Sept. 28, 1943. C. W. STRAUBEL 2,330,318

LATCH-CONTROLLED COMPRESSOR

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Fig. 1.

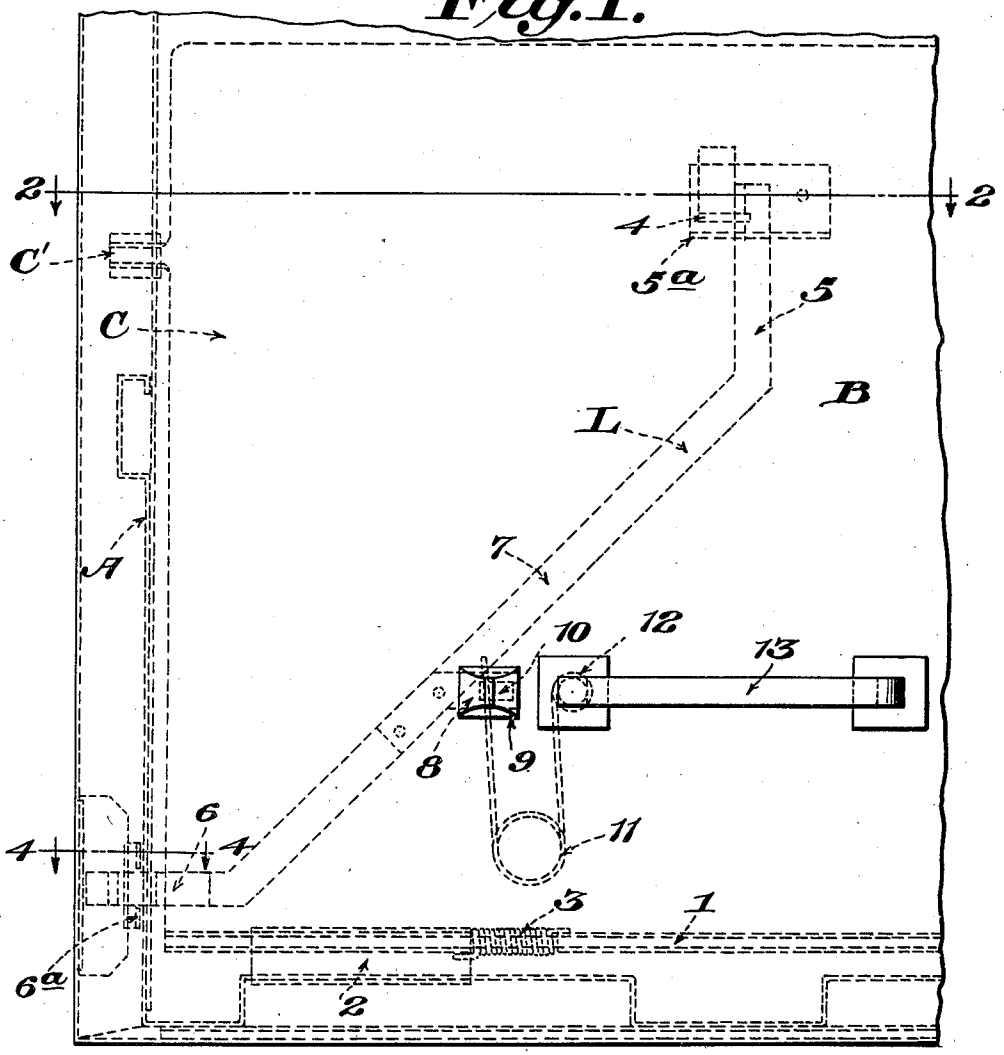
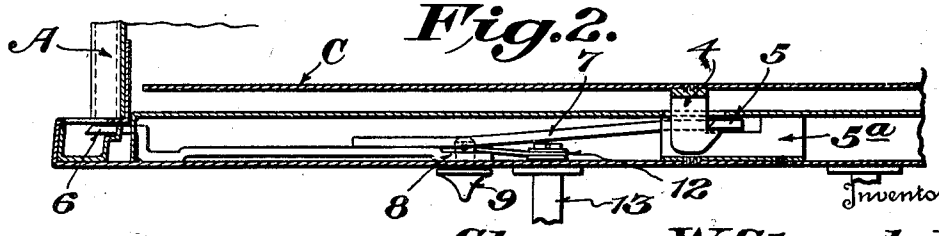


Fig. 2.



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Fig. 3.

