F. L. G. STRAUBEL.

DESK TRAY SET.

APPLICATION FILED OCT. 13, 1917

1,303,985. Patented May 20, 1919.

Fig. 1.

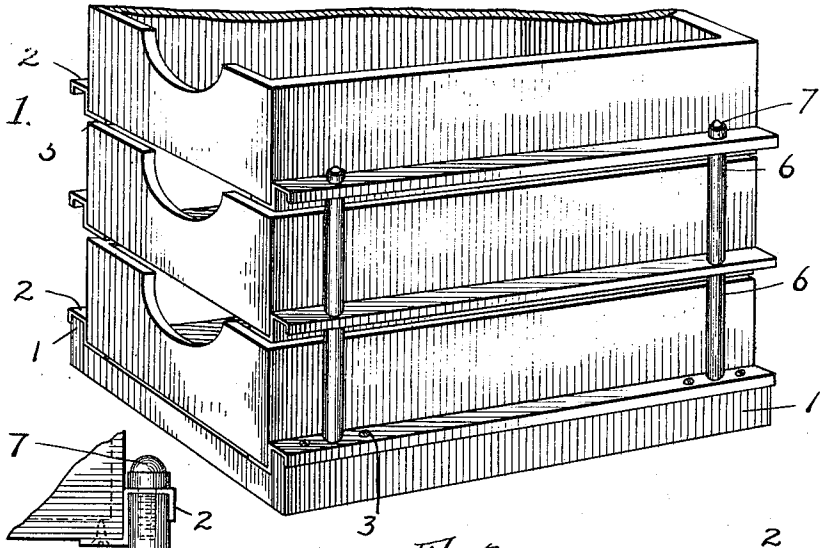


Fig. 2.

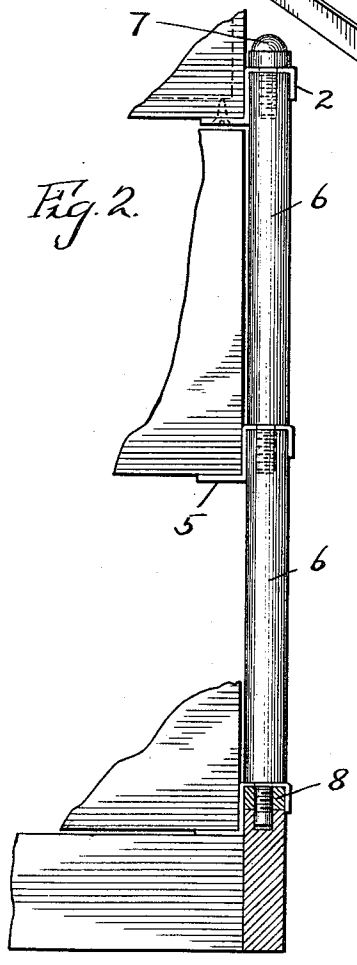


Fig. 3.

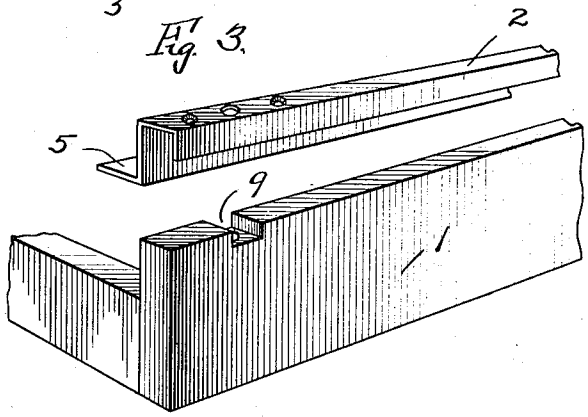


Fig. 5.

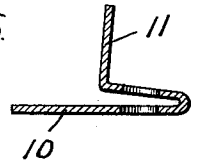
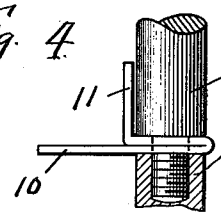


Fig. 4.



