Sept. 23, 1930. O. CARLSON 1,776,678

COMPRESSOR

Filed July 27, 1928

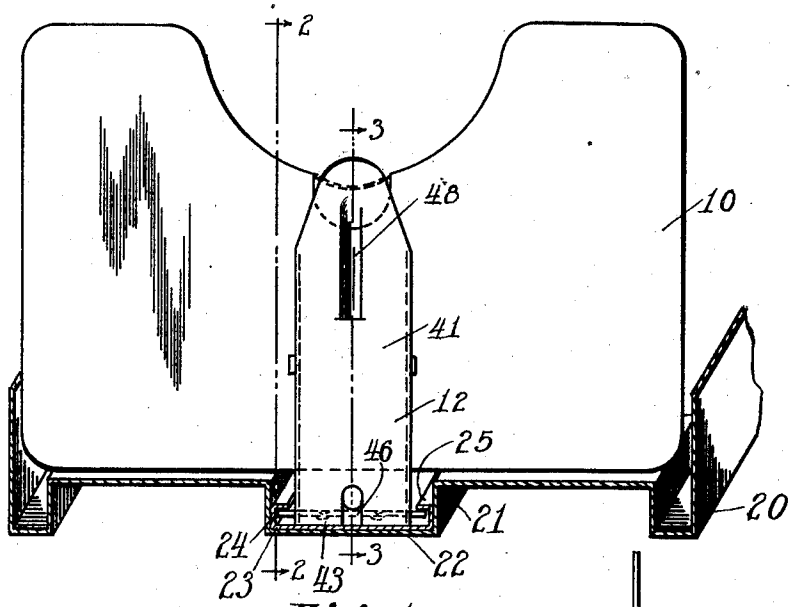


Fig. 1.

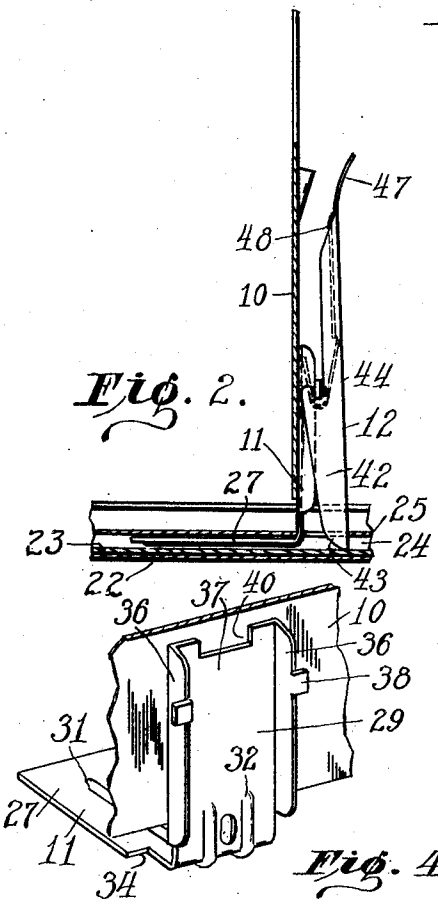


Fig. 2.

Fig. 4.

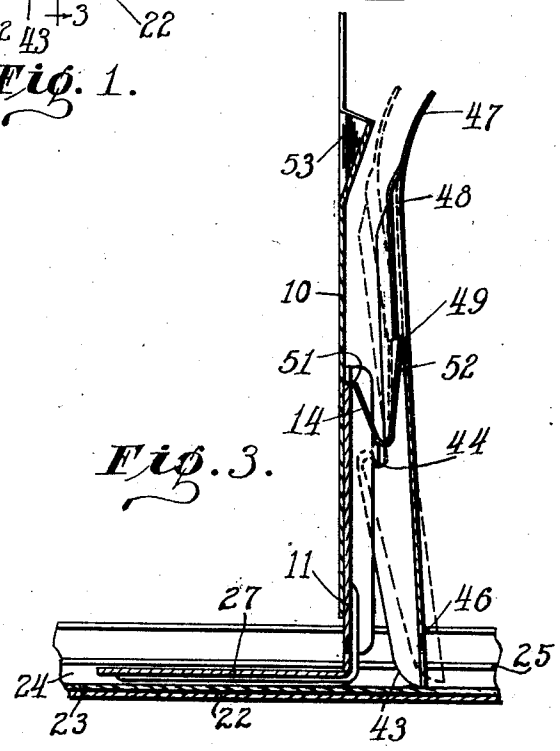


Fig. 3.

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UNITED STATES PATENT OFFICE

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COMPRESSOR

Application filed July 27, 1928. Serial No. 295,700.

This invention relates to an improvement in compressors or followers for filing cabinets used for the purpose of holding cards, files, and papers in the drawer of cabinets in a substantially vertical position.

In its preferred embodiment this invention constitutes means for positioning, in an upright manner, cards or papers within the drawer of a cabinet, being readily adjustable longitudinally of the cabinet to accommodate any desired quantity of papers.