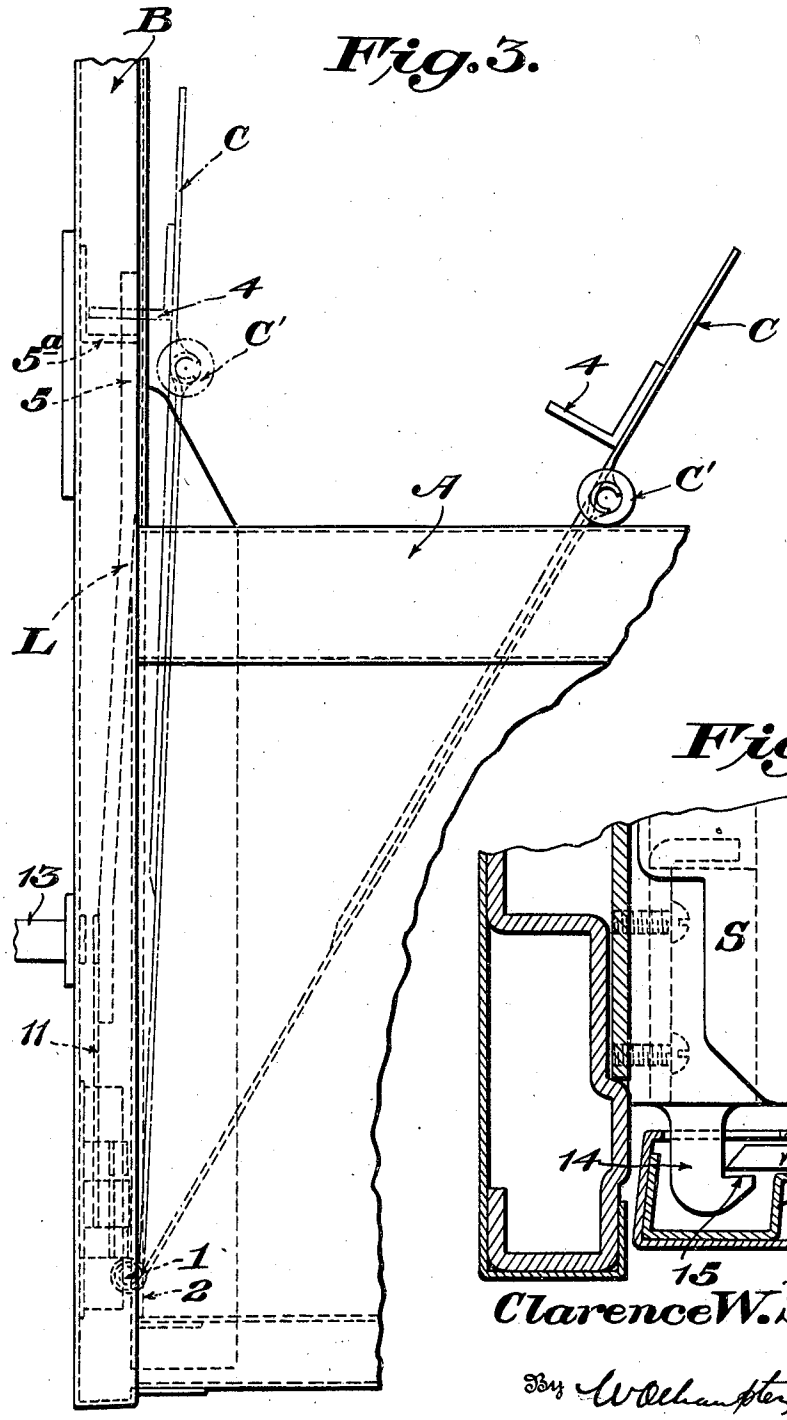


Fig. 4.

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LATCH-CONTROLLED COMPRESSOR

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Application October 18, 1941, Serial No. 415,611

7 Claims. (Cl. 45—2)

This invention relates to filing cabinets, and more particularly to an improvement in filing drawers.

One of the objects of the invention is to provide a drawer with a front compressor plate which, when the drawer is pulled open, may be manually moved from its inwardly tilted position to a forward position in which it may be locked to the drawer head, thereby to hold the compressor plate out of contact with the drawer contents while filing material therein, and on the other hand may be automatically released as the drawer proceeds to a fully closed position.

A further object is to provide a novel arrangement whereby the compressor may be manually released while the drawer is open by manipulating an operator's knob exposed at the face of the drawer front.

A still further object is to so construct and arrange one form of the means for automatically releasing the compressor so as to lock the drawer in the cabinet when the drawer is closed.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which:

Fig. 1 is a fragmentary front elevation of a filing drawer embodying the present improvements.

Fig. 2 is a horizontal cross sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary side elevation of the drawer shown in Fig. 1.

Fig. 4 is an enlarged detail horizontal sectional view taken on the line 4—4 of Fig. 1 and including a portion of the side wall of the cabinet.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

According to the embodiment of the invention shown in the drawings, the same includes in its organization a drawer body designated generally as A and intended to be slidably supported in the usual manner by an appropriate drawer suspension in a filing cabinet. The drawer body A is provided with a drawer head B which may be of the rigidly affixed type, or, on the other hand, may be of the movable telescopic type B' shown in Fig. 5.