Witness:

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UNITED STATES PATENT OFFICE.

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DESK-TRAY SET.

1,303,985. Specification of Letters Patent. Patented May 20, 1919.

Application filed October 13, 1917. Serial No. 196,511.

To all whom it may concern:

Be it known that I, FREDERICK L. G. STRAUBEL, citizen of the United States, residing at Green Bay, in the county of Brown and State of Wisconsin, have invented certain new and useful Improvements in Desk-Tray Sets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to desk tray sets for office, store or factory use, and aims to provide a desk tray set of unusual strength and durability, and one which may readily be altered in effective size, so as to vary the number of trays or compartments held by the same, and, if desired, to also vary the depths of the individual trays. More particularly, my invention aims to provide an expansible rack for supporting any desired number of trays above one another and to construct such a rack of standard duplicate parts, including portions adapted to hold the individual trays either slidably or rigidly; and also to hold any of the trays excepting the uppermost one in a partially exposed position.

Heretofore, desk tray sets for this general purpose, such as the one disclosed in copending application filed December 15, 1915 as Serial No. 66952 have been constructed with wooden uprights and wooden guides, all assembled in rigid formation and depending for their firmness on the size of the wooden parts and the rigidity of the connections between the same. Unless constructed of rather heavy and consequently clumsy parts, the rack for such a tray set is apt to be damaged in transit or to have certain portions split, or to warp out of shape and hence cause a binding of the sliding trays. Moreover, such wooden structures have always been of a fixed size, thereby permitting neither an addition to their height when the needs of the business demanded the same, nor the substitution of relatively deeper or more shallow trays where these might be desirable for certain purposes.

In my present invention, I substitute metal for wood as the material for all except the base portions of the structure, thereby avoiding a cracking and warping of the parts and enabling me to provide ample strength while using smaller and neater appearing parts. In so doing, I also aim to use standard forms of metal parts for the guide upon which the individual trays are supported, and to so shape these as to stiffen their formation and to reduce the outwardly projecting metal edges to a minimum. I also aim to use standard and interchangeable post sections as separable parts of the uprights of the frame, which post sections may be assembled in any desired height and from sections of either uniform or varying lengths, and which post sections when assembled will automatically hold the metal guide strips between them in effective operating position both for supporting trays above them and for limiting the tilting of a tray which has been partially withdrawn from the rack. Furthermore, my invention aims to utilize the same standard type of metal guide strips upon the wooden base frame as guides for the lowest sliding tray, and to use simple nuts non-rotatably housed by these lower guide formations as means for securing the lowermost post sections to the base of the rack. Still further objects will appear from the following specification and from the accompanying drawings, in which drawings—

Figure 1 is a perspective view of a desk tray set embodying my invention.

Fig. 2 is an enlarged vertical section of a corner portion of a three-desk rack, with the operating parts separated to show the method of assembling the same.

Fig. 3 is a perspective view of a corner portion of the base and of an adjacent part of one of the metal guides ready for fastening to the base.

Fig. 4 is a fragmentary transverse section of rack portions showing an alternate design of the metal portions.

Fig. 5 is a vertical section through the metal tray guide of Fig. 4 before the latter was clamped between post sections.

In the drawings (which are presented as showing one embodiment of my invention, though by no means the only desirable one), the rack member of my tray set is shown as having as its base a rectangular frame of wood including a longitudinal member 1 with a relatively narrow upper ledge por-

tion. Slipped over each of the said ledge portions and suitably fastened thereto (as by screws 3) are metal guide strips 2 each desirably of an inverted U-shaped section and each presenting a horizontal ledge 5 toward the middle of the wooden base. Rising from these metal strips near each end thereof are uprights, each of which desirably comprises a metal post composed of consecutive sections 6, which sections are suitably interconnected as by being threaded upon one another. Mounted at the junctures of the consecutive sections 6 of the posts at each side of the rack are metal guide strips, desirably identical in size and shape with those fastened to the wooden base, each of which strips is desirably clamped between consecutive post sections and hence firmly held in position without the use of auxiliary fastening elements. However, instead of using a plain rod form for the uppermost section of each post, I preferably use an ornamental section 7 so as to afford a more handsome finish.

