

Oct. 15, 1963

E. E. SCHOLFIELD ETAL

3,106,920

FILING APPARATUS

Filed March 19, 1959

2 Sheets-Sheet 1

FIG. 1.

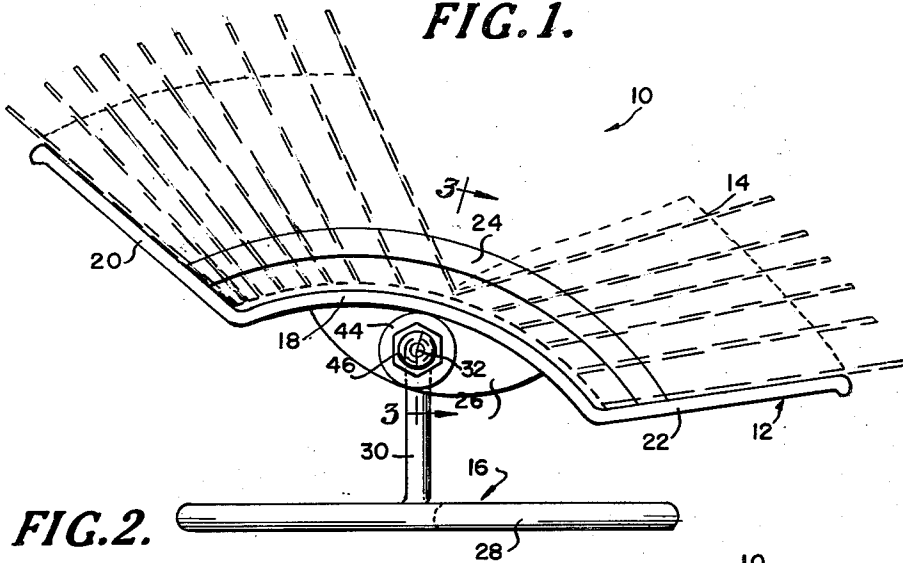


FIG. 2.

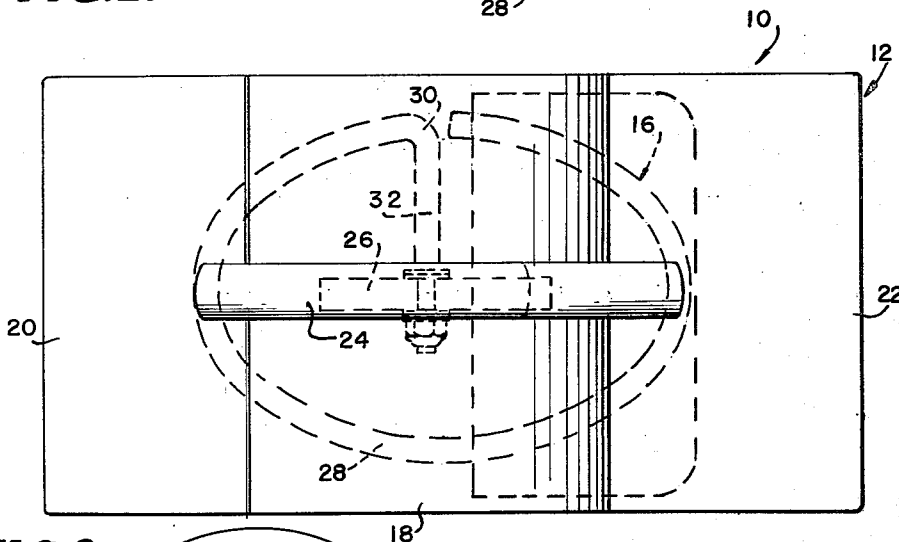
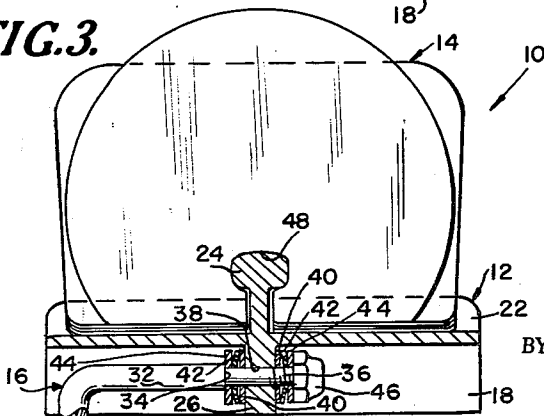


FIG. 3.



