No. 805,507. PATENTED NOV. 28, 1905.

G. F. WATT.

FILE BINDER FOR LOOSE SHEETS.

APPLICATION FILED FEB. 3, 1902.

2 SHEETS—SHEET 1.

Fig. 1.

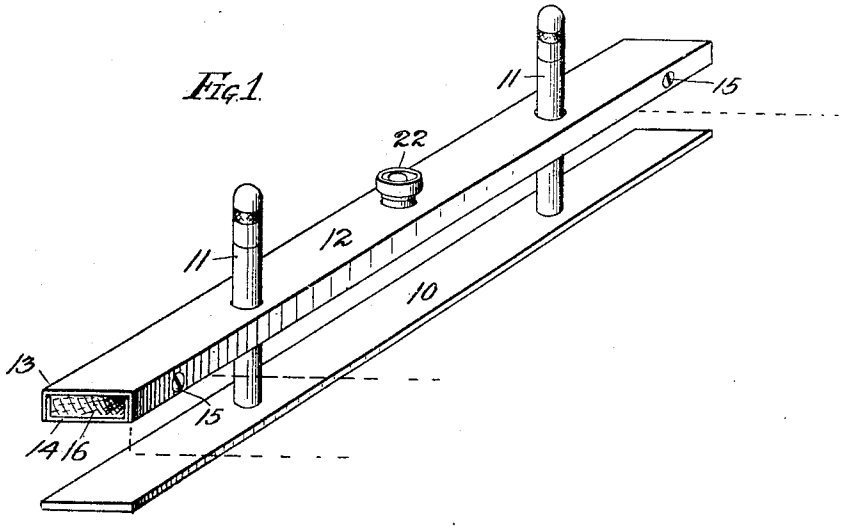


Fig. 2.

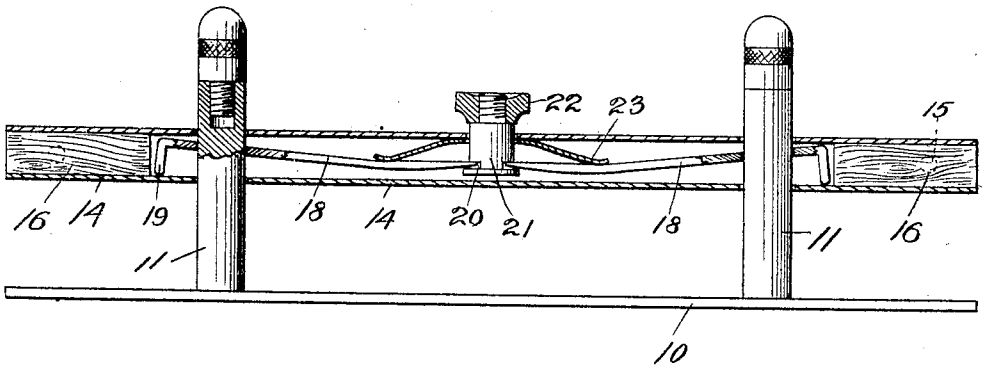
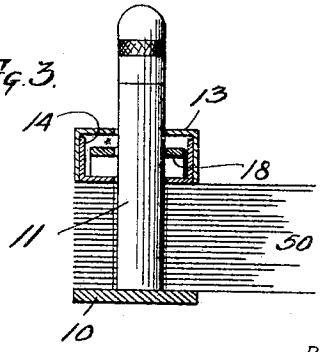


Fig. 3.



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2 SHEETS—SHEET 2.

FIG. 4.

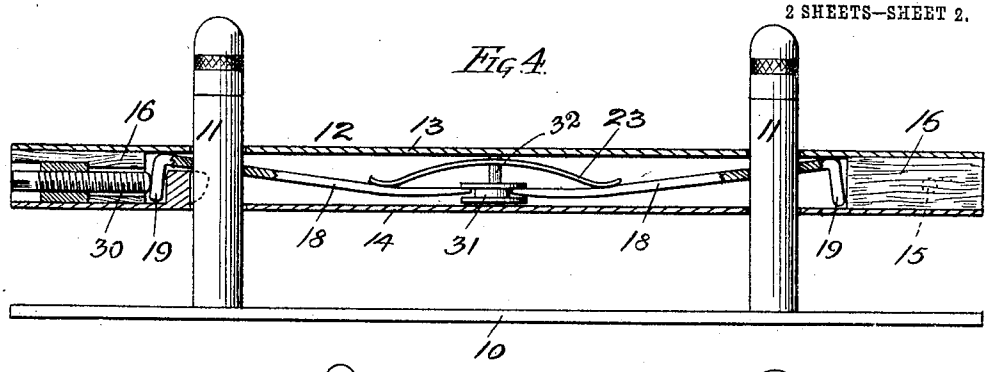


FIG. 5.

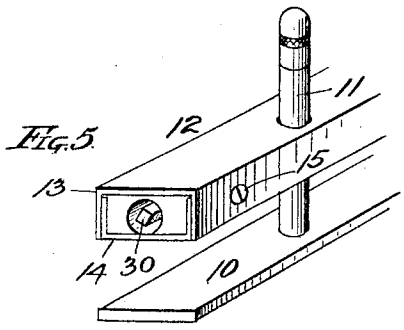


FIG. 6.

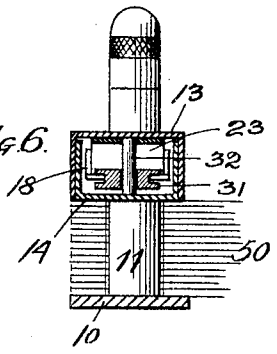


FIG. 7.

