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2,688,527

COVERED TUB FILE FOR CARDS

Filed May 24, 1951

2 Sheets-Sheet 1

Fig. 1.

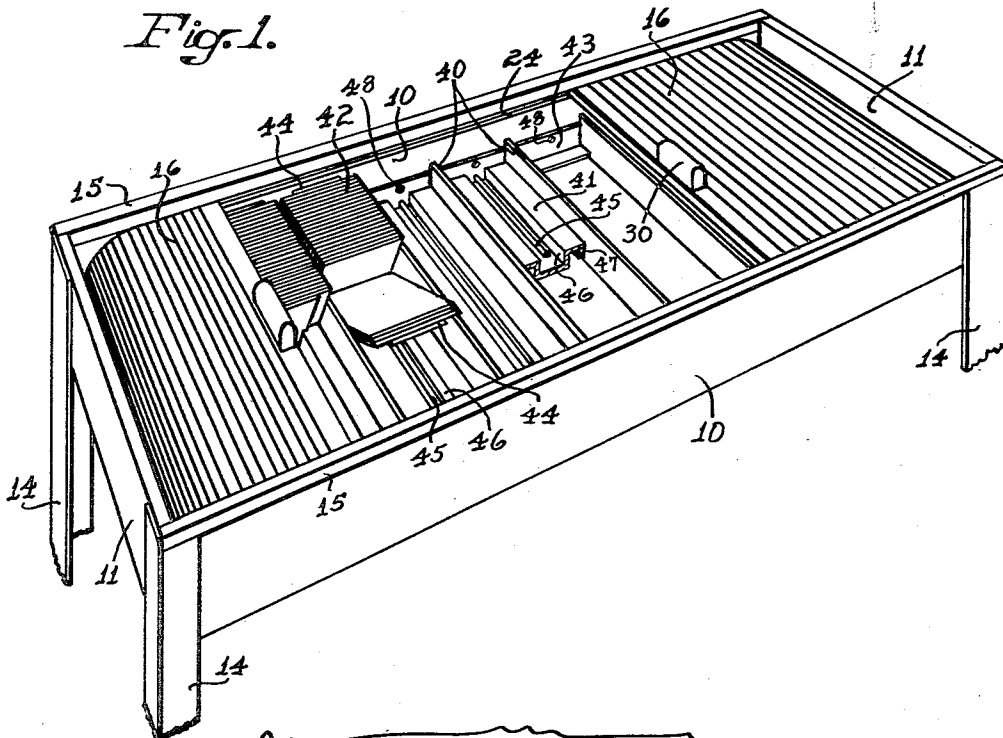
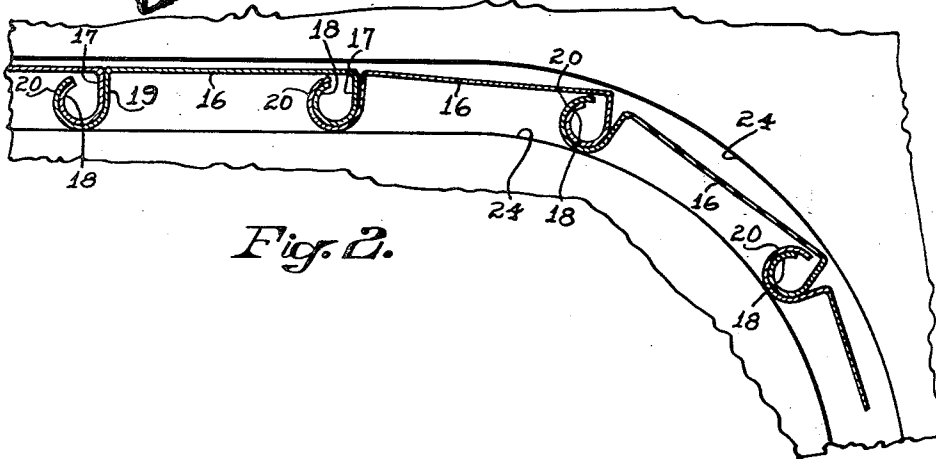


Fig. 2.



