J. F. SCHAEFER.

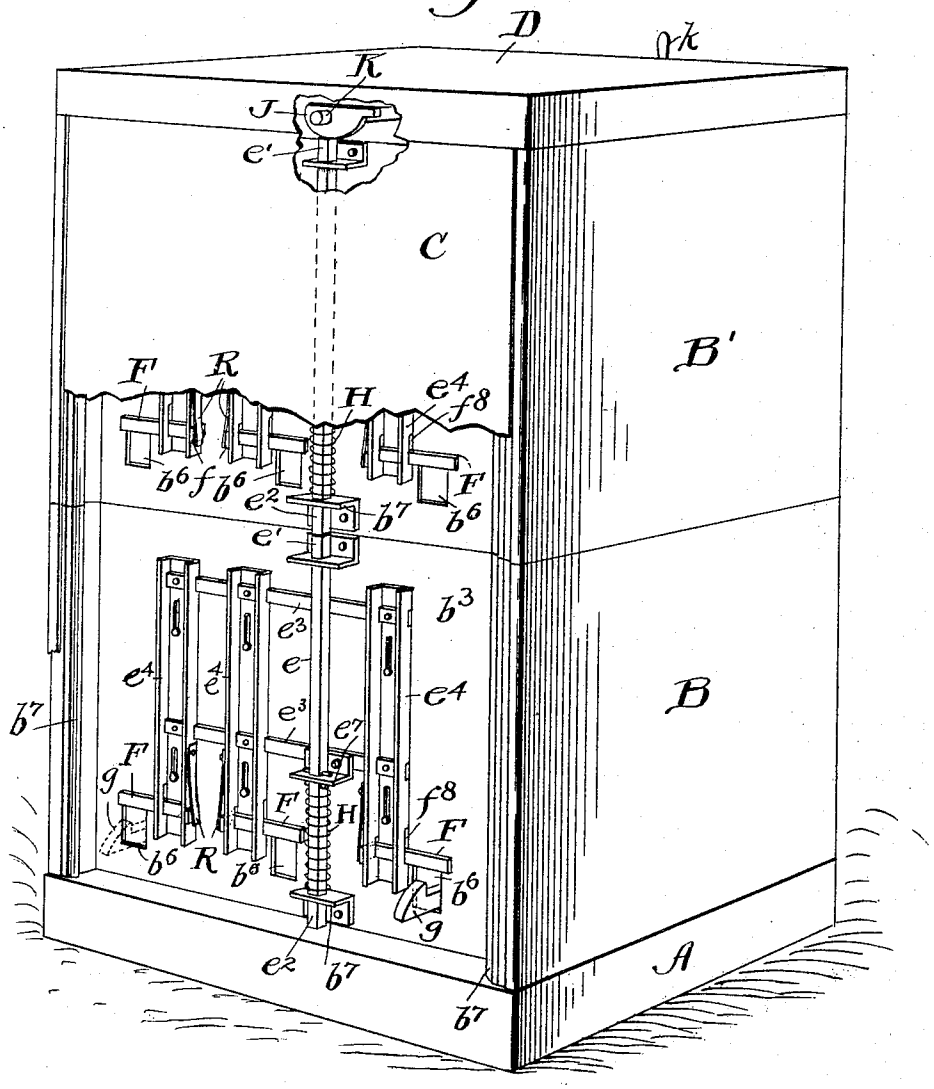
LOCKING MECHANISM FOR SECTIONAL FILING CABINETS.

APPLICATION FILED FEB. 9, 1914.

1,200,882. Patented Oct. 10, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses.
E. B. Gilchrist
L. L. Porter

Inventor:
Joseph F. Schaefer
by Thurston & Lewis
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

