E. TEDESCHI.

DRAWER LOCKING MECHANISM FOR DESKS, &c.

APPLICATION FILED MAY 8, 1913.

**1,099,522.**

Patented June 9, 1914.

2 SHEETS—SHEET 1.

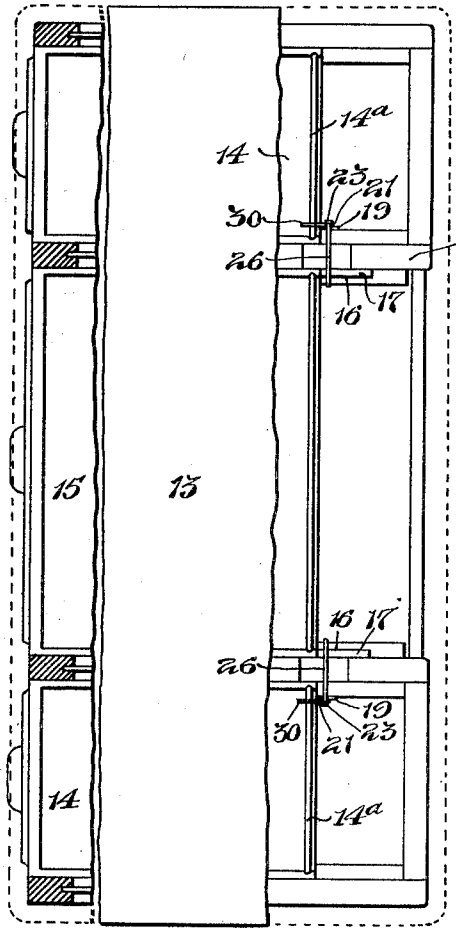



Fig. 3.

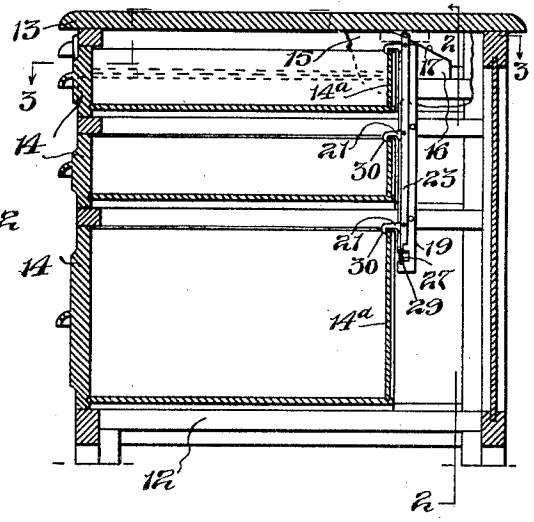
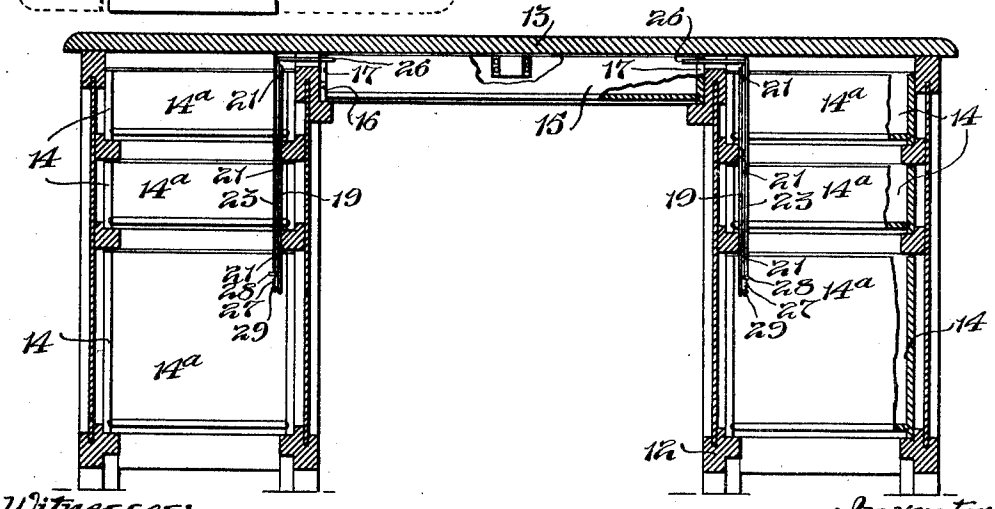



Fig. 1.

Fig. 2.




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2 SHEETS—SHEET 2.

Fig. 8.

