therefrom. As is conventional, rod **4** may be locked within holder **6** by engagement of locking lip **8** with the forwardly facing or radially extending surface of portion **4***b*. Portion **4***b* may be subsequently released from locking engagement with locking lip **8** by moving knob portion **4***a*, so as to depress spring finger **9**. The arrangement for mounting latch device **6** within front **3** will be hereinafter described in detail.

Tray body **2** is best shown in FIGS. 1, 2, 4 and 5 as being of integrally formed, molded plastic construction having front, rear, side and bottom walls **10–13**. As best shown in FIGS. 2, 4 and 5, front wall **10** is apertured at **15** to freely receive follower rod **4** and at **16** to receive front mounting screw fasteners **17**, and is provided with an appropriate number of forwardly projecting front positioning studs **18** preferably arranged concentrically of apertures **16**.

Again referring to FIGS. 1, 2, 4 and 5, it will be seen that front **3** of the present invention is of essentially hollow, rectangular constructioin and generally includes molded plastic front and rear halves **20** and **22**; and a pair of generally L-shaped metal reinforcing plate inserts **24**, which are to be positioned within a cavity defined by halves **20**, **22** in the manner to be described.

Front half **20** includes a front panel **26**, which is provided with circular opening **28** for receiving tubular holder **6** and rectangular openings **30**, **32**; and rearwardly extending top, bottom and side marginal flanges **34**, **36** and **38**, which define a continuous recess **36***a*. The side flange **38** viewed in FIGS. 1 and 2 is additionally provided with a rectangular opening **40**, which is vertically aligned with front panel opening **32**.

Rear half **20** includes a rear panel **42**, which is provided with a circular opening **44** for receiving tubular holder **6**; circular openings **46** for receiving positioning studs **18**; and circular openings **48** for receiving screw fasteners **17**. Extending forwardly from rear panel **42** is an apertured drawer pull **50**; positioning and supporting ribs **52**, **52***a*; a plurality of spacer ribs **56**; and a plurality of studs **58** for positioning or orientating plate inserts **24**. Extending rearwardly of rear panel **42** in axial alignment with opening **44** is a tubular holder mounting extension **60** having radially through slot openings **62**.

Plate inserts **24** are shown in FIGS. 2–4 as being stamped from sheet metal to form a marginal flange portion **64** and a tab portion **66**, which project in opposite directions from a planar panel portion **68** having

threaded openings 70 and smooth bore openings 72.

In assembling front 3, plate inserts 24 are first mounted on rear panel 42 by inserting studs 58 in plate bore openings 72 in order to positionally align threaded openings 70 with rear panel openings 46 and 48. When thus positioned, each of plates 24 extend into close proximity to the base of drawer pull 50, as best shown in FIG. 3. Thereafter, front halves 20, 22 are permanently joined together by fixing the marginal edges of rear panel 42 within flange recess 36*a*, such as by fusion or adhesive bonding techniques.

When halves 20, 22 are thus joined, tubular holder receiving openings 28 and 44 are arranged in axial alignment; drawer pull 50 freely projects forwardly of front panel 26 through opening 30; at least spacer ribs 56 and preferably supporting rib 52*a* are arranged in supporting engagement with the rear surface of front panel 26 to prevent collapse of front 3; and plate tab portions 66 are arranged in engagemet with or in close proximity to the rear surface of front panel 26 in order to retain plates 24 in position on studs 58. Further, as will be apparent from viewing FIGS. 3 and 4, rear panel ribs 52 and 52*a* are arranged for cooperation with the rearwardly facing surface of front panel 26 and top flange 34, respectively, to define an elongated cavity 74 for receiving a drawer contents identifying card 76, which may be removably inserted through side flange opening 40 for viewing through front panel opening 32.

After assembly of front 3 has been completed, latch device 5 may be mounted therein by inserting tubular holder 6 through aligned openings 28 and 44 until holder rim 7 abuts against the forwardly facing surface of front panel 26, as best shown in FIG. 5, and thereafter swedging or otherwise deforming portions, such as a pair of tabs 6*a*, from the rear end of holder 6, such that tabs 6*a* extend radially into slot openings 62 of mounting extension 60, as best shown in FIG. 6. Holder 6 is thus permanently supported within and constrained from rotation relative to front 3.

Drawer front 3 may be subsequently mounted on tray 2 by first positioning studs 18 within back panel openings 48 in order to automatically align threaded openings 70 of plates 24 with tray front wall openings 16, and thereafter threading screw fasteners 17 into openings 70 until rear panel 42 is securely clamped between tray front wall 10 and marginal flanges 64 of insert plates 24.

