March 1, 1932. M. C. TURNER 1,847,106

DESK LOCK

Filed Dec. 4, 1926 2 Sheets-Sheet 1

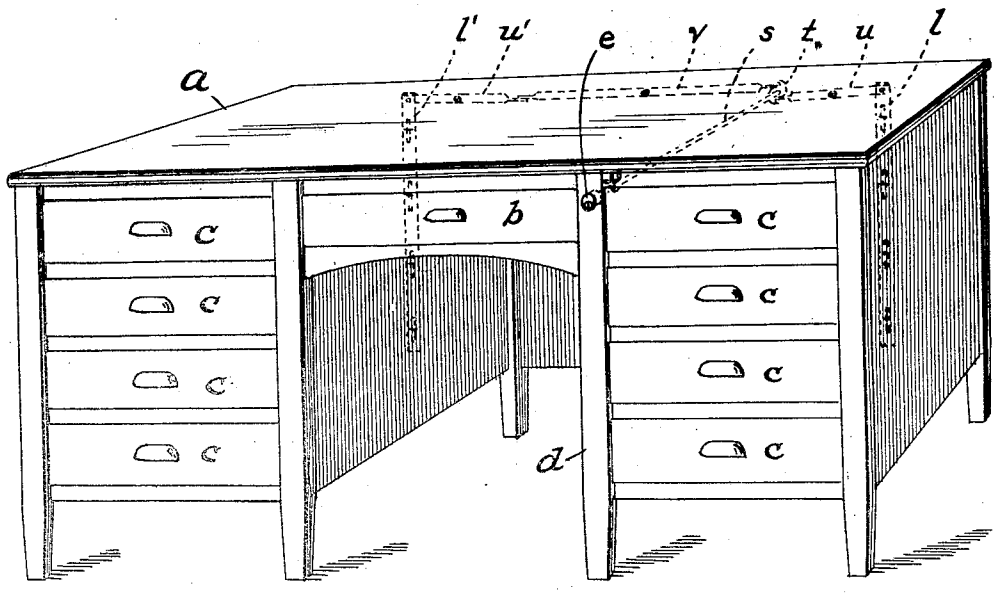

FIG. 1.

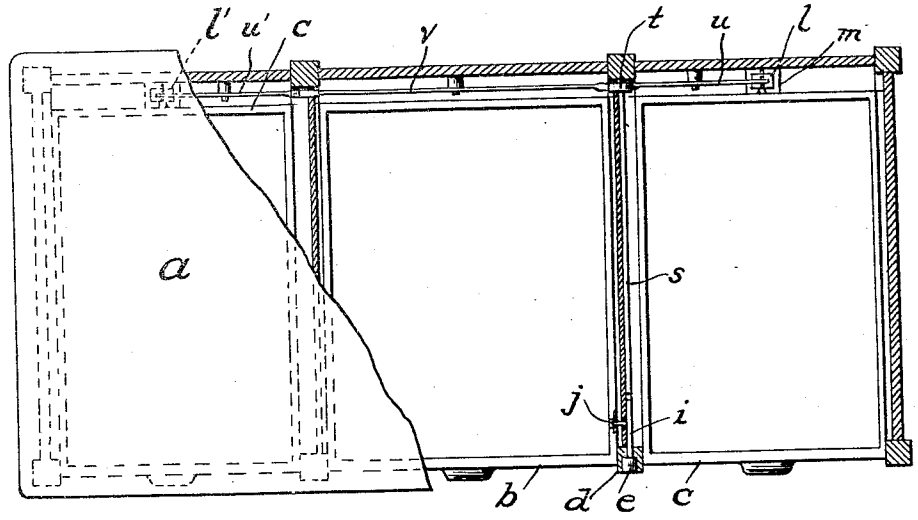

FIG. 2.