J. F. SCHAEFER.

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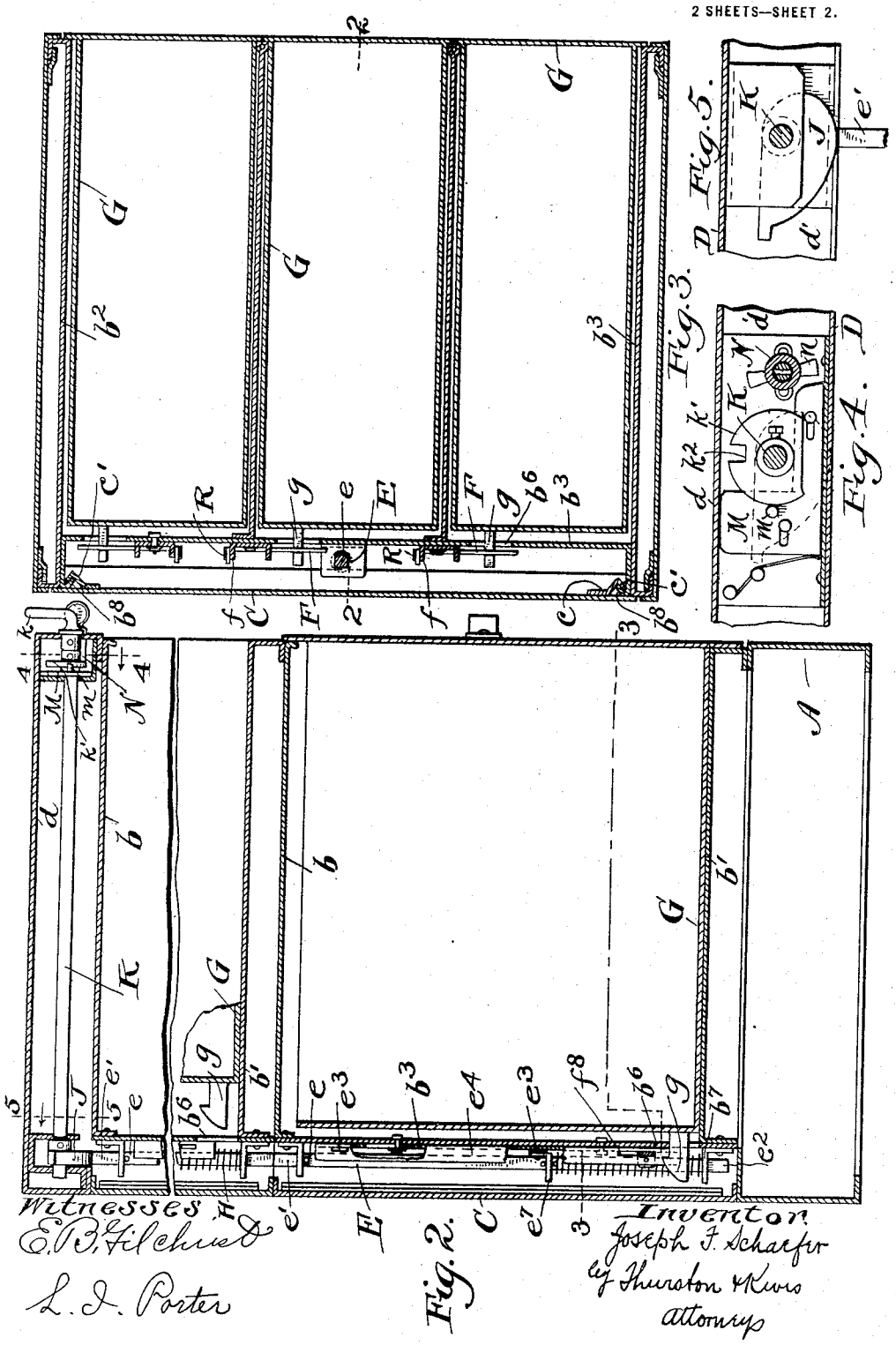


Fig. 2.

Fig. 5.

Fig. 3.

Fig. 4.

Witnesses
E. B. Filchner
L. L. Porter

Inventor
Joseph F. Schaefer
by Thurston & Kerr
attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH F. SCHAEFER, OF CLEVELAND, OHIO, ASSIGNOR TO THE VAN DORN IRON WORKS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

LOCKING MECHANISM FOR SECTIONAL FILING-CABINETS.

1,200,882. Specification of Letters Patent. Patented Oct. 10, 1916.

Application filed February 9, 1914. Serial No. 817,433.

To all whom it may concern:

Be it known that I, JOSEPH F. SCHAEFER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Locking Mechanisms for Sectional Filing-Cabinets, of which the following is a full, clear, and exact description.

It is common practice to construct filing cabinets by piling any desired number of filing sections upon one another, putting a cap member on the top of the resulting pile or stack. The filing sections usually contain sliding drawers; and many uses of such cabinets require that the drawers may be locked shut by means which require the use of a special key before any drawer can be opened.

It is to this type of sectional filing cabinets and particularly when the sections are made of metal, that the present invention pertains; and the invention relates to the drawer locking mechanism carried by each filing section, and to the construction of the filing sections which adapts them for use with such locking mechanism; to the described construction and arrangement of such locking mechanisms whereby the proper placement of one filling section upon another brings about a coöperative relation between the drawer locking mechanisms carried respectively thereby; and in the combination, with such mechanisms, of key controlled lock operating mechanism carried by the cap, and so constructed and arranged that the proper placement of the cap on the top of the pile of filing sections, places all of the drawer locking mechanisms under the control and influence of the said operating mechanism carried by the cap.

