March 2, 1965 F. G. STARK 3,171,701

INTERCONNECTED TRAY CABINET

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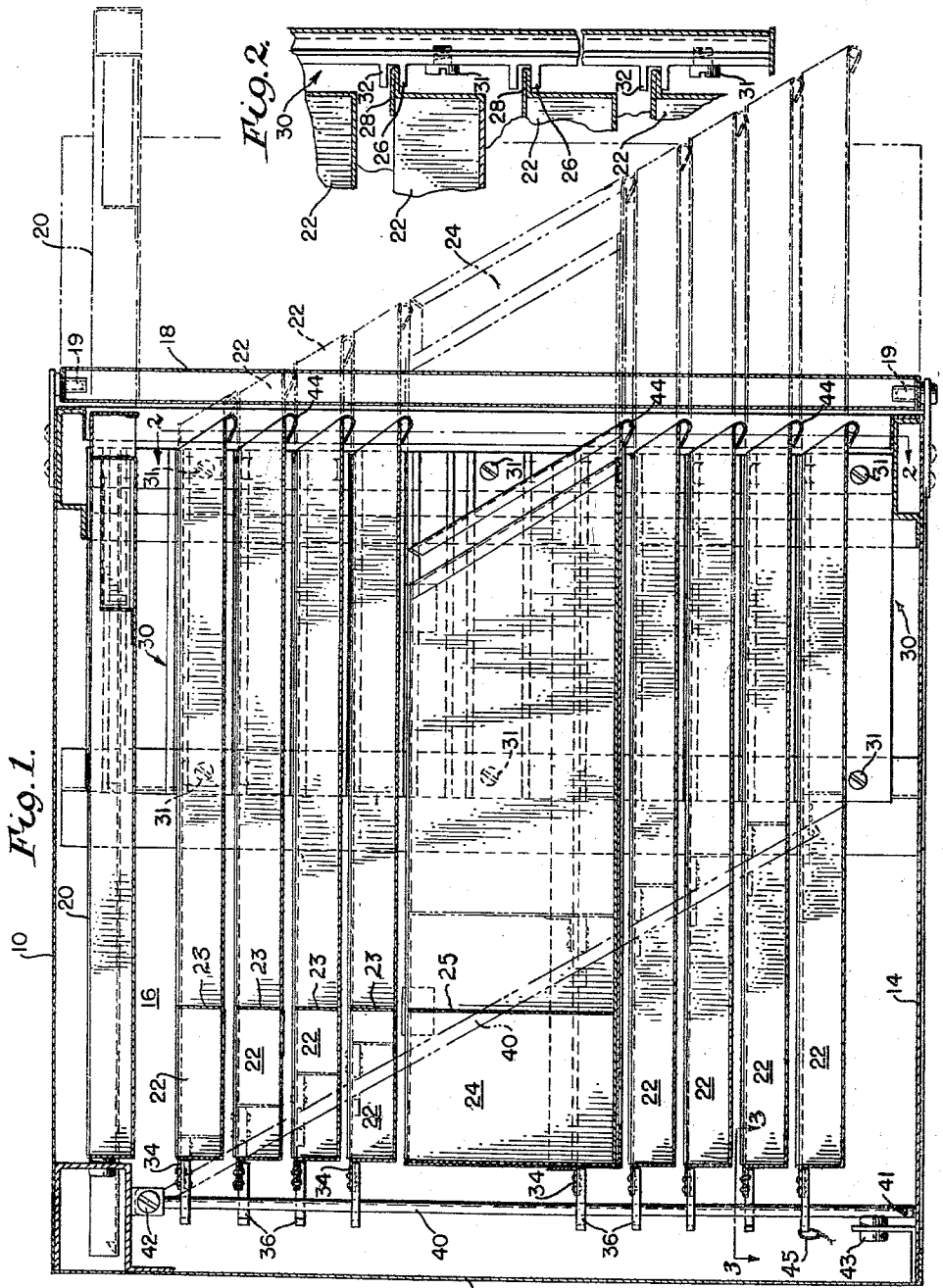


Fig. 1.

Fig. 2.

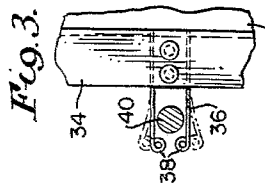


Fig. 3.

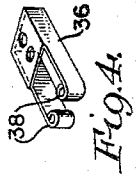


Fig. 4.

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INTERCONNECTED TRAY CABINET

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This invention relates to office equipment, and more particularly to an improved arrangement of stationery drawers, shelves, trays or the like, in office desks or cabinets or the like.

