June 25, 1940. R. P. SCHOLFIELD 2,205,932

FILING APPARATUS

Filed March 7, 1936 2 Sheets-Sheet 1

Fig. 1.

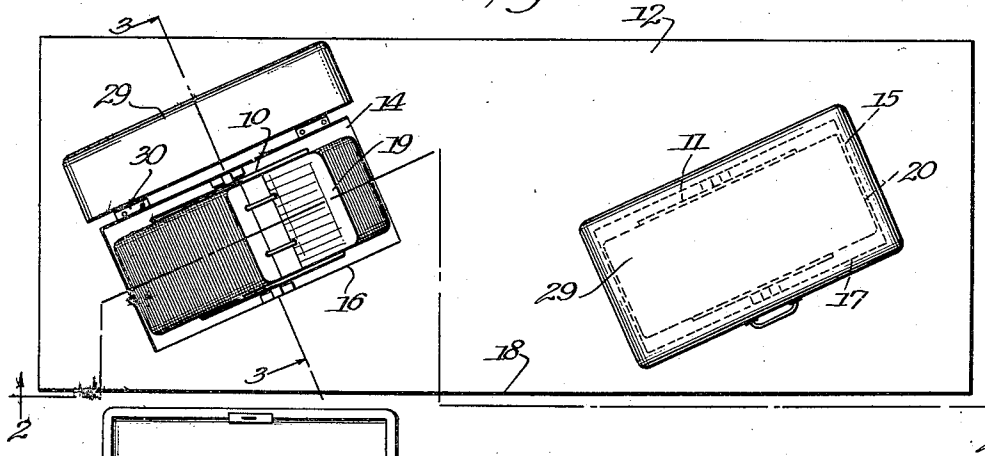


Fig. 2.

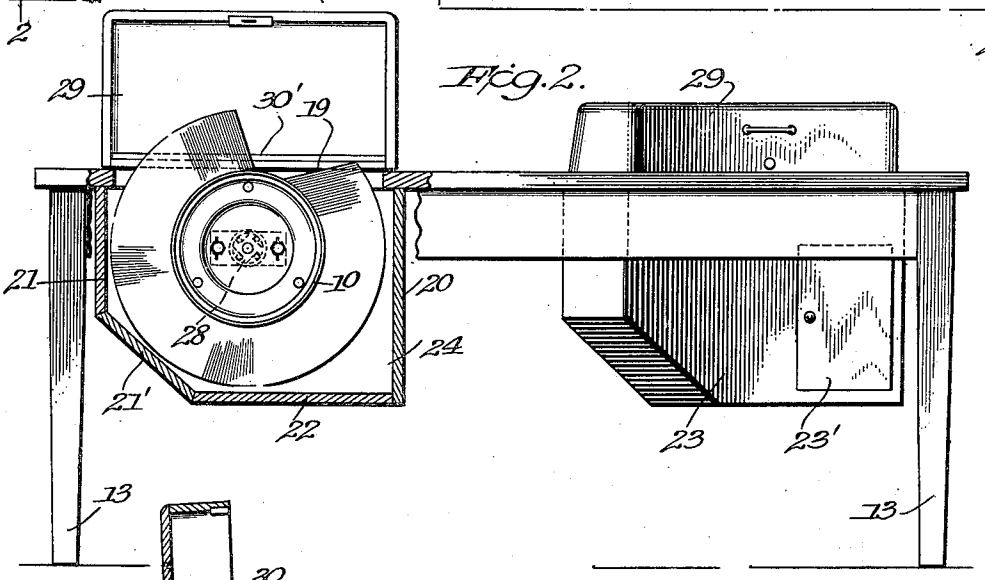
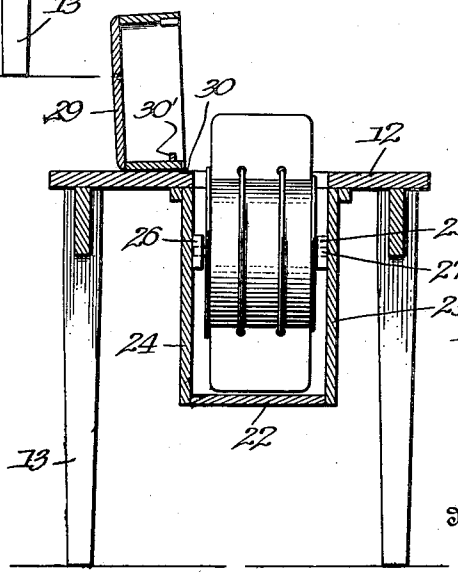


Fig. 3.