A compressor plate C is mounted in the drawer body between the side walls thereof, and has its lower end pivotally supported on a pintle or axis 1 mounted in suitable brackets 2 carried by the drawer bottom. The said compressor plate C is preferably urged inwardly of the drawer by the spring means 3 (Fig. 1) so that the laterally extending bumper arms C' at the upper sides of the plate may rest on the upper edges of the side walls of the drawer when the drawer is empty, as shown in Fig. 3. The purpose of the compressor plate C is, of course, to compress the drawer contents against a follower or divider and thus maintain it substantially erect when stored. However, when additional filing material is to be inserted in the drawer it is desirable to relieve the drawer contents of pressure so that the filed material can fan out or spread open, and, therefore, the present invention proposes to lock said plate with the drawer head in such a way that the drawer contents are freed of compression when the drawer is open. When it is desired to restore the compressor plate to its normal position, the same may be conveniently unlocked or disengaged from the drawer head either manually or automatically.

The compressor plate C is provided with a hook-like keeper arm 4 on its outer face, said keeper arm being adapted for engagement with the vertical portion 5 of a latch bolt or bar L. This latch bar also includes a horizontal latch portion 6 which is connected with the latch portion 5 by an intermediate oblique portion 7. It will of course be appreciated that, for convenience in manufacture, the oblique portion 7 may be made in two parts, each part carrying its respective latch portion, and said parts being welded or otherwise secured together at the point of overlap so as to in effect provide a single rigid intermediate oblique portion. It will also be apparent from the drawing that the said intermediate oblique portion 7 is provided with a substantially horizontal ear 8 which is intended to carry a finger knob 9 whose shank is supported to slide transversely in the slot 10 of the front face of the drawer head, while the knob 9 is exposed at the outer face of said drawer head. For the purpose of maintaining the entire latch assembly, including the parts 5, 6 and 7, in normal position, the said shank of the knob 9 is preferably engaged by one leg of a looped spring 11 whose other leg is anchored as at 12 to one of the inner ends of a drawer handle shank 13, mounted in the usual manner on the drawer head. It will thus be apparent that the latch bar L

is yieldably and slidably mounted so as to move transversely of the drawer head.

When it is desired to hold the compressor plate C out of compressing relation to the drawer contents, as when the drawer is open to permit filing procedure, it is only necessary to manually grasp the upper end of the compressor plate and move it toward the drawer head until the keeper 4 engages the latch portion 5 of the latch bar L. The compressor plate may then remain interlocked with the latch bar as long as desired. When it is desired to release the latch bar, the thumb of the operator's hand which engages the handle 13 may press the knob 9 toward the handle and thus move the entire latch bar to cause the latch portion 5 to disengage the keeper arm 4 of the compressor plate.

If the compressor plate is left engaged with the latch bolt or bar upon completion of filing procedure, that is, not manually released as above described, it will be automatically released as the drawer proceeds to fully closed position within the cabinet by reason of the latch portion 6 engaging the nose of the abutment 14 carried by a portion of the drawer suspension S (Fig. 4), which in turn is secured directly to a side wall of the cabinet. That is to say, if the compressor plate C is not manually released by the operator manipulating the knob 9 before closing the drawer, the said compressor plate will be automatically released as the drawer moves to closed position, because when the latch portion 6 of the bar L engages the nose 14 of the abutment, the entire latch bar will be shifted transversely and thus cause the latch portion 5 to move out of engagement with the keeper 4 of the compressor plate.

When the drawer is in fully closed position in the cabinet, as shown for example in Fig. 4, it will also be apparent that the drawer is locked in the cabinet and of course the compressor is free to compress the drawer contents. Upon opening the drawer to permit filing procedure, the operator grasps the handle 13 and with the thumb of the hand engaging the handle shifts the knob 9 against the tension of the spring 11 and thus shifts the entire latch bar, which has the effect of withdrawing the latch portion 6 out of engagement with the hook 15 of the abutment 14. Thus, the drawer may then be pulled open. Since the operator removes his hand from the handle 13 and releases thumb pressure on the knob 9, the latch bar L is returned to normal position by spring 11 and the compressor plate C may be moved forwardly so that the keeper arm 4 engages with the latch portion 5.

It will of course be understood that the latch bar L, in addition to being slidably guided and supported through the medium of the ear 8 and the shank of the knob 9 riding in the slot 10, suitable guide brackets may be provided respectively for the latch portions 5 and 6. For example, the latch portion 5 may be guided in the bracket 5^a and the latch portion 6 may be guided in the side wall of the drawer head and the bracket 6^a, as shown in Fig. 4.