Although various stationery storage devices have been previously employed to provide pluralities of vertically stacked shelves or trays for holding supplies of various kinds of stationery (such as assorted letter and copy sheets, envelopes, and the like) it is an object of the present invention to provide an improved arrangement for such purposes whereby to increase the facility of access to the tray contents, for the convenience of the user.

Another object is to provide an improved stationary storage arrangement for the purpose aforesaid, which is of the tray slide-out type.

Another more specific object is to provide an improved device as aforesaid wherein all of the trays or shelves are motivated automatically to simultaneously displace through different distances upon manual displacement of any one of said trays.

Another object is to provide an improved device for the purposes aforesaid whereby the successively lower trays of the unit move outwardly and through progressively greater distances compared to the shelves thereabove when any one of the trays is manually pulled upon so as to automatically present the contents of all of the trays in visually exposed relation, whereby the contents of all of the trays are simultaneously accessible and may be withdrawn for use with improved facility, ease, and convenience. Other objects and advantages of the invention will appear from the specification hereinafter and the accompanying drawings wherein:

FIG. 1 is a vertical sectional view through a desk pedestal or cabinet wherein a shelf unit of the present invention is carried; showing by means of solid lines the tray unit in retracted or stored-away position, and showing by means of broken lines the tray unit in extended position for ease of access to the contents thereof;

FIG. 2 is a fragmentary sectional view, on enlarged scale, taken along line 2—2 of FIG. 1;

FIG. 3 is a fragmentary sectional view, on enlarged scale, taken along line 3—3 of FIG. 1; and

FIG. 4 is a perspective disassembled view of a detail of the construction at FIG. 3.

As shown in the drawing herewith the invention may be embodied in any suitable casing structure such as for example an office desk pedestal, or in a separate cabinet or the like; and the casing structure may comprise for example a top plate 10, a back plate 12, a bottom plate 14 and opposite side plates 16, 16 thereby providing a box-type casing open at its front end. A closure such as a door as indicated at 18 may be slide-mounted or hinged to one side of the casing as indicated at 19—19, for closing the casing when the trays are in retracted "stowaway" positions therein. A sliding writing shelf or convenience tray as indicated at 20 may also be provided to slide-fit under the top plate of the casing.

The tray unit of the invention comprises a plurality of trays or shelves or drawers as indicated at 22, all of which may be of similar dimensions or of various heights as illustrated herein, according to the contents to be handled. For example, an extra high drawer as indicated at 24 (FIG. 1) is included in the drawing herein; it being understood that trays of appropriate heights will be provided to accommodate the anticipated storage space requirements for the various types of stationery which are to be stored in the trays. As shown in FIG. 1, tab portions 23 may be blanked out from the bottom surfaces of the trays and bent up into vertical abutment form whenever desired to convert the trays to accommodation of letter size stationery as distinguished from "legal" length letter sheets. Also, partitions as indicated at 25 may be employed to subdivide the trays and support various contents in preferred manner.

In any case the trays are supported in the casing in horizontal attitudes and in vertically stacked spaced apart relation, and are arranged to be freely slidable through the open front end or doorway of the casing as to the broken line positions thereof shown in FIG. 1. For this purpose the trays are conveniently supported on slide tracks as indicated at 26; each tray having a laterally extending slide flange 28 arranged to ride on a track piece 26, as best shown in FIG. 2. The track device is preferably provided in the form of one or more unitary molded plastic members designated generally at 30; the members 30 each being molded in the form of a generally rectangular shaped panel (FIG. 1) adapted to be fastened against the inner side wall surfaces of the casing as by means of machine screws 31. The panels 30 have the supporting rail portions 26 molded integrally therewith. Cooperating hold-down ridge portions 32 may also be molded integrally with the track panels 30 to cooperate with the support rail portions 26 to guide the flange portions 28 of the trays when sliding back and forth relative to the casing.

The trays are all provided at their rear ends with flange portions 34 extending into bolted or riveted connections with linkage devices comprising spring clamp members 36; each clamp member having a pair of leaf spring portions extending in parallel relation and turned inwardly at their rear ends as illustrated at 38—38 (FIGS. 3, 4). The space between the spring arms of each of the clamps 36 is dimensioned to freely accommodate passage upwardly therethrough of a control rod 40 (FIGS. 1, 3), the upper end of which is pivotally connected as indicated at 42 to the casing structure. The lower or free end of the rod 40 is provided with abutment means such as the cotter pin 41 to prevent axial withdrawal of the rod from between the spring arms 36. Hence the control arm 40 is swingable as between the solid line vertical hanging position thereof in FIG. 1 to the forwardly inclined position thereof which is illustrated by broken lines in FIG. 1, and thus it will be understood that because of the linking connections between the clamps 36 and the bar 40, all of the trays will move in unison but through different distances of displacement. The front end panels of the tray devices may be rolled under and back at their bottom edges, as indicated at 44; or any other suitable devices may be employed to avoid sharp edges at the front ends of the tray members of the unit.