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June 25, 1940. R. P. SCHOLFIELD 2,205,932

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Filed March 7, 1936 2 Sheets-Sheet 2

Fig. 4.

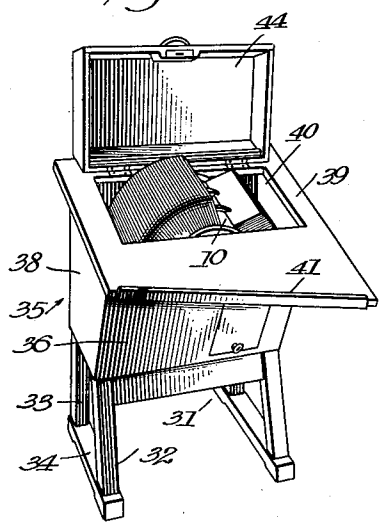


Fig. 5.

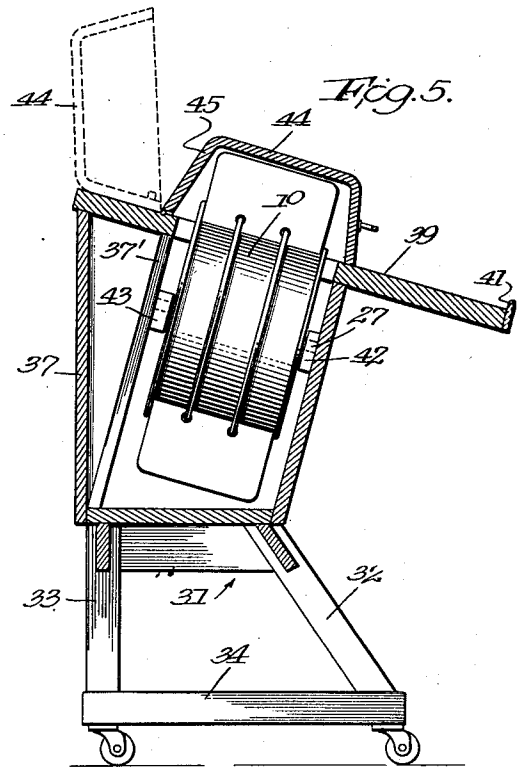


Fig. 6.

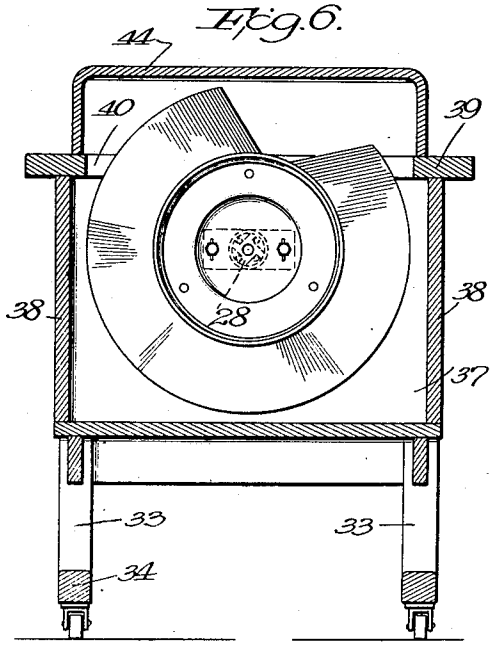
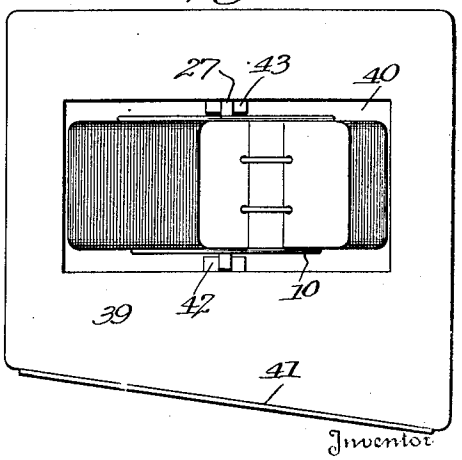


Fig. 7.



