J. SCHIAVONE.

SIDE AND END LOCK FOR DRAWERS.

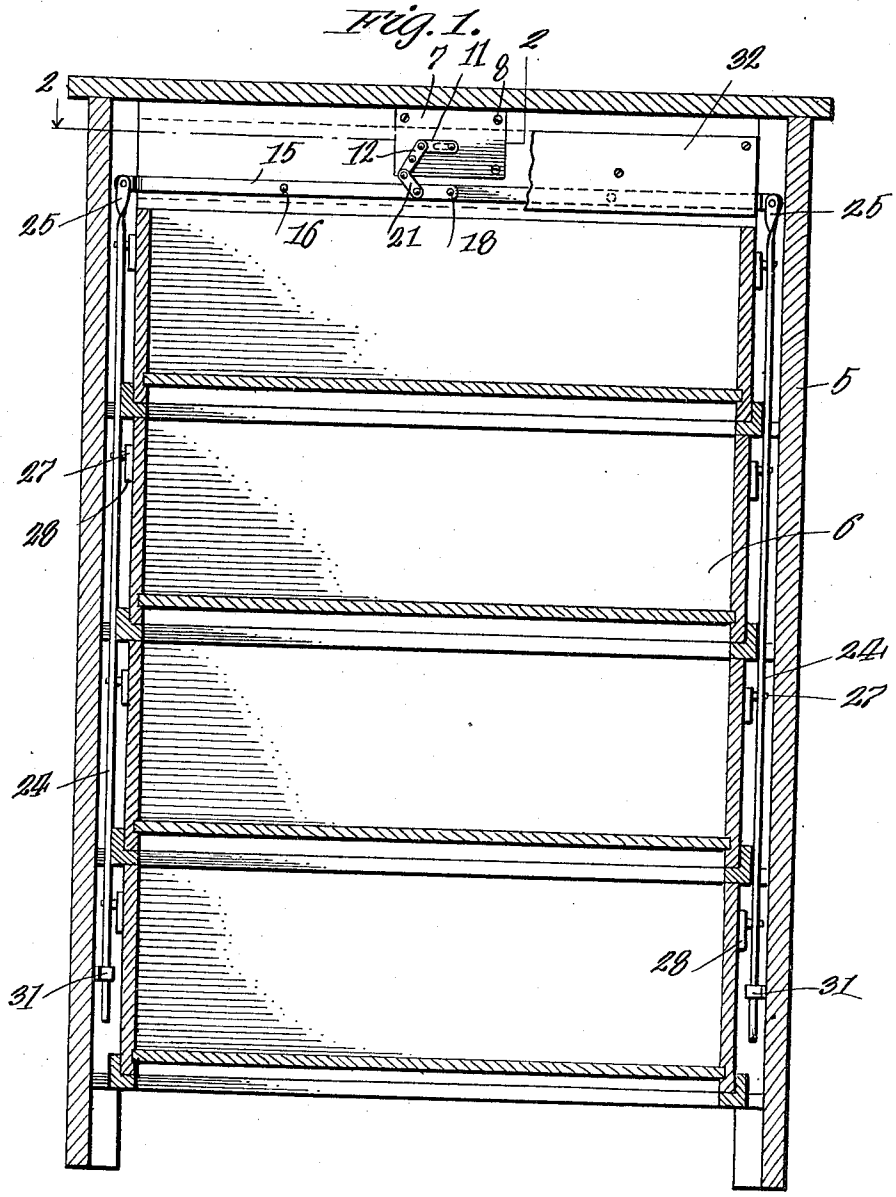
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1,318,011.

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2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

