Oct. 11, 1949. J. R. JONES 2,484,713

COMPRESSOR FOR FILING DEVICES

Filed Dec. 7, 1944

Fig. 1.

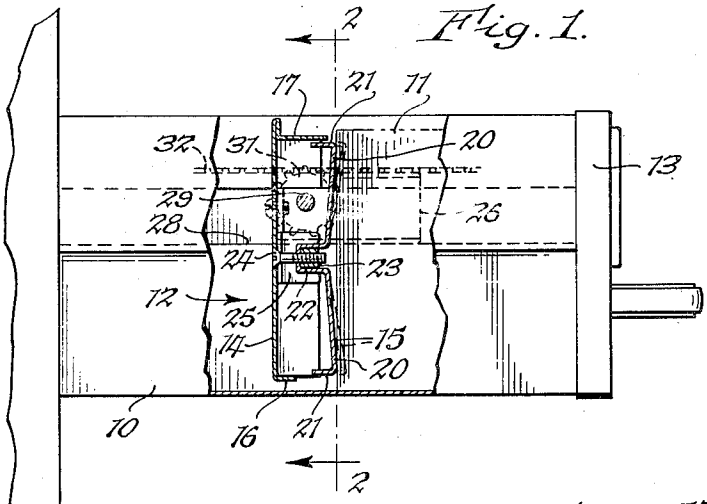


Fig. 2.

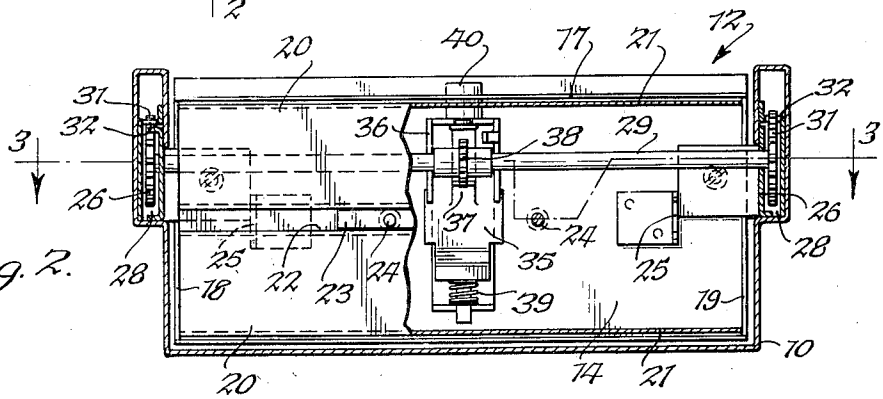


Fig. 3.

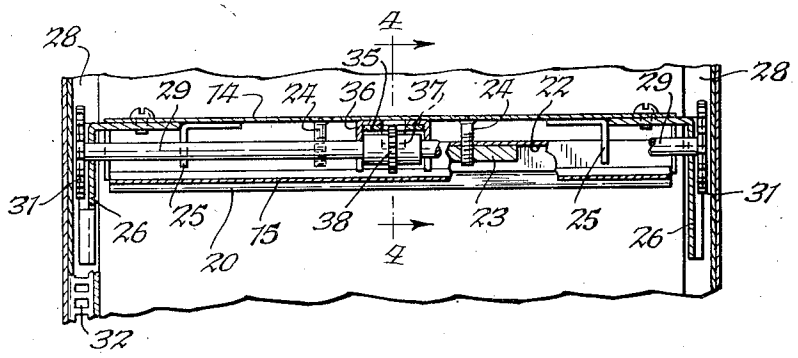
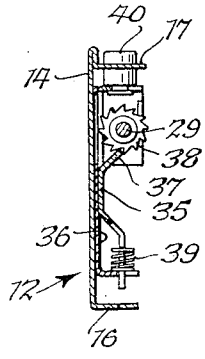


Fig. 4.