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UNITED STATES PATENT OFFICE

2,205,932

FILING APPARATUS

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Application March 7, 1936, Serial No. 67,710

7 Claims. (Cl. 45—3)

This invention relates to filing apparatus, and more particularly to apparatus of the type comprising a rotatably mounted drum carrying a plurality of cards upon its periphery. The invention is directed primarily to means for supporting such drums in novel position to facilitate the operations of inspection and posting of entries on the cards. Although not confined to such use, the supporting structure of the present application is of particular utility in combination with filing drums of the type shown in the co-pending application of Scholfield et al., Serial No. 600,514, filed March 22, 1932, Patent No. 2,046,655, issued July 7, 1936.

It is an object of the present invention to combine a rotatable filing drum with a novel form of supporting structure to facilitate the normal use of the apparatus, particularly in the manual posting of entries on the cards associated with the drum. It is a further object to improve the appearance and generally increase the efficiency of this type of device.

It is well known that a person writing by hand upon a sheet or card usually turns the sheet sidewise so that the upper and lower margins of the sheet and the lines upon which he is writing extend at an oblique angle to the front edge of the desk or table, upwardly to the right. This is the natural writing position. It is an object of the present invention to so mount the rotatable filing drums that the cards thereon, when in the posting position, extend at an angle to the operator, corresponding to this natural writing position.

It is a further well known fact that it is more convenient to write upon a surface inclined upwardly and rearwardly away from the writer than upon a flat surface. For instance, desks for school children have always been provided with inclined upper surfaces. One important aspect of the present invention consists in providing means for supporting a rotatable card carrying drum so that the cards thereon, when in posting position, will be thus inclined upwardly and rearwardly away from the operator.

It is a further important object of the invention to combine, with a drum mounted on a horizontal axis or on an axis slightly inclined from the horizontal, a desk or table-like working surface so that the operator is provided with an appropriate space for the papers or other articles with which he is working. Furthermore, the invention contemplates mounting a filing drum so that it may be rotated sidewise past the operator to expose the successive cards on the drum and to bring them successively to posting position. An important feature of the invention, in this connection, is the provision of a one-way brake or other means for restraining rotation of the drum in the opposite direction when force is applied to a particular card for posting entries thereon. Thus, the drum may be rotated in a left-hand direction past the operator and, when a particular card has been brought to the posting position, the right hand may be rested thereon and the entry posted, without causing the drum to rotate in a right-hand direction. This one-way brake or other restraining means enables the card and drum to act as a firm support during the posting of entries thereon.

In the accompanying drawings, two forms of the invention are shown, in which:

Figure 1 is a plan view of a table support having two filing drums mounted therein.

Figure 2 is a view, partly in section, and partly in elevation, taken on the line 2—2 of Figure 1.

Figure 3 is a vertical sectional view with the drum shown in elevation, taken on the line 3—3 of Figure 1.

Figure 4 is a perspective view of a second form of the invention.

Figure 5 is a vertical sectional view, with the drum shown in elevation, taken on a plane extending from the front to the back of the apparatus of Figure 4.

Figure 6 is a vertical sectional view taken at right angles to Figure 5, and

Figure 7 is a plan view of the apparatus of Figure 4.

Referring to Figures 1 to 3, the support for the rotatable filing drums 10, 11 comprises a table having a rectangular top 12 and legs 13. The table top 12 is provided with two rectangular openings 14, 15, and it should be noted that the edges of these openings are disposed at an angle of about 20° to the corresponding edges of the table top. Although the invention is not confined to this specific angularity, it has been found convenient to dispose the front edges 16, 17 of the openings in this relation to the front edge 18 of the table top. Thus, the cards 19 (Figure 1) are in the normal writing position with respect to the operator seated adjacent the front edge of the table.