It will be apparent from the foregoing that the latch bar L performs the dual function of holding or locking the compressor plate in non-compressing position and also controls the locking and unlocking of the drawer relative to the cabinet, both of these functions being under common control through the operator's knob 9 exposed at the face of the drawer head.

From the foregoing it will be apparent that the present invention provides a compressor plate which may be readily engaged and disengaged with the drawer head, and in all cases enables the operator to keep the compressor out of contact with the drawer contents while filing. In the event that the operator forgets to release the compressor plate at the end of the filing procedure, said plate will automatically be released when the drawer is closed so as to properly support the drawer contents.

I claim:

1. In a drawer for filing cabinets, a drawer head, a compressor plate pivotally supported in the drawer adjacent the inner side of the drawer head, keeper means at the outer face of the compressor plate, a horizontally shiftable spring controlled latch bolt accessible to the keeper means from the inner face of the drawer head, and means on the drawer head and cabinet for automatically releasing said latch bolt when the drawer is moved to fully closed position to permit the compressor plate to move inwardly of the drawer.

2. In a drawer for filing cabinets, a drawer head, a compressor plate pivotally supported on the drawer bottom adjacent the inner side of the drawer head, spring means for normally urging the compressor plate inwardly of the drawer, keeper means on the outer face of the compressor plate, a spring controlled latch bolt on the drawer head adapted to be engaged by said keeper means, and means also carried by the drawer head and cabinet for actuating said latch bolt when the drawer is moved to fully closed position to release the compressor plate for movement inwardly of the drawer.

3. In a filing cabinet, a drawer slidable in the cabinet and including a drawer head and a drawer body, an abutment on the cabinet, a compressor plate pivotally supported on the drawer body inwardly of said drawer head, a keeper arm on the front face of the compressor plate, and a spring tensioned latch bolt on the drawer head and mounted for horizontally shifting movement, said bolt having an upper portion adapted to be engaged by the keeper arm of the compressor plate and having a horizontal portion engageable with the abutment on the cabinet as the drawer moves to closed position, thereby automatically to actuate the bolt and release the keeper arm of the compressor plate.

4. In a filing cabinet, a drawer slidable in the cabinet and including a drawer head and a drawer body, an abutment on the cabinet, a compressor plate pivotally supported on the drawer body inwardly of said drawer head, a keeper arm on the front face of the compressor plate, a spring tensioned latch bolt on the drawer head and mounted for horizontal shifting movement, said bolt having an upper portion adapted to be engaged by the keeper arm of the compressor plate and having a horizontal portion engageable with the abutment on the cabinet as the drawer moves to closed position to shift the same to unlatching position and a finger controlled knob carried by the latch bolt between the said upper and horizontal portions thereof and exposed at the face of the drawer head for manipulation by a finger of the hand of the drawer operator to shift the latch bolt.

5. In a filing cabinet, a drawer slidable in the cabinet and including a drawer head and a drawer body, an abutment on a side wall of the cabinet, a compressor plate pivotally supported on the drawer body inwardly of said drawer

head, a keeper arm on the compressor plate, a latch bolt including vertical and horizontal latch portions connected by an oblique intermediate portion said horizontal portion adapted to engage the said abutment as the drawer moves to closed position, means on the drawer head for mounting the latch bolt to shift horizontally, a spring for biasing the latch bolt to normal position, and an operator's knob connected to the said intermediate portion of the latch bolt and exposed at the front face of the drawer head for manipulating the latch bolt against the tension of said spring to cause the same to disengage the said keeper arm.

6. In a filing cabinet, the combination including a drawer slidable in the cabinet and having a drawer head, a compressor pivotally supported in the drawer adjacent the inner side of the drawer head and normally spring urged to drawer contents compressing position, an abutment on the cabinet disposed adjacent the drawer head when the drawer is closed, and means for manually connecting and releasing the compressor relative to the drawer head when the drawer is opened and automatically releasing the compressor if latched to the drawer head when drawer moves to closed position, said means comprising a keeper on the compressor and a latch bolt on the drawer head having keeper and abutment engaging portions, said latch bolt being normally spring biased toward the keeper and the abutment.

7. In a filing cabinet, the combination including a drawer slidable in the cabinet and having a drawer head, a compressor pivotally supported in the drawer adjacent the inner side of the drawer head and normally spring urged to drawer contents compressing position, an abutment on the cabinet disposed adjacent the drawer head when the drawer is closed, and means for manually connecting and releasing the compressor relative to the drawer head when the drawer is opened and automatically releasing the compressor if latched to the drawer head when drawer moves to closed position, said means comprising a fixed keeper on the compressor and a latch bolt on the drawer head having a manual operator and separate portions respectively engaging the compressor keeper and said abutment on the cabinet, the said latch bolt also being normally spring biased in one direction for automatic engagement with the abutment and adapted to be moved thereby when being so engaged in the opposite direction for said automatic release from the keeper element of the compressor.

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