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COMPRESSOR FOR FILING DEVICES

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5 Claims. (Cl. 129—28)

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This invention relates to files or devices of the sort which comprise a file receptacle or holder for tabulating cards, papers or other elements, and a compressor or follower mounted for adjustment to different positions in or on the file receptacle or holder, depending upon the number or quantity of the elements in the file, for pressing the elements closely together face to face, and maintaining them in their original, flat condition. In order to accomplish this, it has been customary to provide means for releasably holding or securing such compressors in the different, required, adjusted positions in or on the file receptacle or holder, and also to make provision for an extra or supplemental movement of the compressor or a member thereof relatively to its securing means or adjusted position on the file holder, usually effected by cam or lever action, for firmly compressing the filed elements into close contact one with another. Such compressors usually are not automatic in their compressing action, but they have to be secured in the adjusted position by one operation or manipulation of the securing means, and the compacting or compressing action of the compressor then accomplished by an additional operation or manipulation.

One object of this invention is to provide a practical and desirable file or compressor which is automatic in its compressing action, it simply being necessary to move or press the compressor against the file contents, when it will act automatically to exert compacting pressure on the contents.

Other objects of the invention are to provide an efficient, improved file compressor which can be quickly and easily operated to hold the file contents under compression; which is of simple and economical construction; which comprises a main body plate or member on which are mounted the means for securing the compressor in adjusted positions, and a spring or resilient plate which is arranged to engage the file contents and to be placed under spring tension by the adjusting movement of the compressor, and which acts by its resilience and tendency to resume its normal condition, to exert spring pressure against the file contents; and in which said spring plate serves as a cover plate to hide or conceal the securing or adjusting means of the compressor.

Further objects and advantages of the invention will appear from the following specification of the preferred embodiment of the invention shown in the accompanying drawings, and the novel features of the invention are set forth in the appended claims.

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In said drawings:

Fig. 1 is a side elevation, partly in longitudinal section, of a file receptacle or holder provided with a compressor embodying my invention.

Fig. 2 is a transverse section of the file receptacle on line 2—2, Fig. 1, showing the compressor partly in front elevation and partly in transverse, sectional elevation.

Fig. 3 is a sectional plan view thereof on line 3—3, Fig. 2.

Fig. 4 is a sectional elevation of the compressor on line 4—4, Fig. 3.

Describing the preferred embodiment of the invention illustrated in the drawings, 10 represents the file holder or receptacle, which is shown in the form of a shallow drawer or tray adapted to hold tabulating or other cards or elements 11 standing on edge in the tray, and 12 indicates the compressor, which is arranged upright in the tray for longitudinal adjustment therein, to hold or compress the cards between the compressor and the front end wall 13 or other opposing wall or part of the tray.

Preferably, the compressor comprises an upright, transverse main or back plate 14, and an upright, transverse, front face or cover plate 15 supported by the back plate in front thereof. The back plate is shown as formed with forwardly projecting stiffening flanges 16, 17, 18 and 19 respectively at its bottom, top and side edges. The face or cover plate 15 shown consists of a generally rectangular plate of spring or resilient sheet metal or other suitable resilient material attached at a middle portion thereof to the back plate, and having upper and lower portions 20 which flare or incline forwardly somewhat respectively upwardly and downwardly from the middle attaching portion of the plate and have rearwardly directed, top and bottom edge flanges 21, of which the top flange 21 is adjacent to and overlaps the top flange 17 of the back plate so as to close or cover the space between the plates 14 and 15 at its top. Said upper and lower portions 20 of the front plate are adapted to yield or spring under pressure toward the back plate. For securing the front plate to the back plate, the former is preferably provided midway of its height with a transverse channel-shaped rib 22 in which a filler bar 23 is secured, as by welding, and screws 24 passing through holes in the back plate and screwed into threaded holes in this filler bar, secure the rib of the front plate in notched lugs or seats 25, welded or otherwise

secured on and projecting forwardly from the back plate. By these securing means the front plate may be spaced from but fixedly secured at ats middle portion to the back plate by a single pair of fastening screws 24, the front plate thus being securely anchored to the back plate while leaving its upper and lower portions 20 free to spring or yield toward and from or relatively to the back plate.