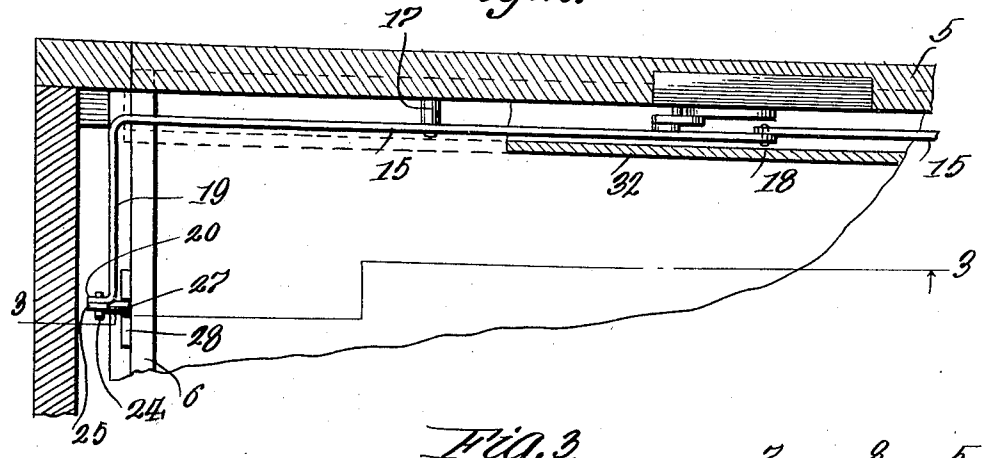


Fig. 3.

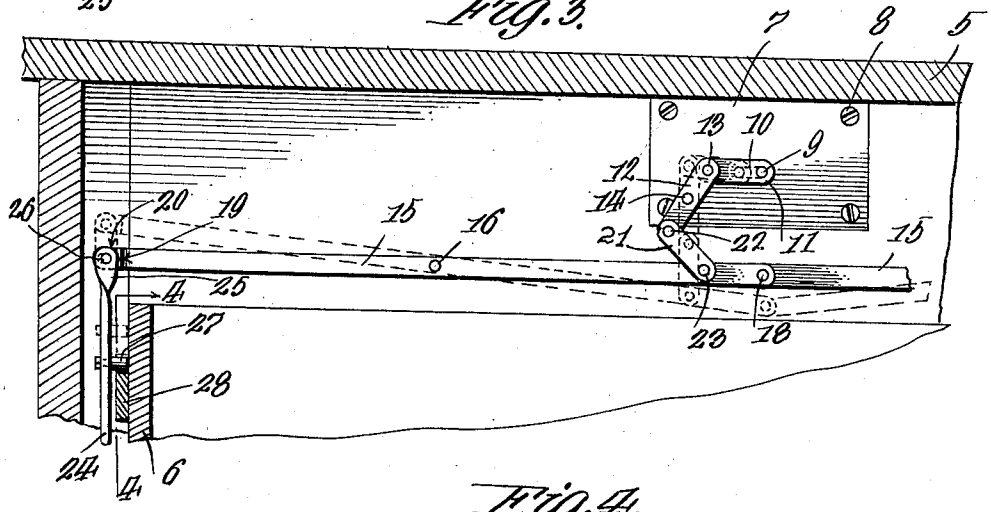
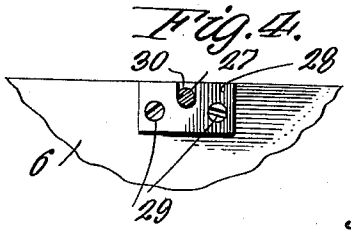


Fig. 4.



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SIDE AND END LOCK FOR DRAWERS.

1,318,011. Specification of Letters Patent. Patented Oct. 7, 1919.

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To all whom it may concern:

Be it known that I, JOHN SCHIAVONE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Side and End Locks for Drawers, of which the following is a specification.

This invention is a lock and has special reference to a lock which is employed for retaining a series of drawers against unauthorized opening.

One object of this invention is the production of a lock wherein the construction is such as to simultaneously lock a number of drawers and hold the same against opening until after being released from the locked position.

Another object of this invention is the production of a lock for a series of drawers wherein a plurality of locking bars are employed having locking pins projecting therefrom and engaging suitable keepers positioned upon the drawers, thus holding the drawers against opening, together with means for shifting the locking bars for releasing the drawers and causing the same to be opened when desired.

Another object of this invention is the production of a lock for a series of drawers, wherein pivotally supported levers are connected to the locking bars and links are connected to the levers, thus causing the links to shift the levers and move the bars for releasing or locking the drawers, as desired.

Broadly stated, this invention consists of a sliding link connected to a pivotal link, a swinging link connected to the pivotal link, pivotally supported levers connected to the swinging link, locking bars connected to said levers, locking pins carried by said bars and notched keepers carried upon drawers for receiving the locking pins, for holding the drawers against unauthorized movement.

With these and other objects in view, this invention consists of certain novel combinations, constructions and arrangement of parts as will be hereinafter fully described and claimed.

One practical form of construction and assembly of the present invention will be hereinafter described and is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section through a cabinet or chiffonier showing the plurality of sliding drawers carried thereby and the lock being illustratel in elevation and also showing the manner in which the same is used.