The object is to endow sectional filing cabinets with the above mentioned and other desirable qualities, and to do this inexpensively but practically.

The invention in the best form known to me is shown in the accompanying drawing, and is described in the following specification; and the several combinations and subcombinations of parts which constitute the invention are defined by the appended claims.

In the drawing, Figure 1 is a perspective rear elevation of a sectional metallic filing cabinet equipped with this invention, said drawing showing one of the filing cases with the protecting rear plate entirely removed, and another with said protecting rear plate partly broken away, and showing the rear flange of the cap also partly broken away. Fig. 2 is a vertical sectional view of a filing case embodying the invention,—said section being taken in a plane indicated by the line 2—2 on Fig. 3. Fig. 3 is a horizontal sectional view of the same in a plane indicated by line 3—3 on Fig. 2. Fig. 4 is a sectional front view of that part of the locking mechanism carried by the cap,—the section being on the line 4—4 in Fig. 2. Fig. 5 is a vertical sectional view on the line 5—5 of Fig. 2 of the locking mechanism carried by the cap.

Referring to the parts by letters, A represents the base member of the stack; B, B^1 filing sections, and D the cap. Usually the base member is an independent piece, as shown, but it is not essential that it be constructed independently of the lower filing section. The filing section B rests upon and is secured to the base member. If the stack is to contain but one filing section, the cap member would rest upon the filing section B and be secured thereto. In case the stack includes more than one filing section, said filing sections are stacked one upon another, and the cap member is placed upon the top filing section; and all of them will be appropriately secured together. Any suitable means for so securing them may be employed; but in Letters Patent No. 1,147,022 granted jointly to Don G. Hoffman and myself, there is shown effective means for practically bringing about that result.

Each filing section is a built up metallic box having an open front. It is composed of a top plate b, a bottom plate b^1, two side plates b^2, and a rear plate b^3, which plates are connected together by welding, riveting or any other suitable means. The two side plates b^2, b^2, extend rearwardly beyond the rear plates b^3, so as to form behind the rear plate a housing for the drawer locking mechanism to be described, which housing is closed by the false back plate C which can be taken out or put back when the filing case, of which it is a part, has nothing resting upon its edge.

Within each filing section are any desired number of drawers G which slide in and out of the open front of the case. As

shown, each filing section contains three drawers located side by side. Each drawer has fixed to its rear end the beveled catch g which, when the drawer is closed, will project through a hole b^6 in the back plate b^3 of the section.

Supported on the rear face of the plate b^3 of each filing section and so that it may have a limited vertical movement up and down is a locking frame E. This frame is substantially equal in height to the height of the supporting section, and its upper end e^1 and its lower end e^2 must be normally in substantially the same horizontal planes as the top and bottom of the supporting section. Both the upper and lower ends of said frame should preferably be parts of a vertical rod e, which is fixed to the cross members e^3. These are, in turn, fixed to the vertical channel bars e^4, of which there are as many as there are drawers located side by side in the filing section by which the frame is supported,—in the present case three. It is, of course, obvious that this particular construction of the vertical movable frame is not essential. It is, however, a very good practical specific construction.

Carried by each of the channel bars e^4 is a latch F. This is simply a flat bar which passes through slots f^8 in both of the side members of the channel bar, and has one end f turned rearward against the adjacent side member of the channel bar. A flat spring R fixed to the channel bar engages in the turned over end f of the latch, and thereby yieldingly holds the latch in the latching position.

There is a spring H which acts on the frame E in a direction to move it upward to what is the drawer-unlocking position. This spring surrounds the bar e, and is compressed between the fixed bracket b^7 and a shoulder e^7 fixed to the bar e. Now, when the frame is raised by the spring H, the latches F will be carried up to positions where they will not engage the catches on the drawers; but, when the frame is pressed down, these latches are carried into the path of the beveled ends of the associated catches g. Therefore, as a drawer is closed, the catch lifts the latch and passes under it, and then the latch is moved by its spring down behind the shoulder on the catch and prevents the opening of the drawers. Each of the filing sections carries a similar frame E equipped with similar latches F; and these frames are so arranged that when one filing case is put upon another, the upper end of each frame will contact with the lower end of the frame on the filing section next above it, and this will be true, however many filing sections are piled one upon anto make a stack. When force is applied to the frame carried by the upper filing case sufficient to press it down, all other frames will be likewise moved down. That is to say, all will be moved to the drawer locking position. When the upper frame is freed and allowed to move up, it and all of the frames below it will be moved up by their respective springs H to the drawer unlocking position.