Each of the metal guide strips desirably has near each end a perforation smaller in diameter than the post sections, but slightly larger than the male end of the threaded portions of these sections, and the lowermost section of each post is desirably anchored to the lowest guide strip by means of a nut 8 set into a suitable recess 9 in the adjacent portion of the base member.

When the parts are assembled, it will be obvious from the drawings that either the walls of the recess 9 or the adjacent vertical flanges of the guide strip will prevent the nut 8 from rotating, thus permitting the lower post section 6 to be firmly fastened to the lower guide strip by simply screwing the threaded end of this post section into the nut. It will also be evident from the drawings that by varying the length of the post sections, the rack may be made to accommodate any desired variations in the height of the trays; and likewise, that by varying the length of the transverse members of the base frame, the entire rack may be widened without requiring any change in the posts or the guide strips. So also, by removing the cap nuts 7 and substituting additional post sections for the same, the rack may be increased in height as desired, so that it forms a readily expansible appliance which may be increased in effective size according to the requirements of the user. In each case, the upper tray may be rendered immovable by simply inserting a screw as shown near the top of Fig. 2 through a perforation suitably disposed in the ledge 5 of the guide strip.

From the drawings, it will also be evident that the U-shaped formation of the guide strip of Figs. 1, 2 and 3 affords two vertical webs, one of which avoids the presenting of an exposed lateral edge of the metal at the side of the tray, while the other serves as a lateral guide for the tray resting on the horizontal web 5. However, I do not wish to be limited either to this or other details of the construction and arrangement as above disclosed, it being obvious that the same might be modified in many ways without departing from the spirit of my invention. For example, each guide strip might comprise a horizontal portion 10 doubled back upon itself and then having the upper fold bent upward to afford a lateral guide 11 for the tray, as shown in Fig. 4, thereby utilizing separate horizontal folds of each strip respectively for the supporting of the tray above the strip and for coöperating with a lower strip in guiding and holding the tray below this strip. In this case, the strip is desirably formed with a slight gap between the upper and lower folds, as shown in Fig. 5, so that the folds will be pressed toward each other in assembling the rack portions, thereby utilizing the resiliency of the metal in affording a spring lock for preventing a possible relative loosening of the various post sections.

So also, I do not wish to be limited to a threaded interengagement of the consecutive post sections, though I desirably connect these sections firmly so as to resist the relative separational movement of consecutively superposed strips due to the tilting of a tray when left suspended at one end of the rack in a partially withdrawn position.

I claim as my invention:

1. In a tray rack, posts each composed of consecutively interconnected sections, and tray-supporting strips fastened to the posts at the junctures of post sections; each strip including a horizontal portion disposed respectively between two post sections and under a tray, and a vertical portion disposed for laterally guiding a tray.

2. In a tray rack, the combination with a base, of a pair of tray-supporting strips fast upon the top of the base respectively at opposite sides of the latter, and posts rising from and fastened to the said strips, the fastening of each post to the lowest guide strip comprising a member threaded upon the post and having a portion disposed under the guide strip and held by the latter against rotation.

3. In a tray rack, posts each composed of consecutively interconnected sections, and tray-supporting strips fastened to the posts at the junctures of the post sections; each strip including a horizontal portion disposed respectively between two post sections and under a tray, a vertical portion disposed for laterally guiding a tray, and a perforated portion clamped between consecutive post sections.

4. In a tray rack, posts each composed of consecutively interconnected sections, and tray-supporting strips fastened to the posts at the junctures of the post sections; each strip including a horizontal portion disposed respectively between two post sections and under a tray, and a downwardly open U-shaped portion adjacent to the said horizontal portion and clamped between consecutive sections of two posts.

Signed at Green Bay, Wisconsin, October 6th, 1917.

FREDERICK L. G. STRAUBEL.