In order to facilitate a clearer understanding of the particular advantages of this invention, reference is had to the construction of the compressors now on the market. Compressors constitute a small but important element of drawer and cabinet construction and it is therefore essential that their operation be of the simplest whereby the device may be cheaply manufactured and operated without danger of becoming out of order. Heretofore, compressors have generally been provided with a clamp which is permanently and pivotally pinned to the compressor proper. Between the clamp and compressor and usually encircling the pin is fitted a spring upon which the clamp action depends. In the event that the clamp is of incorrect proportions to fit the drawer, or the spring is weakened or breaks, the compressor must be removed and completely rebuilt since the various elements are permanently joined and it requires one skilled in metal work to make the repairs.

Applicant, having as the primary object of his invention the idea of producing a cheap, easily assembled, and quickly repaired compressor, has eliminated the pivot pin and also the usual spring. In place of this structure he provides a clamp having open end pockets which are engaged by lugs formed from the compressor. A flat steel spring is fitted between the compressor and clamp and prevents only inadvertent dislodgment thereof.

Another object of this invention is to provide a compressor within a drawer which is normally held in a fixed position from which it can be quickly and easily released to be moved to any other position within the drawer.

A further object of this invention is to provide a compressor having a plate adapted to fully and completely engage the innermost sheet or card within a drawer file whether the compressor engages the cards or sheets tightly or loosely.

A still further object of this invention is to provide a compressor, the construction of which being such that when it is in place within a drawer file, a simultaneous upward and downward pressure obtains to prevent any movement of the compressor until released.

Other and further objects of this invention will appear from a consideration of the following specification taken in connection with the accompanying drawing, and in which

Fig. 1 is a rear elevation of the compressor embodying one form of this invention;

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

Fig. 3 is an enlarged sectional view taken along the line 3—3 of Fig. 1 and illustrates the compressor in locked and released positions, the latter being in dotted lines; and

Fig. 4 is a fragmentary perspective view illustrating the combined base and clamp-positioning plate.

In constructing filing cabinets it is the customary practise to provide in the base of a drawer a longitudinally extending central recess. Within and to the walls of this recess are secured flanges which form a somewhat closed track and in which the compressor is adapted to be guided in its movement from one end of the drawer to the other.

Referring to the drawing and more particularly to Figs. 2 and 3 thereof, this invention is comprised of a backing plate 10 having secured thereto, by welding or any other suitable means, a combined base and supporting member 11. A clamp 12, by which the compressor is held in any desired location within the drawer, removably engages the member 11, being held in position thereupon by means of a spring 14.

The drawer 20 is provided with a centrally

located longitudinal recess 21 in which is secured, as by welding to the base wall 22 of said recess, a channel 23. The channel 23 is provided with vertical flanges 24 which terminate in inwardly extending flanges 25.

The member 11, formed from a single piece of metal, constitutes an important part of this structure, inasmuch as the base portion 27 thereof through the vertically flanged member 29 supports the backing plate 10 and the clamp 12. The base 27 is provided with two longitudinal ribs 31 extending downwardly from the underface thereof and are continued into the member 29 forming ribs 32 thereon. The ribs have a twofold use, namely, that of providing surfaces which slidably engage the channel 23 of the drawer and also acting as a stiffener to prevent any variation in the angle between the member 29 and the base. The rearward end of the base 27 is cut away to provide notched out portions 34, the purpose of which is to give clearance to the flanges of the clamp 12 should said clamp be sufficiently free to move into close engagement with the lower portion of the member 29.

The support 29, to which is secured the backing plate 10, is provided with vertical flanges 36 at right-angles to the base wall 37 thereof. Toward the upper end of each flange 36 is provided an outwardly extending lug 38 by means of which the clamp 12 is mounted upon the compressor. The base wall 37 is, along the upper edge thereof, cut away to provide a shallow centrally located recess 40, the purpose of which will later be described.

The clamp 12, by means of which the compressor is held in any desired place within the drawer, is formed from a single piece of metal being provided with flanges 42 at right-angles to the base wall 41 thereof. The flanges 42 are of uniform width from the lower end 43 of said clamp to the notches 44 from which they gradually taper off and blend with the wall 41. It is by means of the engagement of the flanges 38 formed on the supporting member 29, with the notches 44, that the clamp 12 is operably secured to the compressor. The wall 41 of the clamp 12 is, as shown in Fig. 1 of the drawing, provided with a recess 46 extending upwardly a short distance from the end 43 of said wall. This recess permits provision of the usual rod in a drawer by which to hold cards or files in place. The upper end of the wall 41 of the clamp is curved outwardly terminating in a tongue 47. Stopping short of the curved portion of the tongue 47 and extending longitudinally of the clamp is a rib 48 pressed from the metal which forms said wall. The upper end of the rib 48 blends into the wall 41 without any cut or break in the metal but the lower end thereof is distinctly separated from the wall 41 thus forming a shoulder 49. The spring 14 being substantially V-shaped is provided with a flange 51 which is adapted to rest within the recess 40 provided therefore in the supporting member 29. The end 52 of the spring is adapted to rest against the shoulder 49 of the clamp 12.