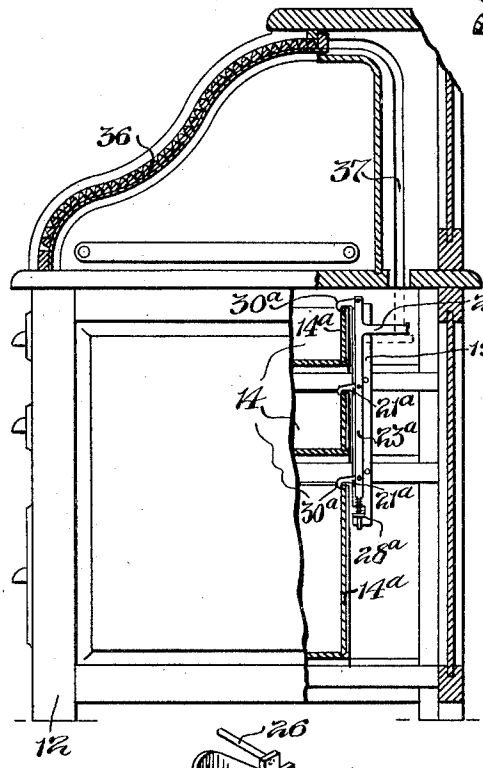



Fig. 4.

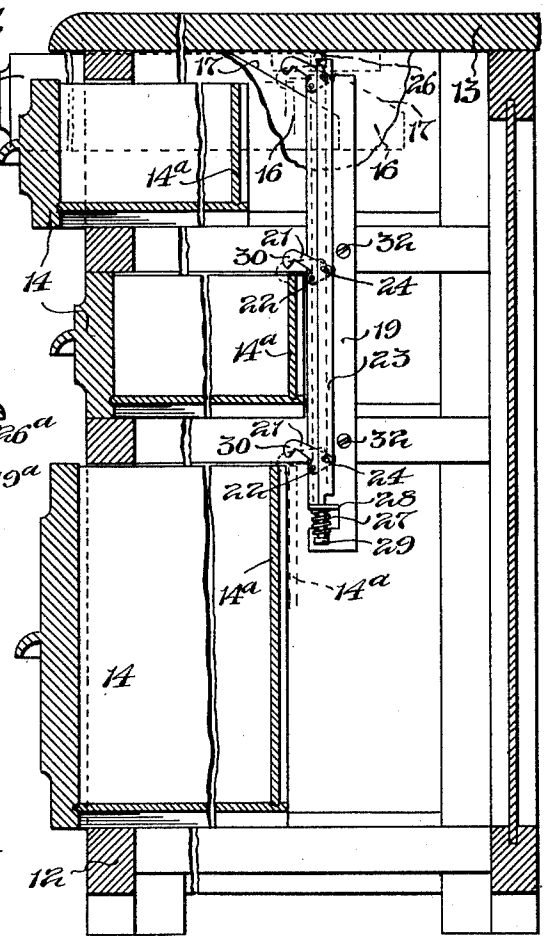
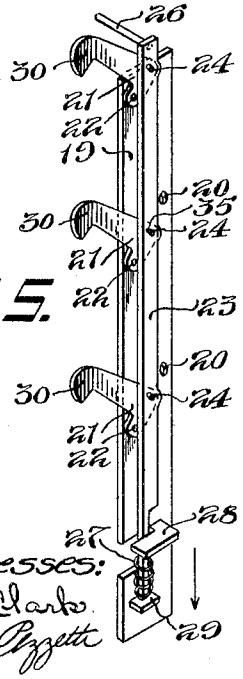



Fig. 5.




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Fig. 9.

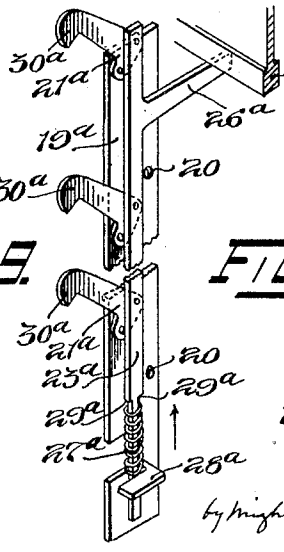



Fig. 6.

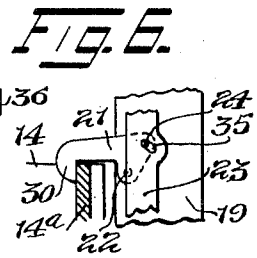
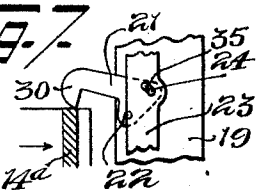



Fig. 7.




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# UNITED STATES PATENT OFFICE.

ERMETE TEDESCHI, OF SOMERVILLE, MASSACHUSETTS.