Depending below the table top 18 is a housing comprising rear end walls 20, front walls 21, 21', bottom walls 22, and front and rear side walls 23, 24. The front end wall 21 comprises an inclined portion 21' to increase the leg room for

an operator seated at the front edge of the table. The front and rear side walls 23, 24 are provided with sockets 25, 26 which may have angular seats therein or appropriate clamping means for securing the ends of a stub axle 27 against rotation. The front side wall 23 may conveniently be provided with a hinged and locked door 23', to permit access to the inerior of the depending housing.

The drums 10 are mounted for rotation upon the stub axles 27 and the connection between the drum and axle comprises a one-way brake 28, the specific details of which need not be shown in the present application, since substantially the construction covered in the prior patent referred to above may be used.

An enclosing top or hood 29 may conveniently be hinged to the table as at 30, adjacent the rear edge of each opening 14, so that the filing drum may be completely enclosed when not in use. The tops or hoods 29, when in raised position, serve as a convenient means for supporting cards or other papers, and for this purpose a retaining rib 30' is positioned, as indicated in Figures 2 and 3, to secure the lower ends of such cards or papers.

As shown in the drawings, the sockets 25, 26 are mounted on a horizontal axis disposed in a vertical plane inclined to the front edge of the table, so that the drum and the cards thereon are angularly disposed to the position of the operator. In certain cases it may be desirable to position the sockets so that the rear one 26 is raised somewhat above the front one, so that the axis of the drum is inclined from the horizontal. In such a case the housing disposed below the table top should be correspondingly inclined, or may be sufficiently large to take the drum in inclined relation thereto. Thus, the form of the invention disclosed in Figures 1 to 3 is not limited to a horizontal mounting for the axis of the drum.

In the form of the invention shown in Figures 4 to 7, a smaller unit is disclosed, but it must be understood that the same principles could be embodied in a large apparatus comprising any desired number of drums.

Referring to Figure 4, the apparatus comprises a supporting base 31 comprising front inclined legs 32, rear legs 33, and horizontal braces 34. Supported upon the base is a cabinet 35 comprising a forwardly and upwardly inclined front wall 36, and vertical back and side walls 37, 38.

Supported upon the side wall is a desk-like, inclined top surface 39 which may be disposed on an angle from the horizontal of about 15°. The top 39 is provided with a rectangular opening 40 communicating with the interior of the cabinet and having its edges disposed in substantial parallelism with the rear and side edges of the top. The margins of the opening 40 are in substantial parallelism with the side and rear edges of the table top, but the front edge 41 of the top is disposed at an angle to the front edge of the opening, so that an operator seated adjacent that front edge will be in substantially the same relation to the opening 40 as an operator working with the apparatus of the form disclosed in Figures 1 to 3.

The interior of the cabinet 35 is provided with sockets 42, 43, the former being secured directly to the inclined inner face of the front wall 36 and the latter secured in any desired way, for instance, upon an inclined strut 37' or the like. As in the first form of the invention, these sockets 42, 43 comprise means to support, non-rotatably, the axle 27 of the drum 10. Moreover, the drum and axle are interconnected by means of a brake 28, as mentioned above, and as specifically described in the afore-mentioned patent.

A top or hood 44 may be hinged adjacent the rear edge of the opening 40 to serve as a cover for the drum when not in use. The rear wall 45 of the hood is inclined, as shown in Figure 5, so that the hood, when open, stands in a substantially vertical position on the inclined top 39.

In the operation of the improved apparatus, an operator seated adjacent the front edge 18 of the table 12 (Figure 1) uses the table top for the various papers from which information is to be transferred to the cards 19 upon the drums 10. The drum may be rotated in a left-hand direction (Figures 1 and 2) until the proper card has been brought to the position of the card 19. The operator may then rest his hand upon the drum and card, and post the appropriate entry on the card. The one-way brake will prevent rotation of the drum in a right hand direction and will enable the drum to act as a firm support during the posting operation. The angular position of the drum with respect to the front edge of the table will facilitate the posting of entries on the cards, since the cards are presented in the natural writing position. As pointed out in the patent, the drum may be rotated in a right-hand direction under the application of deliberate turning force in that direction, but it will not move under the relatively light pressure applied during posting.