An advantage of this invention over the compressors at present employed in drawer files is the simple and expeditious manner by which the various elements are assembled. This, as may be seen, is due to the use of sheet-metal throughout the construction and the manner of mounting the clamp 12 upon the supporting member 29.

When a compressor made in accordance with this invention is to be assembled the following steps should be observed. The unit is comprised of four elements, namely, the backing plate, the base or supporting member, clamp and spring. The backing plate 10 is first secured to the supporting member 29 in any suitable manner as by welding. The spring 14, through its flange 51, is placed in engagement with the supporting member 29 within the recess 40 thereof. The clamp 12, by means of the shoulder 49, engages the end 52 of the spring and the clamp may then be forced into close engagement with the supporting member 29 and as this is done moved upwardly in order that the lugs 38 of the member 29 may be engaged within the recesses or notches 44 formed in the flanged walls of the clamp. When this is done the clamp 12 may be manipulated against the tension of the spring 14 by grasping the backing plate 10 along the offset portion 53 and the tongue 47 of the clamp.

The compressor may now be mounted within the drawer 20, the base 27 thereof being located within the flanged track formed by the walls of the channel 23. Inasmuch as the clamp 12 is of a width considerably less than that of the base 27, the lower end 43 of said clamp will ride freely within the space between the inwardly extending flanges 25. As shown in Fig. 3 of the drawing, the tension of the spring tends to move the end 43 of the clamp toward the backing plate bringing it into contact with the channel 23. The contact of the clamp with the channel tends to raise the base 27 until the rearward edges thereof rest against the underface of the flanges 25. The ribs 31 at their forward end, due to the tilting of the base 27, engage the base of the channel 23. The compressor is thus held in position by pressure exerted both upwardly against the flanges 24 and downwardly against the base of the channel 23. This provides an extensive frictional contact between the compressor and the drawer and prevents any retraction of the compressor within the drawer when under pressure of papers. Obviously, any pressure tending to cause the plate 10 to move backward would force the base 43 of the clamp into closer engagement with the channel and the line of

this contact would function as a fulcrum to increase the pressure of the base 27 against flanges 25 and the base of the channel 23.

If, however, it is desired to draw the compressor forward this can be easily done without deliberately releasing the clamp 12 because such a movement will cause the base of said clamp to sufficiently relinquish its engagement with the channel 23. However, it will be noted that the clamp is so located that the tongue 47 thereof may be easily grasped by the operator and the clamp tilted to release the base thereof at the same time that the compressor is drawn forward.

When the compressor is to be retracted, the tongue 47 is pressed forward against the tension of the spring 14 and at the same time pressure is applied to the face of the plate to force the compressor into the desired position.

While only one modification of this invention has been shown and described, applicant does not intend to be limited thereto since it is obvious that other modifications or adaptations may be made without departing from the spirit and scope of this invention as set forth in the following claims.

Having thus set forth my invention what I claim is new and for which I desire protection by Letters Patent is:

1. The combination with a drawer having a guide channel therein provided with overhanging flanges, of a compressor comprising a backing plate, a base rigidly secured to said backing plate, ribs formed in said base and a spring-actuated clamp normally holding said compressor in fixed relation to said drawer through an upward and downward pressure exerted by said compressor within said guide channel.

2. The combination with a drawer having a guide channel therein provided with overhanging flanges, of a compressor comprising a backing plate, a combined base and support secured to said backing plate, lugs formed in said support, a spring-actuated clamp having recesses in the flanged walls thereof, said clamp being pivotally suspended upon said support by the engagement of said lugs with said recesses.

3. The combination with a drawer having a guide channel therein provided with overhanging flanges, of a compressor having a base within said guide channel, ribs formed in said base, a spring-actuated clamp pivotally joined to said compressor, said clamp normally exerting pressure upon the base of said channel and causing said base of the compressor to engage the overhanging flanges of said guide channel.

4. The combination with a drawer having a guide channel therein provided with overhanging flanges, of a compressor comprising a backing plate, a base member having an upright portion rigidly secured to said backing plate, laterally extending lugs formed in said upright portion, a flanged clamp, having recesses in the flanges thereof, said clamp being mounted upon said base through the engagement of said lugs with said recesses and means preventing inadvertent disengagement of said clamp from said base.

5. The combination with a drawer having a guide channel therein provided with overhanging flanges, of a compressor comprising a backing plate, a base member having an upright portion rigidly secured to said backing plate, laterally extending lugs formed in said upright portion, a flanged clamp having recesses in the flanges thereof, said clamp being mounted upon said base through the engagement of said lugs with said recesses and a steel spring supported between said clamp and the upright portion of said base, said spring preventing inadvertent disengagement of said clamp from said base.

In testimony whereof I have affixed my signature.

OTTO CARLSON.