Fig. 2 is a section taken on the line 2—2 of Fig. 1.

Fig. 3 is a section taken on the line 3—3 of Fig. 2, and

Fig. 4 is a fragmentary section taken on the line 4—4 of Fig. 3.

In the preferred embodiment of this invention, about to be described, it will be seen that the lock is used in connection with a casing indicated in general at 5, which of course may be of any desired construction, for instance as a chiffonier, bureau or the like and having drawers 6 slidable therein. Of course, any other desired article of furniture may be used, but the present disclosure is made to illustrate specifically the manner of operation of the present lock.

The lock casing 7, of any desired structure and containing any desired or preferred form of locking mechanism is provided and is retained by screws or other securing members 8 in set engagement with one wall of the casing 5, thus being in convenient position to communicate with a key hole, not being deemed necessary to be herein shown, thus allowing a key to be inserted into the casing 7 for actuating the locking mechanism therein.

A pin 9 extends through a slot, indicated in dotted lines in Fig. 3 at 10, formed in the casing 7. Therefore, this pin 9 is in position to be engaged by the operating mechanism or by the means carried within the casing 7, thus allowing the pin to be shifted toward either end of the slot desired. This pin 9 is fixed upon the sliding link 11 adjacent one end thereof, as illustrated clearly in Figs. 1 and 3. The pivoted link 12 is pivotally connected to one end of the sliding link 10 as indicated at 13 and is also pivoted intermediate its ends as indicated at 14 upon the lock casing 7. Therefore, it is obvious that as the sliding link 11 is shifted in either of two directions, it will swing the pivoted link 12 upon the pivot 14 thereof.

The locking levers 15 are pivotally mounted intermediate their ends, as indicated at 16, upon the casing 5 and upon referring to Fig. 2 it will be noted that these locking levers 15 are held in spaced

relation from the casing 5 by suitable spacers 17. The inner ends of these locking levers 15 overlap, as indicated in Fig. 2 and are pivotally connected by the pin 18. The locking levers 15 are bent adjacent their ends to form right-angularly extending projections 19 terminating in outwardly extending lips 20.

The swinging link 21 has one end thereof pivotally mounted upon the pivotal link 12 as shown at 22, while the opposite end of this link 21 is pivotally mounted, as indicated at 23, upon one of the locking levers 15 adjacent the overlapping pivotally connected ends of the members, as shown in Fig. 3. It is therefore obvious that as the pivotal link 12 is swung by the movement of the sliding link 11, the swinging link 21 will be shifted and will move the locking levers simultaneously, due to their pivoted connection with each other, and as indicated in dotted lines in Fig. 3. It is therefore obvious that as these locking levers 15 are swung they will also shift the right-angularly extending projections 19, for purposes to be hereinafter set forth.

The depending locking bars 24 extend downwardly adjacent the ends of the drawers 6 at either side thereof, as illustrated in the present use of the invention. These locking bars are preferably formed of comparatively flat strips of material which have their ends 25 twisted to extend at right angles to the remaining portions of the bars, thus allowing the twisted ends 25 to be pivotally mounted, as indicated at 26, upon the outwardly extending lips 20 of the locking levers 15. Locking pins 27 are fixedly carried at spaced intervals along these locking bars 24, as illustrated in Fig. 1.

Keeper plates 28 are retained by screws 29 upon the opposite sides of drawers 6 and each keeper plate 28 is provided with a notch 30, as shown in Fig. 4.

When the present invention is in use, and the drawers are to be unlocked, the sliding link 11 will be moved toward one end of the slot 10 to the position indicated in dotted lines in Fig. 3. This position causes the pivoted link 12 to be swung to extend vertically and the swinging of this pivotal link causes the swinging link 21 to pivot and cause its lower end to move downwardly, thus swinging the inner ends of the locking levers 15 downwardly. This action of the locking levers will cause the right angularly extending projections 19 to move upwardly, thus lifting the locking bars 24 and causing the pins 27 to be positioned above the planes of their respective keeper plates 28. When the locking elements are in the position thus described, it is obvious the drawers 6 may be moved to open or closed positions, as desired.