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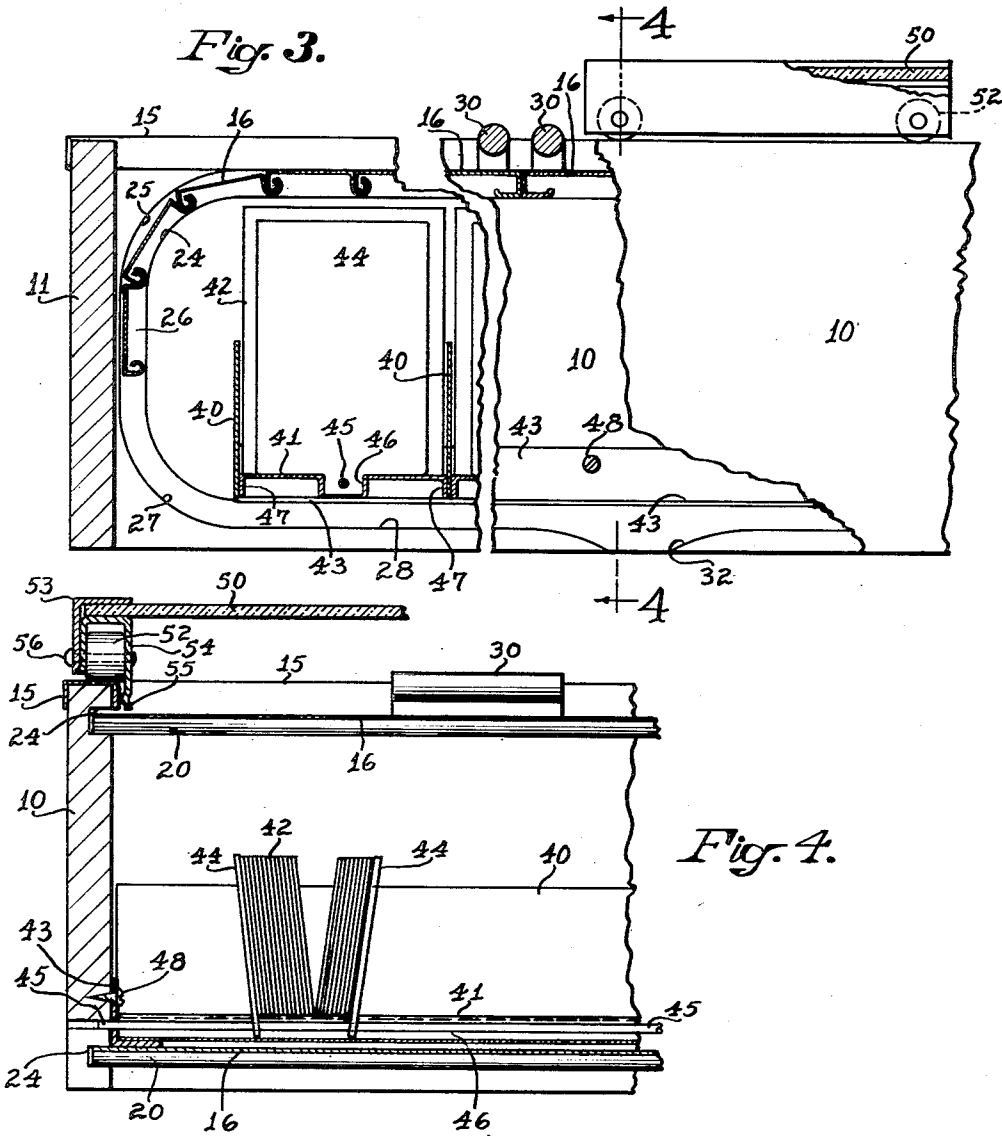
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2 Sheets-Sheet 2



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## COVERED TUB FILE FOR CARDS

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2 Claims. (Cl. 312—231)

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This invention relates to a covered tub file, and more particularly to a shallow tub having spaces for file cards which are arranged to be inspected either in position in the tub or on a posting board after removal from the tub.

The tubs heretofore constructed have been open topped receptacles provided with removable steel or wooden covers which are stored usually beneath the tub with a consequent waste of such space required for other storage purposes. Such covers are not conveniently used, since they are heavy and can be put into position only with difficulty, and the user either leaves the tub uncovered or covers it only at the end of the work day. This leaves the cards exposed to the dust and air as well as possible injury. Moreover, the tub construction has not made an economical use of the space for the filing cards, and it has been unsatisfactory for various reasons.

A primary object of this invention is to overcome the disadvantages of the prior constructions and to provide a suitable tub file with a cover which is always in position and ready to be closed by an easy motion and which is so conveniently arranged that the tub contents may be readily kept covered except during the period of use.

Further objects are to provide a simple and economical construction of this general type which is conveniently used and which has a cover so mounted on the tub that the tub contents may be quickly and easily covered or uncovered, and wherein the file cards may be inspected on a movable posting board which does not interfere with the use of the cover and the usable storage volume of the tub is not materially diminished. Other objects will be made apparent in the following disclosure.

In accordance with this invention, I provide a shallow open topped tub which has a flexible sliding closure made of pivotally connected slats which ride in grooves in the sides of the tub and are arranged to be drawn beneath a movable posting board from a position beneath the index cards to a covering position thereover.