INVENTORS

ETHEL E. SCHOLFIELD
RICHARD P. SCHOLFIELD

BY *Cushman, Darby & Cushman*
ATTORNEYS

Oct. 15, 1963

E. E. SCHOLFIELD ETAL

3,106,920

FILING APPARATUS

Filed March 19, 1959

2 Sheets-Sheet 2

FIG. 4.

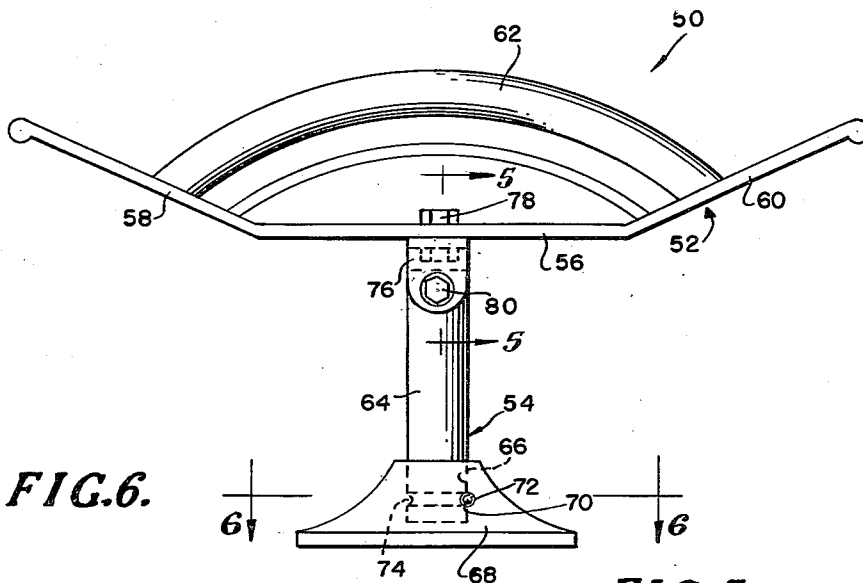


FIG. 6.

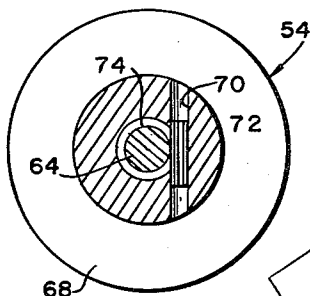


FIG. 5.

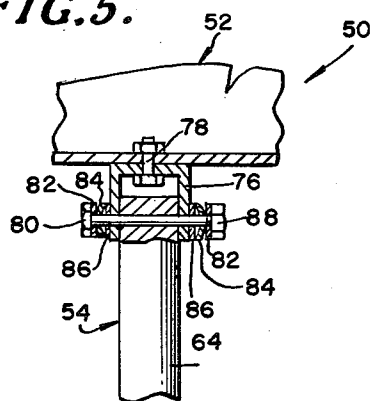
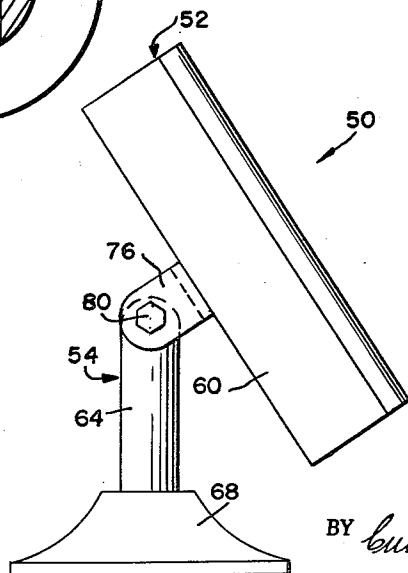


FIG. 7.



INVENTORS

ETHEL E. SCHOLFIELD
RICHARD P. SCHOLFIELD

BY *Cushman, Darby & Cushman*
ATTORNEYS

1

3,106,920

FILING APPARATUS

Ethel E. Scholfield and Richard P. Scholfield, White Plains, N.Y., assignors to Wheedex Manufacturing Co., Inc., Peekskill, N.Y., a corporation of New York
Filed Mar. 19, 1959, Ser. No. 800,430
7 Claims. (Cl. 129-16)

This invention relates to article handling and more particularly to a filing apparatus of the tray type arranged to receive and retain a row of cards in position for convenient access. This application constitutes a continuation-in-part of our application Serial No. 733,895, filed May 8, 1958, now abandoned.