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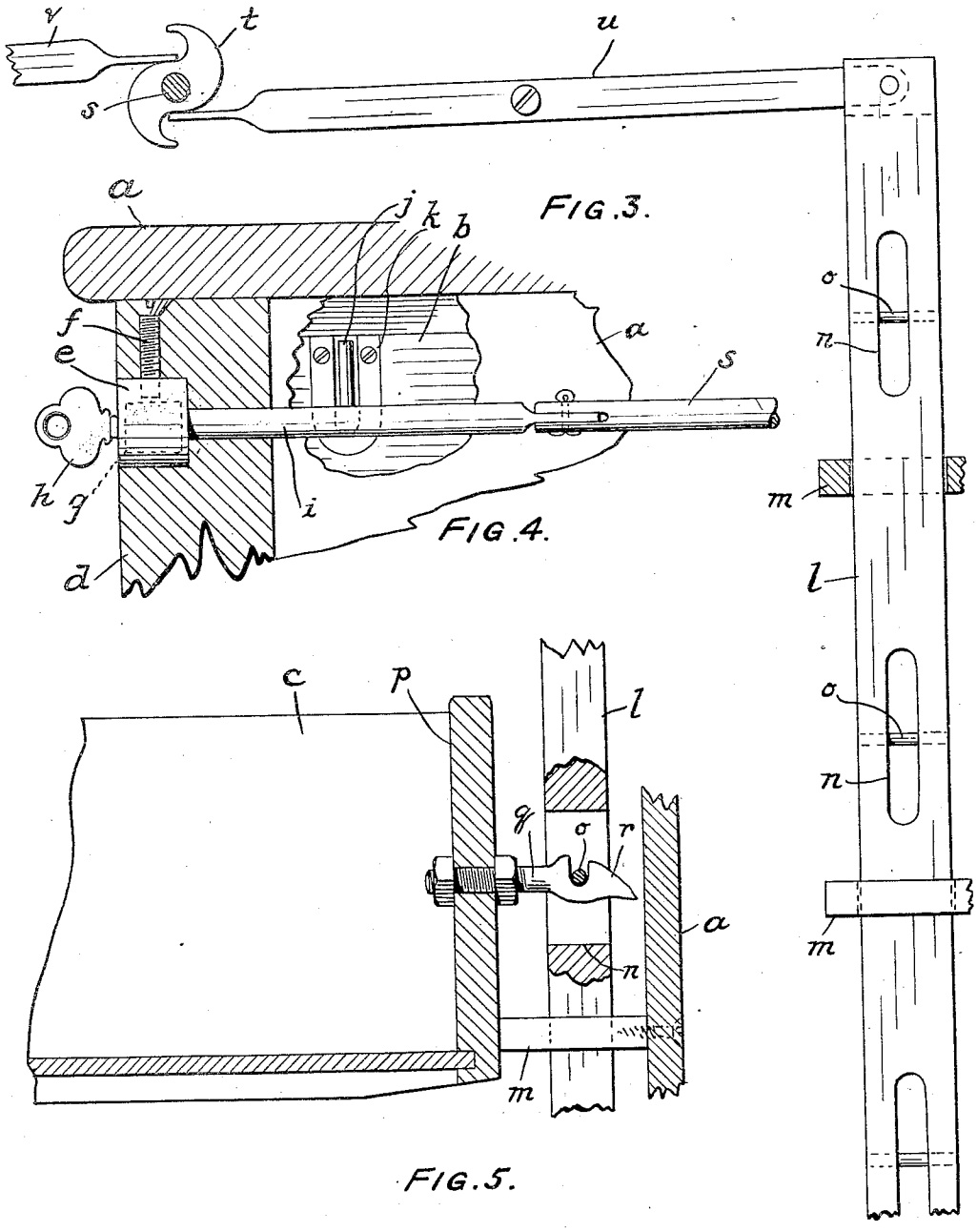

FIG. 3.

FIG. 4.

FIG. 5.

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UNITED STATES PATENT OFFICE

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DESK LOCK

Application filed December 4, 1926. Serial No. 152,553.