Referring to the drawings which illustrate a preferred embodiment of the invention:

Fig. 1 is a perspective view, partly broken away, with the posting board removed, of a tub having two flexible covers partially opened and with one of the card supporting bottoms removed and another broken away;

Fig. 2 is an enlarged fragmentary sectional detail showing the construction of the hinged slats of a sliding cover;

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Fig. 3 is an enlarged longitudinal elevation, partly broken away to show the interior constructions of the tub and the card supports; and

Fig. 4 is a fragmentary vertical transverse section taken on the line 4—4 of Fig. 3.

This type of tub file comprises long vertical side walls 10 forming the front and rear walls of the tub which are connected to shorter vertical ends 11 and form an open topped receptacle of rectangular shape. It may be provided with a continuous bottom plate for supporting removable file boxes, but preferably has its bottom formed of an angle iron structure providing spaced cross supports for bottom sections which carry sets of index cards. The tub walls may be made of wood or of metal, and these are supported at their corners by interfitting with the right angle recesses of suitable angle iron legs 14 secured thereto. Where the body is made of wood, it is preferred to cap the exposed top edge surface of the wooden sides and ends with a thin channel iron 15 which protects both the tub and the user thereof. This channel iron extends downwardly on the inside of the tub, as shown particularly in Fig. 4, to the runway groove provided for the cover.

A primary feature of this invention comprises making the cover flexible and slidable around the tub ends and across the bottom and top between open and closed positions. The cover construction, as shown in detail in Figs. 2 and 3, comprises transverse wooden or metal slats 16 having pivotally connected sliding members. In the preferred form, each slat 16 is a narrow strip of sheet metal having a downwardly projecting side part 17 at right angles to the top flat normally horizontal portion which terminates in an upwardly curved portion 18 of part-cylindrical shape spaced from the under side of the cover slide, as shown. The other end of each slat 16 has a similar downwardly extending vertical section 19 terminating in an upwardly extending partial cylindrical portion which is of such size and shape that it slidably and pivotally fits over the inner cylindrical end 18 of the adjacent slat. The end of the up-turned portion 20 is spaced from the under side of the slat 16 and from the adjacent downwardly projecting part 17, so as to provide adequate room for the adjacent slats 16 to move pivotally relative to each other about the axial center of the two interfitting hinge portions 18 and 20. It will be observed that the parts 17 and 19 are parallel when the cover is in a horizontal closed position, as shown at the left in Fig. 2, and that the cover slats may pivot rela-

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tive to each other only downwardly, as shown at the right in Fig. 2.

This flexible sliding cover rides in two similar inwardly opening U-shaped slots 24 formed in the opposite parallel front and rear side walls 10 of the tub, and the slots are made of such dimensions as to permit easy sliding of the hinged cover slats but without unnecessary waste of space. Each slot 24 has an upper runway just below the top of the side wall 10 and it makes a comparatively sharp bend 25, usually of a very small radius, which is close to each end of the side wall 10 of the tub. It extends downwardly in the vertical portion 26 to another sharp bend 27 and then terminates in a horizontal runway 28 beneath the bottom and the card files. The cover has a width, or slat length, such that the slats fit fairly snugly in the two opposed parallel symmetrical grooves 24 of the opposite side walls 10 and so cannot be removed when in a closed position, and in which they may be locked by a suitable lock and key construction located preferably near the handles. Although only one cover may be used, it is preferred to have two covers for ease of operation. That is, the cover 16 is made in two sections, as shown, which meet centrally of the tub. Each section is provided with a horizontal handle 30 suitably secured to the central end slat and made low enough so that the posting board may ride thereover. This handle may be a cylindrical rod suitably mounted on the end slat, and the two handles 30 are spaced far enough apart when in a closed position so that the operator may readily grasp them and manipulate the cover sections.

It will be appreciated that these covers slide lengthwise of the tub from the central closed position of Fig. 3, which may be gauged by a pin in the groove 24, to a fully open or a partially open position, as shown in Fig. 1. The rear end of each flexible cover section remote from the handle 30 extends downwardly in the vertical slot portion 26 to a sufficient distance, as indicated in Fig. 3, so that the top of the file is fully closed when the handles are brought together. The slot or channel 24 projects into the side walls to a sufficient distance so as to prevent the cover from being removed from its position. The hinged slats may be assembled through a central opening 32 at the under side of the tub, as shown in Fig. 3, where the slot 24 runs out.

