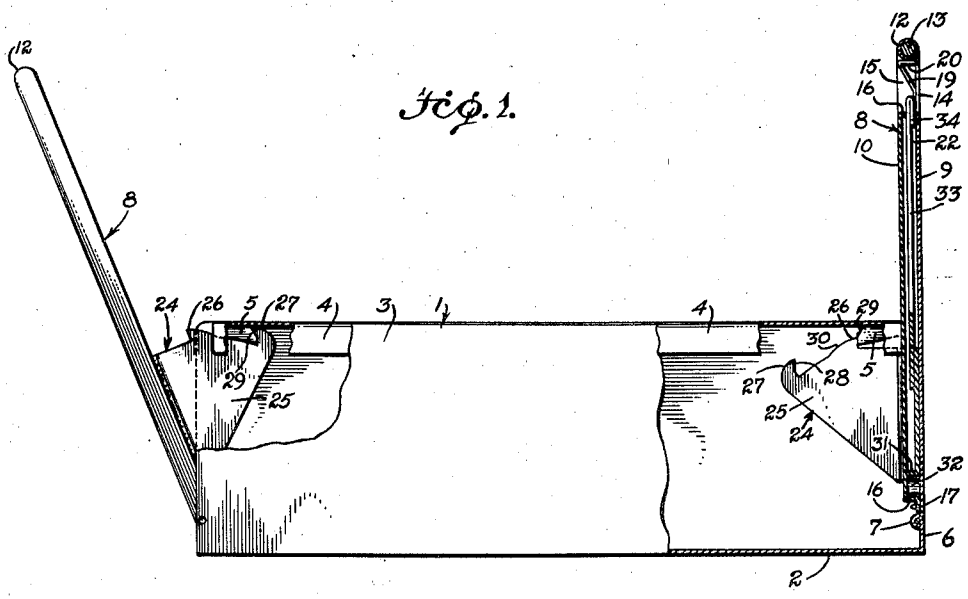
Feb. 13, 1940. C. F. WOLTERS 2,190,178

FILING TRAY

Filed June 3, 1938 2 Sheets-Sheet 1

Fig. 1.



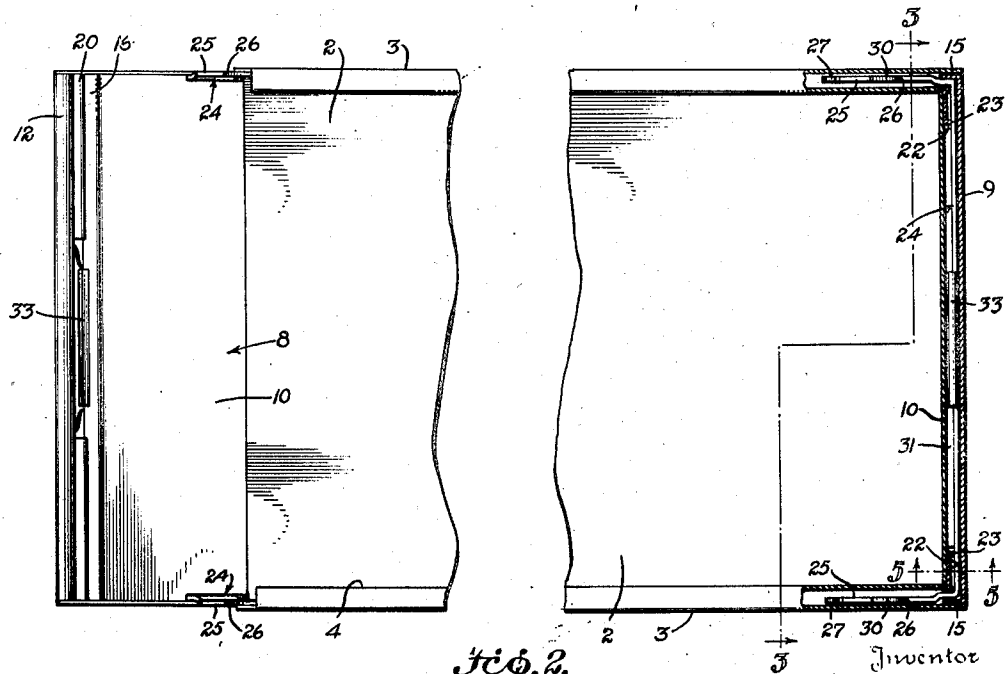


Fig. 2.