My invention relates to desks, such as, for example, are used in offices, and more particularly to a desk so constructed as to enable its several drawers to be locked as a unit.

In desks of the character to which my invention relates as heretofore constructed, mechanism has been provided whereby on the closing of a master drawer, the several other drawers of the desk will be locked. The master drawer has been customarily provided with a lock for locking it in closed position.

Desks in which the several drawers are locked by the closing of a master drawer, are in general satisfactory, but they are open to a number of objections chief among which is that in order to have free use of the several drawers other than the master drawer, it is necessary that the master drawer be maintained partially open in order that the several other drawers may not be locked. Such a condition is undesirable and causes inconvenience, since if the master drawer is inadvertently fully closed, such of the other drawers as are closed, will be locked.

Now, it is the object of my invention to provide a desk so constructed that all of the drawers may be utilized independently and at the same time provided with a master lock which will operate to lock one of the drawers directly and through suitable mechanism and at the same time, lock the other drawers. Thus, when the desk is in use all the drawers may be unlocked by the manipulation of a single lock and they may be then freely and independently opened and closed, being again locked, when desired by the manipulation of the said lock.

Having now indicated, in a general way, the nature and purpose of my invention, I will proceed to a detailed description thereof with reference to the accompanying drawings in which there is illustrated a preferred embodiment and in which:—

Fig. 1 is a perspective view of a desk embodying my invention.

Fig. 2 is a plan view partly in section of the subject of Fig. 1.

Fig. 3 is a detail view of part of the locking mechanism embodied in the desk shown in Fig. 1.

Fig. 4 is a detail view, partly in section and partly broken away, showing a lock for the main drawer of the desk.

Fig. 5 is a detail view, partly in section, and partly broken away, showing locking means for the secondary drawers of the desk.

Referring to the drawings, the desk a is of the type generally used in offices and is provided with a centrally located main drawer b and with banks of drawers c.

In one of the legs or supports d, of the desk, adjacent one side of the main drawer b, is fitted a lock e, the casing of which is retained by means of a machine screw f. The barrel or movable part g of the lock, adapted to be actuated by a key h, is connected to a rod i, which extends toward the rear of the desk. The rod i carries a pin or bolt j, which on rotation of the rod, by manipulation of key h, is adapted to be entered in a keeper k secured to the side of drawer b and which is in the plane of the bolt j when said drawer is closed.

From the above description, it will be apparent that the main drawer b may be locked and unlocked through the medium of rod i, pin j and keeper k, by manipulation of key h.

Supported vertically in the rear of the banks of drawers c are locking bars l, l'. The locking bars are guided by means of brackets m so as to be vertically movable and they are provided at points opposite the rear ends of drawers c with vertical slots n across the central portions of which extend pins o.

In the rear ends p of the drawers c are secured hooks q the forward ends of which are tapered at as r. The hooks q are positioned so that when the drawers c are fully closed they will project respectively through the slots n in bars l, being engaged by pins o, as shown in Figure 5.

To the end of rod i there is connected one end of a rod s which, suitably supported, extends to the rear of the desk and carries on its rear end a double cam member t. A lever u pivoted to the rear wall of the desk is pivotally connected at one end to the upper end of locking bar l and is adapted to be engaged at its other end by one of the cams of member t.

A second lever u' pivoted to the rear wall of the desk is pivotally connected at one end to the upper end of locking bar l' and at its other end engages one end of a lever v, pivoted to the rear wall of the desk, and the other end of which is adapted to be engaged by the other cam of member t.

The double cam member t is so positioned on the rod s that the cams will act on the ends of levers u and v to depress one end of lever u and raise one end of lever v, thereby lowering the other end of lever v and the adjacent end of lever u' as the rods i and s are rotated by turning key h to effect the unlocking of the main drawer b. This operation of the ends of levers u and v causes locking bars l and l' to be lifted, so that the pins o carried thereby will be clear of hooks q carried by the drawer c. So long as the cams are in the unlocked position, levers u and v will be retained in unlocking position and the drawer c respectively, may be fully opened and closed independently of the drawer b.