The above-identified application discloses a tray type card holder embodying a card supporting means arranged to receive and retain a set of file cards in upwardly convex row formation. The card holder includes integral lower surfaces arranged to support the holder in different positions of longitudinal tilted adjustment so that the cards can be divided into two oppositely inclined groups between any two adjacent cards in the row and the groups will be maintained by gravity in their oppositely inclined positions. In general, this result is accomplished by supporting the holder in different positions of tilted adjustment so that the point of card division is substantially uppermost in the row.

An object of the present invention is the provision of a card holder of the type described having improved means for supporting the tray of the card holder in different positions of tilted adjustment.

Another object of the present invention is the provision of a card holder of the type described having a separate base, a means for connecting the base to the card holder tray so that the latter may be supported in different positions of longitudinal tilted adjustment.

Still another object of the present invention is the provision of a card holder of the type described embodying a base and improved means for connecting the base to the tray of the card holder so that the tray can be moved into different positions of longitudinal tilting adjustment and in a transverse tilted position wherein the cards are disposed in a bookwise attitude.

Still another object of the present invention is the provision of a device of the type described which is simple in operation and economical to manufacture. These and other objects of the present invention will become more apparent during the course of the following detailed description and appended claims.

The invention may best be understood with reference to the accompanying drawings wherein illustrative embodiments are shown.

In the drawings:

FIGURE 1 is a side elevational view of a card holder device embodying the principles of the present invention, showing the same with a set of file cards received and retained therein, the file cards being shown in broken lines;

FIGURE 2 is a top plan view of the device;

FIGURE 3 is a fragmentary cross-sectional view taken along the line 3-3 of FIGURE 1;

FIGURE 4 is a side elevational view of a modified form of card holding device embodying the principles of the present invention;

FIGURE 5 is a fragmentary cross-sectional view taken along the line 5-5 of FIGURE 4;

FIGURE 6 is a cross-sectional view taken along the line 6-6 of FIGURE 4; and

FIGURE 7 is an end view of the device illustrating the manner in which the same may be positioned so that the cards are supported in a bookwise attitude.

Referring now more particularly to the drawings, there

2

is shown in FIGURES 1-3 a card holder device, generally indicated at 10, embodying the principles of the present invention. The device includes a tray 12 for receiving and retaining a set of file cards 14 and a base 16 for supporting the tray 12 in different positions of longitudinal tilted adjustment.

The tray 12 includes an upwardly convex arcuate wall 18 having end walls 20 and 22 extending outwardly from opposite ends thereof in outwardly diverging relation with respect thereto. Disposed on the outer periphery of the arcuate wall 18 between the end walls 20 and 22 is a card receiving and retaining means in the form of an arcuate member 24 of substantially T-shaped cross sectional configuration, as shown in FIGURE 3. Extending downwardly from the lower surface of the arcuate wall 18 is a depending vertical lug 26 of generally arcuate configuration which is arranged to be connected with the base 16. While the tray may be made of any suitable material, preferably the walls 18, 20 and 22, the T-shaped element 24 and the lug 26 are made in a single casting of a moldable plastic material.

The base 16 is preferably made up of a single piece of rod stock, one end portion of which is bent in substantially elliptical configuration, as shown in FIGURE 2, to provide a horizontal portion 28 arranged to engage a table top, desk top or the like. The rod stock of the base 16 is also bent to provide a vertical portion 30 extending upwardly from one end of the horizontal portion 28. Finally, the base is completed by bending the end portion thereof opposite from the horizontal portion 28 to provide a transversely extending upper horizontal portion 32. Preferably, the extremity of the horizontal portion 32 is reduced in diameter to provide a shoulder 34 and the outer extremity is threaded as indicated at 36.

The reduced extremity of the upper horizontal portion 32 of the base extends through an aperture 38 formed in the lug 26 of the tray 12. In this way, the tray 12 is connected with the base for tilting or pivotal movement about a transverse horizontal axis which is spaced above the axis of the arcuate wall 18. In order to retain the tray 12 in different positions of longitudinal tilted adjustment with respect to the base, a set of three washers, 40, 42 and 44, is mounted on the threaded extremity 36 on opposite sides of the lug 26. The outer washers 40 and 44 of each set are preferably conventional flat washers while the intermediate washer 42 is of the spring type. The washers 40 are arranged to engage the adjacent surfaces of the lug 26 while one washer 44 engages the shoulder 34 and the other washer 44 engages a nut 46 threaded on the base end 36 extending through the lug 26.