Inventor

Carl F. Wolters,

By

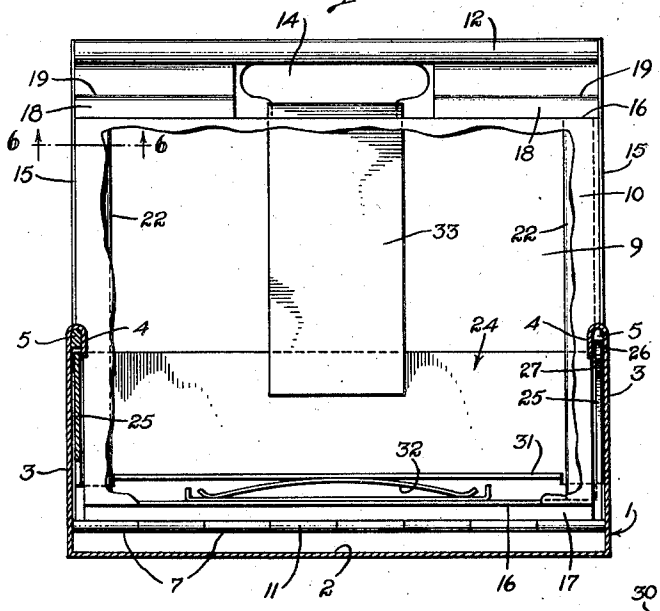
Attorney

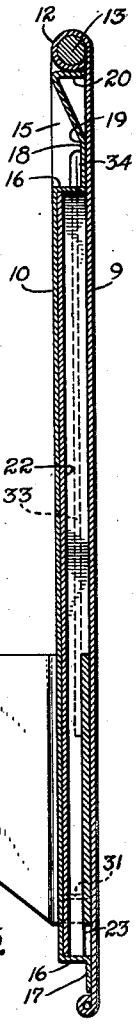
Feb. 13, 1940. C. F. WOLTERS 2,190,178

FILING TRAY

Filed June 3, 1938 2 Sheets-Sheet 2

Fig. 3.





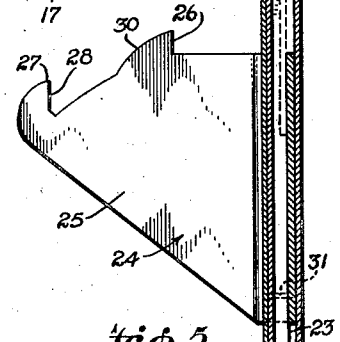
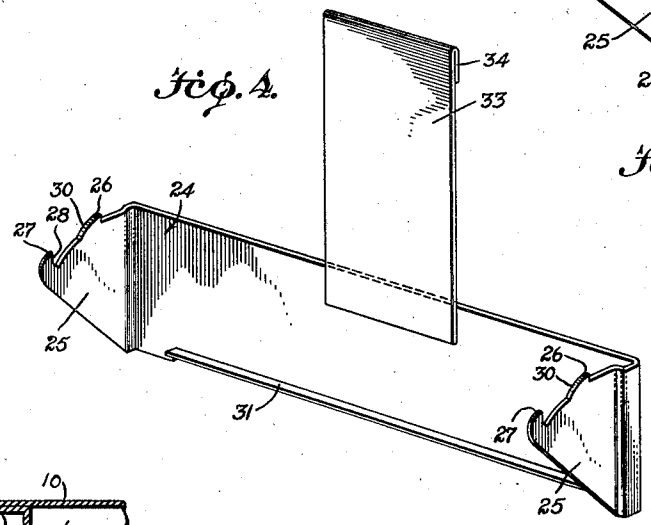


Fig. 5.

Fig. 4.



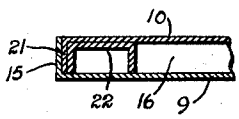


Fig. 6.

Inventor

Carl F. Wolters,

By Richard D. Booth Attorney

Patented Feb. 13, 1940 2,190,178

UNITED STATES PATENT OFFICE

2,190,178

FILING TRAY

Carl F. Wolters, Kenmore, N. Y., assignor to Remington Rand Inc., Buffalo, N. Y.

Application June 3, 1938, Serial No. 211,614

2 Claims. (Cl. 129—43)

This invention relates to filing trays for ledger cards, visible index panels and the like, having tilting end walls, and particularly to the end wall structure and the means for holding the end wall in upright and inclined positions.

The invention comprehends the provision of a filing tray with a tilting end wall having a retaining member slidable on the end wall, provided with a lateral projection, the projection and tray being formed with shoulders arranged to cooperate to support the end wall in both upright and inclined positions, the retaining member being normally operated to hold the shoulders in engaged relation while a suitable handle is provided to operate the retaining member to disengage the shoulders so the end wall may be moved from one position to the other.