Thus it will be appreciated that the tray devices of the unit are adapted to receive and store stacks of stationery supplies of various types. Upon opening the front door of the casing, in order to gain access to the supplies therein, the user simply pulls forwardly upon the front end of the bottom shelf or tray, whereupon the trays all slide forwardly and outwardly of the casing; the lower trays moving progressively further out than the upper trays so that the trays are disposed in stepped relation as illustrated by broken lines in FIG. 1. A tie wire or the like as indicated at 45 (FIG. 1) may be linked through the eyes of the clamp 36 at the rear end of the bottom tray, to ensure against its accidental disengagement from the rod 40. Thus the open top front end portions of the trays are exposed for ease of withdrawal of the letter

sheets, envelopes, or the like, from the interiors of the trays, as needed. The tray unit may be pushed back into the casing by simply pressing against the front end of any one of the trays, whereby the entire tray unit will slide backwardly into the casing and into compact, vertically stacked relation, as illustrated by the solid line showing in FIG. 1.

The spring clamp devices **36** enable the trays to be easily connected and/or detached to and from the control bar **40**. Thus, any one or more of the trays may at any time be removed from the unit simply by pulling firmly upon the tray so as to dislodge its spring clamp holding action on the bar **40**. Similarly, trays may be assembled in the unit by simply sliding them rearwardly on the rails **26** and then pushing firmly thereagainst until the spring fingers of the clamp **36** open and permit the eye portions **38** to ride over and around the control bar. Thus it will be appreciated that trays of various dimensions may be interchangeably arranged in the system at any desired heights within the tray stack, and that trays may be withdrawn and added to the unit at will, for any desired purpose.

It will of course be appreciated that whereas only one specific form of construction of a device of the invention has been illustrated and described in detail hereinabove, various changes may be made therein without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. An office stationery supply unit comprising a casing having a doorway and adapted to house a plurality of horizontally disposed trays in vertically stacked relation therein, slide guide means carried by said casing, a plurality of stationery trays supported upon said slide guide means to be normally housed within said casing in horizontal attitudes but being slidable forwardly through the casing doorway to project therebeyond, a slide control bar disposed vertically and articulately held at its upper end by said casing, spring link means extending from each of said trays and spring-coupled to said control bar at different elevations on said bar to coordinate movements of said trays through different ranges of displacement when one of said trays is displaced whereby each successively lower of said trays will be caused to displace a greater distance than the next above of said trays, and whereby said trays reside in vertically aligned positions when retracted into said casing and are disposed in stepped relation when projecting through the casing doorway.

2. An office stationery supply unit comprising a casing having side walls, a rear wall, a front wall and an opening in said front wall whereby the casing is adapted to house a plurality of horizontally disposed trays in vertically stacked relation therein, a slide guide rod pivotally suspended within said casing adjacent said rear wall, track members secured to said side walls and presenting opposed track grooves extending horizontally from adjacent said front wall toward said rear wall, a plurality of tray units each having flanges along its opposite sides received in a corresponding pair of opposed track grooves, each tray unit having a rear end wall and each rear end wall having a pair of leaf spring arms projecting rearwardly therefrom, said leaf spring arms having free end portions disposed in spaced realtion to present a throat therebetween which is smaller than said slide guide bar and each pair of leaf spring arms being aligned with such bar to releasably clamp thereon.

3. An office stationery supply unit comprising a casing having side walls, a rear wall, a front wall and an opening in said front wall whereby the casing is adapted to house a plurality of horizontally disposed trays in vertically stacked relation therein, a slide guide rod pivotally suspended within said casing adjacent said rear wall, track members secured to said side walls and presenting opposed track grooves extending horizontally from adjacent said front wall toward said rear wall, a plurality of tray units each having flanges along its opposite sides received in a corresponding pair of opposed track grooves, each tray unit having a rear end wall and each rear end wall having a pair of leaf spring arms projecting rearwardly therefrom, said leaf spring arms having free end portions disposed in spaced relation to present a throat therebetween which is smaller than said slide guide bar and each pair of leaf spring arms being aligned with such bar to releasably clamp thereon, and abutment means at the free end of said slide guide bar to prevent longitudinal withdrawal of said bar from between said leaf spring arms.

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