The bottom may be formed of spaced angle irons so arranged as to hold a set of removable file boxes or a pack of assembled file cards held on a bottom plate between movable followers. As shown, spaced vertical division walls 40 and a set of bottom plates 41 of thin metal are shaped and connected with two end angle iron supports 43 to form a U shaped container which provides file space channels for a set of cards 42 of desired type. Compressors or followers 44 may be suitably mounted at each end of the set of cards. They are provided with holes at their bottoms which permit their being slid along on a horizontal rod 45 mounted in holes in the side walls 10, which hold the cards in a secure vertical arrangement. Each bottom plate 41 is shaped to form a transverse upwardly opening U channel 46 at the center of the card compartment, which is so arranged that the rod 45 may be held in that channel below the cards and thus permit sliding the follower boards 44. Two adjacent bottom plates 41 have their side portions 47 bent downwardly and spot welded to the vertical parti-

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tion 40 therebetween. The depending portion 46 is spot welded at its ends to the two angle irons 43 arranged to carry the ends of the plate 41, thus making a rigid card containing structure. After these parts have been assembled and welded together, the unit is put in place and secured by screws 48 passing into the opposed side walls 10 above the bottom plate 41.

The lower run of the cover in the slide groove 24 is located just below the bottom plates 41 and their L-shaped angle iron supports 43. The V-action of the two tilting followers 44 makes it easy to pull out the cards, since the followers normally tilt away from each other and provide a V-opening that expands upwardly. The boards 44 may be moved independently to various positions, so as to hold only a few or a large number of cards. This is particularly useful and does not require the use of heavy card boxes for carrying a small number of cards in a new file.

A further part of the tub construction comprises a rectangular horizontal posting board 50 on a sliding or rolling carriage. It may be a thin glass plate mounted horizontally on rollers 52 near the corners of the board, as shown in Figs. 3 and 4. This comprises a pair of angle irons 53 and channel irons 54 so mounted at the opposite sides of the plate as to hold the plate securely therebetween. Each of the set of four rollers 52 is carried on a horizontal pivot pin 56 suitably secured in the channel members 53 and 54. The inner end 55 of the channel member 54 projects downwardly, and it is preferably provided with an in-turned bead which rubs against the inner vertical wall of the metal U-channel iron 15 and thus prevents lateral motion of the longitudinal movable posting board 50 but permits quick removal thereof. Each roller rides on the top of the channel iron 15 which covers the top side wall 10 of the tub. Thus there is no waste of card space as would be necessary if the posting board rollers rode on runways inside of the tub. The horizontal plate 50 is located only a slight distance above the groove 24 where it will clear the handles 30 of the cover, although shown in exaggerated position in Fig. 4, and the parts are so constructed that this posting board is very close to the working space of the tub. The cover slides under the posting board and neither interferes with the use of the other. If the card carriers are made up of separate open topped receptacles that are removable from their positions of resting on the bottom of the tub, then these receptacles may be placed on the top of the posting board for ready inspection of the cards. The board serves for supporting either a set of the cards 42 removed from the file or other cards to be added, as well as other material pertinent to the tub file. Also, the use of glass for the posting board makes it easy to inspect the various parts of the tub file.

The manner of use of the construction will be apparent. Also, it will be appreciated that various modifications may be made in the construction within the scope of the appended claims. This construction satisfies the requirements of economical space utilization, and it particularly makes it easy to cover and protect the cards at any time that the file is not in use, or to open only one cover to a desired position of access to a given set of cards. The cover is easily moved and such weight as is involved cannot make the operation difficult. Many advantages will be

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readily apparent to those familiar with the use of such files.

I claim:

1. A tub file comprising long vertical, rigid, front and rear side walls of the same height and shorter end walls defining an open topped elongated receptacle frame, legs for supporting the frame well above a floor, bottom and vertical division walls providing transverse channels extending parallel with the end walls for holding spaced sets of file cards for inspection from the front of the tub, said front and rear walls having similar U-shaped, inwardly opening, opposed slideway grooves, each groove having an upper portion parallel with and located near but below the top of the side wall and a lower portion extending closely beneath the transverse channels which are connected by a curved portion near an end wall and thereby forming a continuous channel slideway for a cover, a flexible cover slidably mounted in the slideway grooves which comprises a set of slats projecting into and supported by the grooves and which are pivotally connected and arranged for movement of the cover endwise of the tub from a horizontal file closing top position above the cards to a position in the curved and bottom portions of the grooves for exposing a set of cards while covering others, a handle for moving the cover to and from a closed position, the front and rear walls having

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flat, continuous, top metal surfaces in a horizontal plane forming rails and unobstructed inner guide faces spaced above the grooves, and a posting board having parts supported on said rails and guided by said faces which is spaced for free longitudinal movement above and without interferences with the cover and its handle.

2. In a tub file according to claim 1, the posting board having a horizontal flat top board, downwardly depending side walls of equal height rigidly connected to the top board, means carried by each side wall which is mounted on the top of the tub rail for movably supporting the board and a guide which engages the inner face of the rail wall to prevent lateral movement of the board.

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