The invention further comprehends the provision of a filing tray having a hinged end wall constructed of a pair of spaced sheet metal sections slidably mounting a retaining strip between the sections formed with a lateral projection provided with shoulders to engage a shoulder on the tray, and normally held in one position to cause said shoulders to engage and retain the end wall in either upright or inclined position, while a handle member is provided for operating the retainer strip to disengage the shoulders through manual operation of the handle in order to provide for movement of the end wall from one position to the other.

The invention provides an end wall structure made of sheet metal hinged to the end of a tray having inner and outer sections secured together for slidably mounting a retainer member for sliding movement therebetween, with a spring for actuating the retainer member in one direction, the retainer member being provided with lateral projections formed with shoulders to cooperate with shoulders on the tray body for retaining the end member in either upright or inclined position, while a handle in the form of an extension from the retainer member projects outwardly at one end of the end wall for manual operation so the shoulders may be disengaged to provide for movement of the end wall from the upright to the inclined position.

The invention also comprehends several specific features involved in the construction of the end wall and the assembly of the retainer member therein, to provide an end wall structure that is simple in construction and assembly as hereinafter pointed out in detail in the specification and claims.

In the drawings:

Fig. 1 shows a tray incorporating the features of invention in side elevation with portions broken away and shown in section in order to illustrate the details of construction, one end wall being shown in inclined position and the other end wall in upright position.

Fig. 2 is a plan view of the tray as shown in Fig. 1 with portions broken away and shown in section to illustrate details of construction.

Fig. 3 is a transverse section taken on line 3—3 of Fig. 2.

Fig. 4 shows the retaining member in perspective detached from the end wall.

Fig. 5 is an enlarged cross section taken on line 5—5 of Fig. 2.

Fig. 6 is an enlarged cross section taken on line 6—6 of Fig. 3.

A tray is indicated at 1 formed of sheet metal having a body including a bottom 2, and side walls 3. The upper ends of the side walls are formed with return bend portions 4 arranged in spaced parallel relation inside of side walls 3. Shoulders 5 are supported in the space between the return bends 4 and side walls 3 at the ends of the tray.

The sheet metal forming the tray bottom is turned upwardly at the ends as indicated at 6 and formed to provide hinge knuckles 7 for hingedly mounting an end wall 8 on each end of the tray. Each end wall is of duplicate construction so that a description of one will suffice for both.

Each end wall is constructed with an outer sheet metal section 9 and an inner sheet metal section 10. Section 9 is provided at the lower end with a plurality of hinge knuckles 11 that interfit between hinge knuckles 7 to receive a hinge pintle for hingedly mounting end wall 8 on the tray. At the upper end outer section 9 is formed to provide a cylindrical portion 12 reinforced by rod 13, the central portion of the sheet metal being cut out as indicated at 14 to provide a hand opening at the upper end of the end wall. At the side edges section 9 is formed with lateral side flanges 15. Inner section 10 is formed with laterally extending flanges 16 at the top and bottom terminating in offset end portion 17 at the bottom, and 18 at the top, that are spot welded or otherwise rigidly secured to the inner face of outer section 9, thereby mounting inner section 10 in spaced parallel relation to outer section 9. Offset end 18 at the upper end of inner section 10 is provided with a curved portion 19 at opposite sides of hand opening 14 terminating in a lateral

extension 20 located under cylindrical portion 12 in the manner illustrated in Fig. 1

The side edges of inner section 10 are provided with lateral flanges 21 slidably interfitting inside of side flanges 15 on outer section 9 and channel members 22 extend between lateral flanges 16 of inner section 10, one being located along each side of inner section 10 adjacent to flanges 21. These channel members are suitably spot welded or otherwise rigidly secured to inner section 10 and have approximately the lower one third portion of the length of the edges cut away as indicated at 23 to provide guideways between the channels and the inner face of outer section 9 for receiving a retaining member 24.

Retaining member 24 is formed from a strip of sheet metal having lateral end projections 25 extending through slots formed at the side edges of end wall 8 between the sides of inner section 10 and flanges 15 of outer section 9. These end projections 25 extend along the inside faces of side walls 3 of the tray under return bend portions 4. The upper edges of projections 25 are formed with a pair of projections 26 and 27, respectively, providing shoulders on each projection for cooperating with shoulders 5 on the tray side wall for supporting and retaining end wall 8 in either vertical or inclined positions on the tray. Projections 26 cooperate to retain end wall 8 in vertical position and projections 27 retain the end wall in inclined position. Projections 27 are longer than projections 26 and have angular end portions 28 adapted to engage over angle portions 29 of the shoulders 5 for holding retaining member 24 in engaged relation with shoulders 5 and normally preventing said retaining member from being manually operated to disengage shoulders 27 from shoulders 5.