If now it be desired to lock the drawers, the main drawer b is closed and the rod i rotated, by manipulation of key h, to enter bolt j in keeper k. Rotation of rod i causes rod s and cam member t to be rotated, which permits the locking bars l and l' to move downwardly under their own weight a sufficient distance to enable pins o to engage hooks q carried by drawers c and which when the drawers are closed project respectively into the slots n in the locking bars. Since the rods i and s and cam members t cannot be rotated without unlocking the main drawer b the drawers c, which were fully closed when the main drawer was locked, will remain locked until the main drawer is again unlocked.

If when the main drawer is locked one or more of the drawers c is partially open, such will not effect the locking of those drawers c which are fully closed and any such open drawer may be locked by merely fully closing it, since in the closing movement of the drawer the tapered face r of hook q will act as a cam on the pin o causing the locking bar to be lifted for admission of the hook and permitting it to drop when the hook is in the position to receive the pin.

As a result of my invention, it will now be observed that the several drawers of the desk may be locked through the manipulation of a master lock and, at the same time, when unlocked the drawers may be individually opened and closed entirely independent of one another.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:—

1. A desk comprising a frame, a main drawer slidably mounted in said frame, banks of drawers slidably mounted at the sides of the main drawer, a lock, for the main drawer, a rod operatively connected to said lock, means carried by said rod for engaging the main drawer at its closed position for locking or unlocking it, a duplex camming member carried by said rod, a plurality of oscillating levers actuated by said member, a pair of longitudinally movable latching bars for the drawers, said bars operative one way under control of said member for unlatching the drawers in said banks and another way for automatically locking the drawers in said banks independently of the locking operation of said means.

2. A desk comprising a frame, a main drawer slidably mounted in said frame, banks of drawers slidably mounted at the sides of the main drawer, a rod, a duplex camming member carried by said rod, a pair of oscillating levers, one end of said levers being disposed in engageable relation with said member, automatically operable latching bars normally latching the drawers in each of said banks, one of said levers being connected to one of said bars, another oscillating lever having one end connected to the other of said bars and having its other end engaging the other lever in said pair, a lock for controlling the locking and unlocking of said drawer and for actuating said member for unlocking said drawers in said banks.

3. A desk comprising a frame, a main drawer slidably mounted in said frame, a bank of drawers slidably mounted at the side of the main drawer, a hook member carried by each drawer in the bank, a bar slidably mounted on said frame, a lock, a rod actuated by said lock for locking and unlocking the main drawer, a cam carried by said rod, a pair of oscillating levers pivotally mounted on said frame, one end of one of said levers being operatively connected to said bar, one end of the other lever being disposed in engageable relation with said cam, the other ends of said levers being disposed in operative relation with each other for unlocking said drawers upon the operation of said rod and automatically operable means for engaging said hooks for locking said drawers in the closed position independent of the locking of the main drawer.

4. A desk comprising a frame, a main drawer slidably mounted in said frame, a bank of drawers slidably mounted at the side of the main drawer, a lock carried by the frame between the main drawer and the bank of drawers, a rod connected to said lock, means operated by said rod for locking and unlocking the main drawer, another rod actuated by the movement of the first mentioned rod, a camming member carried thereby, a bar mounted in the rear of said drawers, a latching member carried by each of the drawers in said bank having camming portions, pins carried by said bar, one for each of said latching members and connections

between said camming member and said bar permitting movement of said bar independently of said rod when the rod is in locking position to automatically lock the drawers of the bank in the closed position and to permit the movement of said drawers from the opened to the closed position under the action of the camming portions of said latching members on said pins.

In testimony of which invention, I have hereunto set my hand, at Maspeth, on this 30th day of November, 1926.

MAURICE C. TURNER.