The operation of the second form of the invention is substantially the same. An operator seated adjacent the inclined front edge 41 will find the cards presented at the normal writing angle, and, additionally, will find them inclined rearwardly and upwardly, after the manner of a desk surface. The drum will be rotated in the left-hand direction until the proper card is found, and will be restrained against rotation in the right hand direction during posting.

I claim:

1. The combination with a rotatable filing drum having means for carrying a plurality of cards upon its periphery, of a support, said support comprising an axle upon which the drum is journaled, and means for supporting said axle on an axis inclined upwardly and rearwardly between the horizontal and the vertical.

2. The combination with a rotatable filing drum having means for carrying a plurality of cards upon its periphery, of a supporting structure adapted to support said drum for rotation upon an axis inclined upwardly and rearwardly from the position normally occupied by an operator, said structure comprising an upper, plane working surface having an edge adjacent the normal position of an operator, and drum mounting means below said surface disposed upon an axis inclined upwardly and rearwardly from said position, whereby the cards on the upper portion of said drum are disposed upon inclined planes facing the position of the operator, to facilitate posting of entries on said cards.

3. The combination with a rotatable filing drum having means for carrying a plurality of cards upon its periphery, of a supporting structure, said structure comprising an upper plane working surface terminating in a forward edge adjacent the position of an operator, and means for supporting said drum in said structure with its axis disposed in a plane meeting said edge at an acute angle and tipped rearwardly and

upwardly from the horizontal, whereby the cards on the periphery of said drum are presented to the operator in a position to facilitate posting of entries thereon.

4. A filing apparatus comprising a card carrying drum, a stub axle upon which said drum is journaled for rotation, and a supporting structure for said drum and axle, said supporting structure comprising sockets for the ends of said axle mounted on a line inclined upwardly and rearwardly between the horizontal and the vertical to support the axle and drum on an inclined axis, and a housing for said drum having at least one of its walls inclined from the vertical to correspond to the inclination of said drum.

5. A filing apparatus comprising a supporting structure and a rotatable filing drum mounted therein having means for carrying a plurality of cards on its periphery, said structure comprising an upper plane working surface terminating in a forward edge adjacent the position of an operator and being inclined upwardly and rearwardly from said position, said surface having a substantially rectangular opening therein and a housing below said opening, said housing comprising a wall depending from one margin of said opening on a plane perpendicular to the plane of said working surface, the forward wall of the housing and the front and rear margins of the opening being disposed in acute angular relation to the forward edge of said plane surface, said drum being mounted in said housing in a symmetrical relation to the margins of the rectangular opening and on an axis inclined on a line parallel to the plane of said working surface, whereby the cards mounted on the periphery of said drum are inclined upwardly and rearwardly and are disposed at an angle to the position of the operator to facilitate the posting of entries thereon.

6. The combination with a rotatable filing drum having means for carrying a plurality of cards upon its periphery and a stub axle upon which said drum is journalled, of a supporting structure for said axle and drum, said structure comprising an upper plane working surface terminating in a forward edge adjacent the position of an operator and inclined upwardly and rearwardly therefrom, said surface being provided with a rectangular opening having the forward margin thereof disposed on an acute angle with respect to said edge of the working surface and inclined rearwardly from left to right, a housing disposed below said surface having a front wall disposed in parallel relation to the front margin of the opening and perpendicular to the plane of said working surface, and supporting means disposed interiorly of said housing for said stub axle, said supporting means being disposed on a line normal to the front wall of the housing, whereby the drum is inclined upwardly and rearwardly and is mounted at an angle to the forward edge of the working surface, for the purposes described.

7. The combination of a filing drum having means for carrying a plurality of cards upon its periphery, of a supporting structure adapted to support said drum for rotation to bring the cards on the drum successively to a posting position with respect to the position occupied by an operator, said supporting structure comprising an upper plane working surface disposed on a plane inclined upwardly and rearwardly from the position of the operator, said surface having a rectangular opening therein and a housing disposed below the opening, the front wall of the housing being disposed on a plane perpendicular to the plane of said surface, and means for supporting said drum for rotation on an axis below said surface, normal to said front wall and parallel to the inclined plane of said working surface.

RICHARD P. SCHOLFIELD.