The upper edge of projections 26 is formed to provide cam portions 30 adapted to engage the under faces of projections 5, so that when end wall 8 is manually operated to move it from the inclined position to the upright position, cam portions 30 on projections 26 will move retaining member 24 downwardly in order to automatically position retaining member 24 so the shoulders on projections 26 may engage with shoulders 5 and latch end wall 8 in upright position.

Retaining member 24 is formed with a lateral flange 31 on the lower edge which seats on spring 32 supported on lateral flange 16 at the lower end of inner section 10, operating retaining member 24 to normally hold projections 26 and 27 in position to engage shoulders 5. A strip 33 mounted in the central portion of retaining member 24 extends laterally thereto and upwardly between outer and inner sections 9 and 10. The upper end of strip 33 is doubled upon itself as indicated at 34 to provide a handle extending through a slot in the central portion of flange 16 at the upper end of inner section 10. Handle 34 projects into hand opening 14 in the manner illustrated in Fig. 3 so as to be readily engageable for manual operation to depress the handle for moving retaining member 24 downwardly to disengage shoulders 26 from shoulders 5 and thereby provide for movement of end wall 8 from the upright to the inclined position.

This construction provides a very simple tilting end wall structure for filing trays including a retainer member slidable in the end wall and arranged to engage the side walls of the tray to form extensions thereof when the end wall is moved into the inclined position beyond the end of the tray, and at the same time, provide a means for supporting the end wall in both upright and inclined positions. This construction reduces the number of parts to a minimum so as to obtain an economical and yet efficient structure. While the inner and outer sections 9 and 10 are welded together as above described thereby providing a permanent assembly of the parts, it will be understood that they may be detachably secured together, if desired, so that access can be had to the retaining member and spring 32 for replacement thereof if desired.

The invention claimed is:

1. A filing tray, comprising a body having bottom and side walls, an end wall for movement between upright and tilted positions having an outer sheet metal section hinged at the bottom to said body, an inner sheet metal section having lateral end flanges terminating in offset end extensions secured to the inner face of said outer section and mounting said inner section in spaced parallel relation, a channel strip at each side of said inner section having the center portion thereof secured to the side margin of said inner section, said channel strips extending to the ends of said inner section and having the edges engaging the inner face of said outer section, said channel strips having a portion of the edges removed to provide a guideway between said strips and outer section, a retainer strip extending across said end wall slidable in said guideway, said retainer strip having laterally projecting ends at the side edges of said end wall overlapping said side walls in contiguous parallel relation and spaced above said bottom wall, cooperating shoulders formed on said laterally projecting ends and said side walls for supporting said end wall in upright and inclined positions, a lateral flange formed on said retainer strip, a spring between said last-named flange and a lateral end flange on said inner section normally operative to slide said retainer strip in one direction for retaining said shoulders in engagement and a handle formed of a strip of sheet metal having one end secured to said retainer strip and the opposite end projecting laterally therefrom between said wall sections to the upper ends thereof for manual engagement for moving said retainer strip in the opposite direction to disengage said shoulders, said laterally projecting ends forming side wall extensions for said tray to close the opening between said end wall and the ends of said side walls in the tilted position of said end wall.

2. A filing tray comprising a body having a bottom and side walls extending upwardly therefrom, an end wall for movement between upright and tilted positions at one end of said tray, said end wall having inner and outer spaced wall sections, said sections having laterally extending edge flanges connecting said sections in assembled relation, a hinge at the bottom of one section connecting it to the end of said tray bottom, a retainer strip having the central portion extending between said wall sections and slidable in said end wall above said bottom, and having laterally extending end projections formed with shoulders to engage shoulders mounted on the side walls of said tray and operable to support said end wall in upright and tilted positions, resilient means engaging between the bottom edge flange on said wall sections and the bottom edge of the central portion of said retainer strip for normally retaining said shoulders in engagement, and a strip attached at one end

to the central portion of said retainer strip, projecting laterally therefrom and extending outwardly through a slot in the edge flange at the upper part of said end wall and forming a handle for manual engagement to slide said retainer strip downwardly in said end wall against the tension of said resilient means to disengage said shoulders, and said end projections forming side wall extensions beyond the ends of said side walls for closing the end of said tray when said end wall is in tilted position.

CARL F. WOLTERS.