When however, it is desired to lock the drawers, the key is inserted in the lock casing 7 and is actuated to move the pin 9 toward the opposite end of the notch to the position indicated in full lines in Fig. 3. As this sliding link 11 moves to this position it will swing the pivoted link 12 in a clockwise direction, thus moving the swinging link 21 in a counter-clock-wise direction. The movement of the swinging link 21 in a counter-clock-wise direction causes this link to move the inner ends of the locking levers 15 upwardly to extend in a horizontal plane. This action will cause the right-angularly extending projections 19 to move downwardly, thus lowering the locking bars 24. The downward movement of the locking bars will cause the pins 27 to move into the notches 30 of the keeper plate 28. It will be noted, upon referring to Fig. 1, that the guides 31 are carried by the casing 5 and the lower ends of the locking bars 24 extend through these guides 31. Therefore, the reciprocal movement of these locking bars will be properly retained, by the guiding action of the guides 31, while the guides 31 will also hold the lower end of the locking bars 24 from being swung outwardly if an effort is presented to withdraw the drawers from locked positions. As the pins 27 will fit within the notches 30 of the keeper plates 28, it is obvious the drawers cannot be moved to open positions until the links and levers as well as the bars have been properly shifted by the unlocking of the device in the manner hereinbefore specified.

It is of course obvious that if so desired a suitable housing may be placed in the casing 5, as indicated at 32 in Fig. 2, thus protecting the locking elements from accidental injury or from engagement with foreign objects.

From the foregoing description it will be seen that a very simple and efficient locking mechanism has been provided for retaining a series of drawers against unauthorized opening while the various links, levers and bars may be easily shifted by the movement of the pin, thus permitting the drawers to be locked or unlocked as desired.

The foregoing description and the drawings have reference to what may be considered the preferred, or approved, form of my invention. It is to be understood that I may make such changes in construction and arrangement and combination of parts, materials, dimensions, et cetera, as may prove expedient and fall within the scope of the appended claims.

In the event of the device being used with a tool box, trunks or other cabinet having a hinged cover as at 5, the locking mechanism of the lock 7 coöperates therewith and therefore the lock serves to hold the cover and drawers at the same time, and to simultaneously release the same. The device is

shown in Fig. 3 applied to a lock having a horizontal operating movement, but with a lock having a vertical operating movement, the links 11 and 12 are eliminated and the lever 15 connected to the bolt mechanism of the lock directly by the link 21.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a device of the class described, the combination of a support having a movable drawer, a sliding link carried by said support, means for shifting the sliding link, a pivotal link connected to said sliding link, a swinging link connected to said pivotal link, a pivotally supported lever carried by said support and engaging said swinging link, thus causing said lever to be swung when said links are shifted, a locking bar connected to said lever, a pin carried by said bar, a keeper plate carried by said drawer, thus causing the pin to engage the keeper plate for holding the drawer against movement for a predetermined time, and said links shifting said lever to move said bar and causing said pin to move and permit the drawer to be moved.

2. In a device of the class described, the combination of a support having a sliding drawer, pivotally supported locking levers carried by said support, said levers having overlapping ends pivotally connected together, means for shifting one of said levers for causing the simultaneous movement of both levers, keeper plates carried by the opposite sides of said drawer, and means carried by the ends of said levers for simultaneously engaging or releasing said keeper plates, thus permitting said drawer to be retained in a set position or to be opened as desired.

3. In a device of the class described, the combination of a support having a movable drawer, a sliding link carried by said support, means for shifting said link, a pivoted link connected to the sliding link, a swinging link connected to said pivotal link, a pivotally supported lever carried by said support and engaging said swinging link, thus causing said lever to be swung when said links are shifted, a locking bar connected to said lever, and disengagable means on said bar and drawer for holding the drawer against movement, and said links being adapted to shift said lever to move said bar and cause said means to be disengaged to allow the drawer to be moved.

4. In a device of the class described, the combination of a support having a sliding drawer, pivotally supported locking levers carried by said support, said levers having overlapping ends pivotally connected together, means for shifting said levers simultaneously, locking bars carried by said levers, and disengageable means on said locking bars and said drawers for holding the drawers against movement at times.

5. In a device of the class described, the combination of a support having a sliding drawer, pivotally supported locking levers carried by said support, said levers having overlapping ends pivotally connected together, means for simultaneously shifting said levers, keeper plates carried by said drawers, locking bars pivotally connected to said levers, and pins on said locking bars engaging said keeper plates for holding the drawer against movement although when said levers are shifted said locking bars will cause said pins to disengage said plates and permit the drawer to be moved.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN SCHIAVONE.

Witnesses:
HARRY JOS. SCAVONE,
JOHN E. BURCH.

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