The compressor may be mounted for longitudinal adjustment in the file receptacle and releasably held in adjusted positions therein by guide and securing means of known or suitable construction. The means shown for this purpose comprise angle-shaped guide arms 26 suitably fixed on opposite ends of the compressor back plate 14 so as to project into and slide in longitudinal guideways 28 formed or provided on the upright side walls of the receptacle 10. A transverse shaft 29 journalled on the compressor, as in bearing holes in the guide arms 26, has secured on its opposite ends toothed pinions 31 which mesh with racks 32 extending longitudinally in the guideways 28, these racks, as shown, being formed by longitudinal, flanged strips welded in the guideways 28 and having horizontally disposed webs with spaced perforations which form the rack teeth for meshing with the teeth of the pinions 31. The meshing engagement of these pinions with the parallel racks at the opposite sides of the receptacle maintains the compressor in parallelism with itself in its adjustments forwardly and rearwardly in the receptacle.

For releasably holding or securing the compressor in its different adjustments in the receptacle, a thumb or finger-actuated latch or locking device is shown, comprising a latch plate 35 (Fig. 4) which is slidable vertically in a guide bracket 36 welded or otherwise fixed on the front side of the back plate 14, and is provided with a lug 37 arranged to engage the teeth of a toothed wheel 38 fixed on an adjacent portion of the shaft 29. A spring 39, which may be arranged between the lower end of the latch plate and a bottom flange of the guide bracket normally holds the latch lug 37 in engagement with the teeth of wheel 38 and holds an actuating thumb piece or button 40 on the upper end of the latch plate in a position in which it projects upwardly through a hole in the top flange 17 of the compressor back plate. Latch lug 37 is so inclined relatively to wheel 38 that the teeth of the wheel are adapted to ride or pass over the lug and permit rotation of the wheel and shaft in a clockwise direction, as illustrated in Fig. 1 of the drawing, thereby enabling forward adjustment of the compressor simply by pushing the compressor. But the latch lug will engage the wheel teeth and prevent the reverse rotation of the shaft and rearward movement of the compressor except by disengaging the latch lug from the wheel 38 by depressing the actuating thumb piece 40.

The operation of my improved filing device, it is believed, will be apparent from the foregoing description. To properly hold or confine the file contents under pressure so as to maintain the cards or elements flat and in contact face to face, it is only necessary to push the compressor toward the contents until the spring face plate is pressed against the contents with sufficient force to deflect the portions 20 of the face plate toward the main plate 14. The compressor will be held pressed against the file contents by engagement of the latch lug with the latch wheel, and thus retain the plate portions 20 deflected and under tension, which will react against the file contents to hold them compressed under spring pressure. In order to free the contents for access thereto for inspection, or addition or removal of elements, it is only necessary to depress the latch actuating piece and back the compressor away from the file contents.

By constructing the compressor as described, the resilient front or face plate 15 cooperates with the main or back plate in housing or concealing the compressor securing or adjusting means, and this construction provides a practical, readily operable compressor of simple and compact form and neat appearance.

I claim as my invention:

1. In a filing case of the type having spaced side walls with inwardly opening grooves on their inside faces and rack teeth on a horizontal wall of each groove, the combination therewith of a compressor partition disposed between said walls, movable forwardly and rearwardly and having front and back plates spaced apart to form a chamber between said plates, a shaft rotatably supported on said back plate and extending across said chamber into said grooves, a pinion fixed on each end of said shaft and in said grooves and meshing with said rack teeth, a ratchet wheel fixed on said shaft and disposed in said chamber, a latch plate mounted to slide vertically on said back plate, a spring bearing at one end on said back plate and at the other end thereof against said latch plate in a direction to yieldingly urge said latch plate upwardly, a tongue on said latch plate extending into position to engage said ratchet teeth, said back wall of said partition having a forwardly extending flange at the upper portion thereof forming a top wall of said partition and having an aperture therein, the upper end of said latch plate extending upwardly through and slidably guided in said aperture for vertical movement, said upper end when depressed moving said latch plate to move said tongue out of engagement with said ratchet wheel, and a pair of forwardly extending seat members secured to said back plate and to which said front plate is secured intermediate of the upper and lower ends thereof, said front plate being of resilient material with its upper and lower portions extending forwardly to engage and yieldingly press against filed articles in said case.