## DRAWER-LOCKING MECHANISM FOR DESKS, &c.

1,099,522. Specification of Letters Patent. Patented June 9, 1914.

Application filed May 8, 1913. Serial No. 766,338.

*To all whom it may concern:*

Be it known that I, ERMETE TEDESCHI, a subject of the King of Italy, and a resident of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Drawer-Locking Mechanism for Desks, &c., of which the following is a specification.

This invention relates to a desk having a vertical tier or series of drawers at one or both ends, a movable operating member such as a roll top or a master drawer, and locking mechanism adapted to be operated by said member to unlock the drawers in a roll top desk when the roll top is pushed back or opened, and to lock the drawers in a flat top desk when the master drawer is closed, the said mechanism acting automatically to lock the drawers when the roll top is pulled forward or closed, and to unlock the drawers when the master drawer is opened.

The invention has for its object to provide a simple, effective and sensitive locking mechanism adapted to offer the minimum resistance to the movement of the operating member.

The invention also has for its object to provide a self-contained locking mechanism adapted to be applied to a desk as a single part and without change or adaptation of the structure of the desk, the locking mechanism constituting a desk attachment which may be marketed as an article of hardware and installed in its operative position simply by screwing it to fixed parts of the desk.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings:—Figure 1 represents a transverse vertical section of a flat top desk embodying my invention. Fig. 2 represents a section on line 2—2 of Fig. 1. Fig. 3 represents a section on line 3—3 of Fig. 1. Fig. 4 represents a view similar to Fig. 1, showing the drawers unlocked. Fig. 5 represents a perspective view of the locking mechanism shown by Figs. 1, 2, 3 and 4. Figs. 6 and 7 represent fragmentary elevations of the mechanism shown in Fig. 4. Fig. 8 represents a sectional view of a roll top desk embodying my invention. Fig. 9 represents a perspective view of the locking mechanism shown by Fig. 8.

The same reference characters indicate the same parts in all the figures.

Referring first to Figs. 1 to 7 inclusive, showing my invention embodied in a flat top desk having vertical tiers of drawers at its opposite ends and a central master drawer,—12 represents the frame, 13 the flat top, 14 the end drawers arranged in vertical tiers or series, and 15 the master drawer. These parts are or may be of well known form and construction the master drawer being provided as usual with projections 16 at its inner end, said projections having inclined upper edges 17, Figs. 1 and 4, adapted to operate the drawer-locking mechanism hereinafter described. In the present embodiment of the invention, there being two series of drawers 14, the master drawer is provided with two projections 16 and inclines 17, but my invention hereinafter described may be embodied in a desk having but one series of drawers 14, the master drawer having but one projection 16.

In carrying out my invention I provide a locking mechanism which is preferably adapted to be attached to fixed parts of the desk as a single part so that the locking mechanism may be installed ready for use by the simple operation of screwing one of its parts to the desk.

My improved locking mechanism as here shown is embodied in an elongated bar 19 which may be a relatively thin, flat strip of metal provided with screw-receiving orifices 20, a plurality of levers 21 pivoted independently at 22 to the bar 19, a connecting rod 23 connected by pivots 24, with the levers 21 and provided with a laterally extended projection 26, and a spring 27 seated at one end on an ear or abutment 28 on the bar 19 and at its opposite end on an abutment or head 29 on the connecting rod 23.

Each lever 21 is provided with an extension formed as a hook or detent 30, these detents being adapted to simultaneously engage all the drawers 14 of one group or series, the detents being preferably adapted to engage the upper ends of the backs 14ª of the drawers, as indicated by dotted lines in Fig. 4, the levers and detents being spaced to correspond with the upper edges of the

drawer backs. The bar 19 is attached by screws 32 to suitable fixed parts of the desk such as the horizontal guide members on which the drawers 14 slide.

The pivots 22 which connect the levers 21 with the bar 19 are located at the opposite ends of the levers from the pivots 24 which connect the levers with the connecting rod 23. The distance between the pivots 22 and 24 determine the operative length of each lever.