The cap D is, as stated, put upon and secured to the upper filing section. This cap in the form shown has a rectangular top plate d and vertically depending flanges d^1 around the four sides thereof. A horizontal rock shaft K is mounted in suitable bearings in the cap, and projects through the front flange of the cap. Near its rear end a cam J is fixed to shaft K, in such position that it will engage the upper end e^1 of the frame E carried by the upper filing case. On the projecting front end of this rock shaft is an operating handle k by which the shaft may be turned in the direction to cause the cam to move the upper locking frame down, and thereby to move all of the other frames down. Near the front of the cap, and within the cap is a key actuated lock which may take many specific forms. In the construction shown the locking member is a spring actuated slide M having a forwardly projecting pin m which engages the periphery of a notched disk k^1 fixed to the rock shaft K. When the rock shaft is turned in the direction to cause the locking frames to move down to the drawer locking position, this notch k^2 is brought in alinement with the pin m on the slide, and thereupon the pin slips into this notch; and this prevents for the time being the turning of the rock shaft in the direction such as would permit the locking frames E to move to the drawer unlocking position. The key controlled mechanism is of familiar form, comprising a rotatable barrel N having within the cap, an arm n located so that when the barrel is turned it will move the locking slide M so as to withdraw the pin m from the notch k^2. When this has been done, it is possible for one to take hold of the handle on the rock shaft and turn it so as to permit the locking frames to move to the drawer unlocking position.

From the foregoing, it is apparent that the mechanism in the cap will control the locking frames on the several filing sections, however many filing sections may be stacked one upon another to form the cabinet. All of these locking frames may be moved to the drawer locking position, irrespective of whether any or all of the drawers are closed or opened. Any drawer which is open will, when closed, automatically engage with its associated latch and be locked thereby. The locking frame operating and controlling mechanism being located in the cap and being operable from the front thereof, is in the most convenient place for practical pur-

poses. It is much better to place this mechanism in the cap than in the base, because when the cap is secured in place, the locking mechanism therein is inaccessible, and cannot be operated to unlock the drawers, except by the use of a key. If this mechanism were located in the base of the cabinet, it would be only necessary to lay the cabinet on its back in order that one could get at and operate the lock mechanism without the use of a key; or else the bottom of the base would have to be closed by a more or less expensive plate.

As before stated, the housing at the back of each case is closed by a false back plate C, which projects the described locking mechanism in said housing. This false back plate, in the construction shown, has such interlocking sliding connection with the sides of said housing as will prevent them from spreading apart and thereby allowing said false back to be removed. The side edges of the back plate b^3 are bent along vertical lines, first rearward, so as to lie against the rearward extension of the two side plates, b^2, b^2, and then at an angle forward,—thereby forming the two vertical flanges b^8. Vertical cleats c are riveted or welded to the front (inner) face of the false back C, near its side edges, and these cleats are bent along vertical lines to form the V-shaped channel c^1, which will interlock, as shown, with the inclined flanges b^8, when the false back C is moved down. When the false back is drawn to place, its lower edge rests on the base,—while the superimposed section B^1 will engage with the top of said false back and thereby prevent it from moving up.

Having described my invention, I claim:

1. In a sectional filing cabinet, the combination of a plurality of superimposed filing sections, a cap resting upon the upper section, a drawer in each filing section having a catch, a vertically movable locking frame mounted on each filing section, with its upper end in contact with the lower end of the corresponding frame on the section next above it, a gravity latch pivotally supported on each locking frame for engaging the catch on the associated drawer, a spring acting to move said locking frame up to the drawer unlocking position, a rock shaft mounted in the cap and projecting out through the front wall thereof, a cam fixed to said shaft within the cap and in engagement with the upper end of the upper locking frame, and an operating handle secured to the projecting front end of said rock shaft.

2. In a sectional filing cabinet, the combination of a plurality of superimposed filing sections, a cap resting upon the upper section, a drawer in each filing section having a catch, a vertically movable locking frame mounted on each filing section, with its upper end in contact with the lower end of the corresponding frame on the section next above it, a gravity latch pivotally supported on each locking frame for engaging the catch on the associated drawer, a spring acting to move each locking frame up to the unlocking position, a rock shaft mounted in the cap and projecting out through the front wall thereof, a cam fixed to said shaft within the cap and in engagement with the upper end of the upper locking frame, an operating handle secured to the projecting front end of said rock shaft, a notched disk fixed to said rock shaft within the cap, and a key controlled lock in said cap having a spring actuated bolt for engaging said notched disk.

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

JOSEPH F. SCHAEFER.

Witnesses:
E. L. THURSTON,
E. B. GILCHRIST.

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