Follower rod 4 may then be inserted through holder 6 and tray front wall opening 15 for the purpose of removably retaining appropriate library cards within the tray.

From the foregoing, it will be understood that a particularly important feature of the present invention is the construction wherein the drawer pull is carried by the rear half of the front and the mounting plate inserts extend laterally within the front into close proximity of the base of the drawer pull, such that drawer opening forces are transferred from the drawer pull to the plate inserts and from the plate inserts directly to the tray body via the front mounting screws. As a result, the plate inserts effectively serve to prevent bending deformation of the rear half, and thus the front half of the front, thereby permitting same to be formed of thin walled, light weight construction.

Moreover, by forming insert plates with marginal flanges the rigidity of the plates is greatly increased and the clamping pressure exerted on rear panel is more uniformly distributed than would be the case with plates formed of planar sheet metal stock of the same thickness.

I claim:

1. A drawer construction comprising in combination:

a drawer body, said drawer body including a front wall portion, said front wall portion having openings therethrough;

a drawer front, said drawer front having plastic front and rear halves marginally joined to define a cavity therebetween and plate means arranged within said cavity, said rear half mounting a drawer pull, said front half having an opening therethrough to receive said drawer pull for projection forwardly of said front half, said rear half and said plate means having openings therethrough, at least one of said halves positioning said plate means to align said plate openings with said rear half openings, said plate means when positioned extending within said cavity into close proximity with said drawer pull; and

fastener means for mounting said drawer front on said front wall portion, said fastener means extending through said front wall openings and rear half openings and into said plate openings for clampingly securing said rear half intermediate said plate means and said front wall portion, whereby drawer opening force applied to said drawer pull is transmitted by said plate means through said fastener means to said front wall portion.

2. A drawer construction according to claim 1, wherein said front wall portion is formed with forwardly projecting positioning stud means arranged concentrically of at least some of said front wall portion openings, at least some of said rear half openings are dimensioned to receive said stud means, said stud means and said rear half openings cooperating to positionally align fastener means receiving openings of said front wall portion and said plate means.

3. A drawer construction according to claim 1, wherein said front half includes a front panel portion marginally bounded by rearwardly extending top, bottom and side flange portions, said front panel having a transversely extending view opening therein and one of said side flanges having a vertically extending slot opening therethrough vertically aligned with said view opening, said rear half includes a rear panel portion marginally joined to said front half flange portions, said rear panel portion mounting said drawer pull and having projecting therefrom at least one transversely extending spacer rib and at least one transversely extending support rib, said spacer rib and said support rib cooperating respectively with a rear surface of said front panel portion and an inner surface of said top flange portion to define a receiving cavity into which a drawer contents identifying card may be inserted through said side flange slot opening and viewable through said view opening.

4. A drawer construction according to claim 1, wherein said plate means includes a pair of metal plates having additional openings therein, said rear half includes forwardly projecting locating studs receivable within said additional plate openings for positioning said plates one on each side of said drawer pull and aligning said rear half and plate fastener means receiving openings, said plate fastener means receiving openings are threaded and said fastener means are screw devices received in said threaded openings.

5. A drawer construction according to claim 4, wherein each of said plates have projecting from opposite surfaces thereof a marginal flange portion and an upstanding tab spacer portion, said marginal flange portion being engageable with said rear half and said spacer tab being engageable with said front half to retain said plates on said locating studs.

6. A drawer construction according to claim 5, wherein said front wall portion is formed with forwardly projecting positioning stud means arranged concentrically of at least some of said front wall portion openings, at least some of said rear half openings are dimensioned to receive said stud means, said stud means and said rear half openings cooperating to positionally align fastener means receiving openings of said front wall portion and said plates, said front half includes a front panel portion marginally bounded by rearwardly extending top, bottom and

side flange portions, said front panel having a transversely extending view opening therein, one of said side flanges having a vertically extending slot opening therethrough vertically aligned with said view opening, said rear half includes a rear panel portion marginally joined to said front half flange portions, said rear panel portion mounting said drawer pull and having projecting therefrom at least one transversely extending spacer rib and at least one one transversely extending support rib, said spacer rib and said support rib cooperating respectively with a rear surface of said front panel portion and an inner surface of said top flange portion to define a receiving cavity into which a drawer contents identifying card may be inserted through said side flange slot opening and viewable through said view opening.



**References Cited**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 1,678,357 | 7/1928 | Sampson, Sr. | 402—2 |
| 3,377,115 | 4/1968 | Hansen et al. | 312—330 |
| 3,554,627 | 1/1971 | Mock | 312—330 |
| 3,542,447 | 11/1970 | Himelreich | 312—330 |


JAMES T. McCALL, Primary Examiner

U.S. Cl. X.R.

312—189, 204