The spring 27 normally holds the connecting rod and levers in the relative positions shown by Fig. 5, the levers being considerably inclined relatively to the connecting rod which is substantially vertical. The projection 26 is in this case an arm projecting laterally into the path of the incline 17 on the master drawer 15, the arrangement being such that when the master drawer is open as shown by full lines in Fig. 4, the incline 17 is out of contact with the projection 26 and the connecting rod 23 is depressed by the spring 27, the detents 30 all being held yieldingly in a predetermined raised position. It will now be seen that when the master drawer 15 is pushed in or closed, its incline 17 will encounter the projection 26 and raise the latter with the connecting rod 23, thus depressing the detents 30 and causing them to engage the drawer backs as indicated by dotted lines in Fig. 4. The drawers 14 are therefore all locked simultaneously by the closing and locking of the master drawer. When the master drawer is opened the incline 17 leaves the projection 26 and permits the spring 27 to depress the connecting rod 23 and swing the detents upwardly out of engagement with the drawer backs. The connecting rod 23 is preferably provided with elongated segmental orifices 35 in which the pivots 24 are adapted to play to permit each detent 30 to have a limited independent movement, so that if one of the drawers 14 happens to be open when the master drawer is closed the drawer may be subsequently locked, the corresponding detent 30 yielding as shown by Fig. 7 when the drawer back $14^a$ passes under it.

When the invention is applied to a roll top desk as shown by Fig. 8, where 36 represents the usual flexible top movable in guides 37, the construction of the locking mechanism, while including the same elements, is modified so that the detents are disengaged from the drawer backs by a downward movement of the connecting rod caused by a downward movement of the inner end of the roll top 36 when said top is pushed backwardly.

Referring to Figs. 8 and 9, $19^a$ represents the elongated bar and $21^a$ the levers having the detents $30^a$. $28^a$ represents the spring abutment which in this case supports the lower end of the spring $27^a$, the connecting rod $23^a$ being provided with shoulders $29^a$ constituting the other abutment for the spring. The projection $26^a$, on the connecting rod extends rearwardly into the path of the rear end of the roll top 36. The spring $27^a$ normally holds the connecting rod $23^a$ in a raised position with the detents $30^a$ depressed and in position to engage the drawer backs $14^a$ as shown by Fig. 8. When the roll top is pushed back and its inner end descends upon the projection $26^a$, the connecting rod is depressed and the detents $30^a$ are swung upwardly as indicated by Fig. 9. It will be seen therefore that the operation of closing the roll top 36 permits the spring $27^a$ to swing the detents to their locking position and that the opening of the roll top displaces the detents against the pressure of said spring.

In case one of the drawers 14 is left partly open when the roll top is closed, this drawer may be locked by pressing it inwardly, the corresponding detent yielding and all the other detents yielding in unison with it until the drawer is locked, when all the detents return to their locking position.

It will be seen that the described locking mechanism is sensitive and easily operated, the independent pivoted levers carrying the detents, and the rod connecting said levers being movable by a slight expenditure of power compared with a construction in which the detents and the part or member which supports them are all movable in unison.

It will also be seen that the elongated bar, the detent carrying levers, the connecting rod, and the spring constitute an article of desk hardware which is adapted to be applied to a desk as a single part and requires no change in the construction of a desk either of the flat top variety provided with inclines 17 movable with the master drawer, or of the roll top variety.

What I claim and desire to secure by Letters Patent is:—

1. The combination with a desk having a movable lock-operating member, of an elongated supporting bar provided with a spring abutment, a plurality of levers each pivoted at one end to said supporting bar and each provided with a drawer-engaging detent, an operating rod to which the other end of each lever is pivoted, said rod extending parallel with said supporting bar and having a spring abutment, and a spring interposed between the respective spring abutments and acting on the operating bar to hold said detents normally in unlocked position, said operating rod also having a rigid finger removably engaging with said lock operating member to move said rod in opposition to the pressure of said spring.

2. A drawer locking attachment comprising an elongated supporting bar, a plurality

of levers each pivoted at one end to said supporting bar, an operating rod to which the other end of each lever is pivoted, each lever having a drawer engaging detent extending laterally therefrom between the pivoted ends, said rod extending parallel with said supporting bar and having a rigid projection contiguous to one end, a spring interposed between the supporting bar and the operating bar and yieldingly holding the operating bar and levers with the detents in predetermined position.

3. A drawer locking attachment comprising an elongated supporting bar, a plurality of levers each pivoted at one end to said supporting bar and each having a drawer engaging detent extending therefrom, an operating rod to which the other end of each lever is connected, said rod extending parallel with said supporting bar and having a rigid projection, a spring acting to hold the operating bar and levers with the detents in predetermined position, and means for permitting limited movement of said levers independently of said operating rod.

4. A drawer locking attachment comprising an elongated supporting bar, a plurality of levers each pivoted at one end to said supporting bar and each having a drawer engaging detent extending therefrom, a pivot pin carried by the other end of each lever, an operating rod extending parallel with said supporting bar and having slots to receive said pivot pins, said operating bar also having a rigid projection, and a spring acting on said operating bar to hold said levers with their detents in predetermined position.

In testimony whereof I have affixed my signature, in presence of two witnesses.

ERMETE TEDESCHI.

Witnesses:
C. T. Brown,
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**Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."**