It will be understood that the cards 14 which are supported in the tray 12 are provided with cut-out portions 48 of substantially T-shaped cross-sectional configuration corresponding generally to the cross-sectional configuration of the member 24. In this way, the tray 12 receives and retains the set of cards 14 in upwardly convex row formation so that access to any one card in the row may be had by dividing the row between any two adjacent cards into two oppositely inclined groups. It will be understood that the arcuate extent of the row of cards 14 is such that if the same is held in one position of longitudinal tilted adjustment by the device 10, the two groups of oppositely inclined cards will be maintained in their oppositely inclined positions by the action of gravity alone only when the card division occurs in the uppermost portion of the row. For example, with the cards in the position shown in FIGURE 1, access to cards in the extreme right-hand portion of the row can be readily obtained by dividing the row between any two adjacent cards therein into two oppositely inclined groups. However, the left hand group, which constitutes the majority of the cards, will not be retained by gravity into its in-

clined position as the cards toward the right of this group will tend to fall toward the other group unless manually restrained.

The holder 10 is operable to permit the tray to be tilted about the connection of the base therewith so that the point of card division can be brought to a position substantially uppermost in the row, thus allowing the two oppositely inclined groups to be maintained in their oppositely inclined positions by gravity. By this arrangement not only is the card to which access is desired brought to a convenient position to be viewed by the operator, but, in addition, the device is readily adjustable, in response to longitudinal tilting movement by the user, to maintain a desired card division without the necessity of manual restraint. In this regard, it will be noted that the nut 46 can be readily adjusted to provide a desired frictional contact between the base and the tray so that the tray can be sufficiently loosely connected to permit the operator to readily tilt the tray with respect to he base and a the same time sufficiently tight so that when the tray is moved into a desired position of tilted adjustment it will be frictionally retained therein.

Thus, as shown in FIGURE 1 the plane of each of the end walls defines downwardly extending angle relative to the arcuate member at their point of intersection, the intersecting planes of the end walls 20, 22 defining an included angle less than 180°. The base 16 pivotally supports the tray above the axis of the arcuate member 24 in spaced apart, generally parallel relationship.

Referring now to FIGURES 4-7, there is shown a modified form of a card holder device, generally indicated at 50, which embodies the principles of the present invention. The device 50 includes a tray 52 and a base 54 which is arranged to support the tray for movement into different positions of longitudinal tilted adjustment with respect thereto and into a position of transverse tilted adjustment with respect to the base so that cards received and retained by the tray will be disposed in a bookwise attitude.

The tray 52 includes an intermediate wall 56 having a pair of end walls 58 and 60 extending outwardly from opposite ends thereof in outwardly diverging relation with respect thereto. Extending between the end walls 58 and 60 in a position above the intermediate wall 56 is an arcuate member 62 similar to the member 24 previously described.

The base 54 comprises a vertical stem 64, preferably of circular cross-sectional configuration, having its lower end rotatably mounted within a vertical socket 66 formed in a base member 68, the lower surface of which is arranged to engage a desk top, a table top or the like. The lower end of the stem 64 may be retained within the member 68 by any suitable means, and, as shown, the member 68 is provided with a transversely extending bore 70 for receiving a split, sleeve-like pin 72. The pin 72 is arranged to extend within the bore 70 and to engage within a portion of an annular recess 74 formed in the lower end of the stem 64. It will be seen that with this arrangement the stem may be swiveled or rotated about a vertical axis with respect to the base member 68.

The upper end of the stem 64 is pivotally connected to the depending legs of a U-shaped bracket 76, the bight portion of which is connected below the central portion of the intermediate wall 56, as by a bolt 78. The bolt 78 serves to fixedly secure the bracket 76 to the tray 52 and the pivotal connection between the legs of the U-shaped bracket and the upper end of the stem is effected by means of a bolt 80 which extends through the depending legs of the bracket and the upper end of the stem 64. Preferably a set of three washers, 82, 84 and 86, are mounted on the bolt 80 on opposite sides adjacent each depending leg of the bracket 76. The desired tension in the horizontal pivotal connection between the bracket and the stem is adjusted by means of a nut 88 threaded on the bolt 80.