2. In a filing case of the type having spaced side walls with inwardly opening grooves on their inside faces and rack teeth on a horizontal wall of each groove, the combination therewith of a compressor partition disposed between said walls, movable forwardly and rearwardly and having front and back plates spaced apart to form a chamber therebetween, a shaft rotatably supported by said back plate and extending between said spaced side walls into said grooves, a pinion fixed on each end of said shaft in said grooves and meshing with said rack teeth, a ratchet wheel fixed on said shaft and having ratchet teeth, a latch plate having a projecting pawl bearing on said ratchet teeth at an angle to be cammed aside by rotation of said ratchet wheel in one direction and to engage said ratchet teeth and prevent reverse rotation of the ratchet wheel, said latch plate being mounted to slide up and down to carry said pawl into and out of engagement with said ratchet teeth, a guide bracket secured to said back plate and having forwardly extending portions which guide said latch plate in its movement, a spring resiliently urging said latch in a direction to engage said pawl with

the ratchet wheel teeth, said spring reacting against a portion of said guide plate and against said latch plate, said latch having an operating portion disposed exteriorly of said partition for manual manipulation, said pawl riding idly over said ratchet wheel teeth when said partition is moved forwardly and preventing reverse movement of said ratchet wheel and thereby preventing rearward movement of said partition until said latch is operated to remove said pawl from engagement with the ratchet wheel teeth, and seats secured to said back plate and on which said front plate is mounted.

3. A filing case according to claim 2, in which said latch plate comprises a flat strip slidingly mounted on said guide bracket and having a tongue projecting therefrom and extending somewhat tangentially of the ratchet wheel to engage with the teeth thereof, the upper end of said strip extending above said compressor for manual depression, and said spring urging said strip upwardly to carry said tongue into engagement with said ratchet wheel teeth.

4. A compressor according to claim 2, in which said latch plate has a downwardly extending tongue and in which said guide plate has a forwardly extending bifurcated lower end into which said tongue extends and which guides said latch plate in its up and down movement, said spring being a coil spring extending about said tongue bearing against said latch plate and against said lower end of said guide plate.

5. In a filing case of the type having spaced side walls with inwardly opening grooves on their inside faces and rack teeth on a horizontal wall of each groove, the combination therewith of a compressor partition disposed between said walls, movable forwardly and rearwardly and having front and back plates forming a chamber between them, a shaft rotatably supported by said back plate and extending across said chamber between said spaced side walls into said grooves, a pinion fixed on each end of said shaft in said grooves and meshing with said rack teeth, a

ratchet wheel fixed on said shaft in said chamber and having ratchet teeth, a latch plate having a projecting pawl bearing on said ratchet teeth at an angle to be cammed aside by rotation of said ratchet wheel in one direction and to engage said ratchet teeth and prevent reverse rotation of the ratchet wheel, and mounted to slide back and forth and carry said pawl into and out of engagement with ratchet teeth, a guide bracket mounted on said back plate and having forwardly extending flanges at opposite sides thereof, said flanges having recesses into which said shaft extends, and which flanges hold said shaft against endwise movement, said latch plate being arranged between said flanges and guided thereby in its movement, the lower end of said guide bracket having a forwardly extending flange having an open-ended slot therein, a tongue extending downwardly from the lower end of said latch plate and extending through said slot, a coil spring extending about said tongue and bearing at one end on said flange and at its other end on said latch plate and resiliently urging said latch plate in a direction to engage said pawl with the ratchet wheel teeth, said latch having an operating portion disposed exteriorly of said partition for manual manipulation.

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