It will be seen that with the U-shaped bracket secured to the tray 52, by the bolt 78, in the position shown in FIGURE 5, wherein the axis of bolt 80 extends transverse to the longitudinal extent of the tray, the latter may be tilted and retained in any desired position of longitudinal adjustment in the same manner as the tray 12 previously described. In addition, the swiveling connection between the stem 64 and the base permits the user to rotate the tray in a horizontal plane during such use thus providing additional convenience to the user. In addition, if the user should desire to utilize the device so that the cards are held in a bookwise attitude, as illustrated in FIGURE 7, then the operator need only loosen the bolt 78 and pivot the bracket 90° and then tilt the tray to the bookwise attitude desired. In this position, the nuts 88 may be tightened to a degree greater than that ordinarily utilized when the device is operated in accordance with the embodiment illustrated in FIGURES 1-3.

It will be understood that the base may be readily varied so that a single tilting arrangement such as illustrated in FIGURES 1-3 may be provided with a swivel base of the type shown in FIGURES 4-7, or, alternatively, the universal type connection such as shown in FIGURE 5 may be utilized with a base which is not provided with a lower swivel member. Moreover, it will be readily appreciated that the connection illustrated in FIGURE 5 may be replaced with a ball and socket type universal connection, if desired.

It thus will be seen that the objects of this invention have been fully and effectively accomplished. It will be realized, however, that the foregoing specific embodiment has been shown and described only for the purpose of illustrating the principles of this invention and is subject to extensive change without departure from such principles. Therefore, this invention includes all modifications encompassed within the spirit and scope of the following claims.

We claim:

1. A filing apparatus comprising: a top wall including an arcuate member; opposed end walls rigidly joined to the ends of said arcuate member, the plane of each of said end walls defining a downwardly extending angle relative to the arcuate member at their point of intersection; the intersecting planes of said end walls defining an included angle of less than 180°; a multiplicity of individual cards each having an opening therein communicating with one edge thereof, the opening of each of said cards receiving a portion of said arcuate member; base means for pivotally supporting said top wall above the axis of said arcuate member including a first pivot member disposed generally parallel to and with its pivot axis spaced above to the axis of said arcuate member; a second pivot member depending from said top wall and pivotally engaged with said first pivot member; and means cooperating with said first and second pivot members providing frictional engagement therebetween to maintain said top wall in selected positions of manually tilted adjustment between extreme opposed positions of longitudinal inclination, whereby any two groups of cards are maintained by gravity in oppositely inclined positions.

2. A filing apparatus as defined in claim 1 wherein said base means further includes an elongated rod bent to provide an annular portion for engaging a table top or the like, a vertical portion extending upwardly therefrom and said first pivot member extends inwardly from the upper end of said vertical portion.

3. A filing apparatus as defined in claim 1 wherein said base includes a lower base member for engaging a table top or the like and an upper base member having its lower end mounted in said lower base member for movement about a vertical axis and its upper end connected with said first pivot member.

4. A filing apparatus as defined in claim 2 wherein said top wall further includes an upwardly convex wall surface disposed below said arcuate member and also

5

engaging said end walls and said second pivot member depends from the upper periphery of said convex wall surface for receiving said first pivot member; said second pivot member including an apertured lug.

5. Filing apparatus as defined in claim 1 wherein said base means includes means for supporting said top wall arcuate member in at least one position of transverse tilted adjustment wherein the card row is supported in a bookwise attitude.

6. A filing apparatus as defined in claim 5 wherein said base means includes means for supporting said top wall for pivotal movement about a vertical axis and a horizontal axis.

7. A filing apparatus as defined in claim 6 wherein

6

said base means includes upper and lower members interconnected for relative rotation about a vertical axis.

References Cited in the file of this patent

UNITED STATES PATENTS

498,156	Condit et al.	May 23, 1893
1,476,157	Fleming	Dec. 4, 1923
2,240,325	Bruen	Apr. 29, 1941
2,334,785	Mitchell	Nov. 23, 1943
2,441,717	Nero	May 18, 1948
2,778,454	Scholfield	Jan. 22, 1957

FOREIGN PATENTS

175,231	Great Britain	Feb. 6, 1922
---------	---------------------	--------------