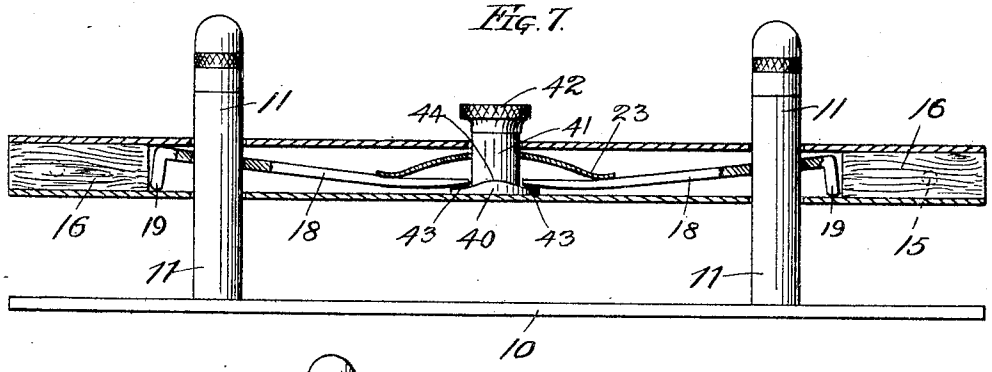


FIG. 8.

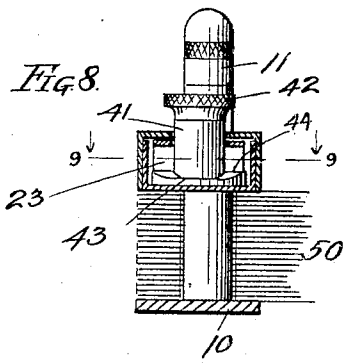
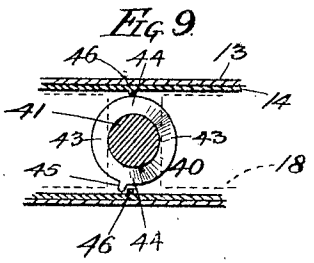


FIG. 9.



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GEORGE F. WATT, OF CHICAGO, ILLINOIS.

FILE-BINDER FOR LOOSE SHEETS.

No. 805,507. Specification of Letters Patent. Patented Nov. 28, 1905.

Application filed February 3, 1902. Serial No. 92,270.

To all whom it may concern:

Be it known that I, GEORGE F. WATT, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in File-Binders for Loose Sheets, of which the following is a specification.

This invention relates to that class of binders now in very general use in which loose papers are threaded on vertical posts and clamped between bars at top and bottom.

The object of the invention is to improve the method of frictionally holding the upper clamping-bar in its acting positions.

The invention is illustrated in its preferred and also in modified forms in the accompanying drawings, forming a part of this application, and in which—

Figure 1 is a perspective of the part of a binder embodying my invention. Fig. 2 is a vertical section of the parts shown in Fig. 1, taken longitudinally of the clamping-bar. Fig. 3 is a transverse section of the same. Fig. 4 is a view similar to Fig. 2 of a modified construction. Fig. 5 is a partial perspective of the construction shown at Fig. 4, and Fig. 6 is a transverse section thereof. Fig. 7 is a view similar to Figs. 2 and 4 of another modified construction. Fig. 8 is a transverse section of the same. Fig. 9 is a horizontal section on the line 9 9 of Fig. 8.

In said drawings, 10 represents the lower clamping-bar, 11 11 the binding-posts, projecting upwardly from the bar 10, and 12 the upper clamping-bar, having openings for the posts and carrying the locking devices engaging the posts. This bar is preferably made rectangular in cross-section and of sheet metal shaped into the form desired. In the construction illustrated it consists of two channel-strips 13 and 14, one entered in the other and secured together by screws 15. The ends may be filled by wood blocks 16, as shown, and in the space between the strips 13 and 14 are located my improved friction devices. These devices are two friction-creating levers 18, placed end to end and each having a vertical opening near its outer end, in which one of the posts is entered. Each lever extends from the post it encircles to the center of the clamping-bar, and outside the post its extremity is bent at right angles, as at 19, and rests on the bottom strip 14. This bent part maintains the outer end of the unbent portion of the lever near the top strip 13. Each lever inclines downward from its outer end toward its inner end, as plainly shown, and its inner end enters a resess 20 in the side of the stem 21 of a vertically-movable button 22. The stem 20 extends upward through the top strip 13, and the button is located above the strip, so as to be operable by hand. A flat spring 23, having a central opening for the stem, extends each way from the stem and bears upon the inner ends of the friction-levers, as seen in Fig. 2, and thus serves to retain the levers at such an inclination as enables them to bite upon or grip the posts and hold the clamping-bar in any adjusted position upon the posts. This grip may be instantly released by pulling up the button against the resistance of the spring 23, thus raising the levers to a horizontal position, and while the levers are held in this position the clamping-bar may be raised or lowered on the posts. The gripping action will be resumed whenever the user releases the button, so that spring 23 can again act.

In both the modifications shown I employ the same friction-levers having a slight rocking motion upon their outer ends and a spring for retaining them in action; but I employ different devices from those shown in the main figures for releasing the lock upon the posts. Thus in Figs. 4 to 6 I release the lock by means of a screw 30, inserted in one end of bar 12 and bearing against the foot of the downturned end 19 of one of the levers. The inner ends of the levers in this construction are supported in a groove upon a disk 31, loosely encircling a short post 32, and the spring 23 is mounted on this post 32. With this construction it will be seen that if the screw 30 is turned inward it will actuate the lever against which it bears and cause it to lift the disk 31, and said disk will raise the inner end of the other friction-lever, both levers thus moving together. A reëngagement of the posts will take place whenever the screw is turned outward, so as to allow the levers to return to their normal positions.

In the modification shown at Figs. 7 to 9 I show a rotatable releasing device consisting of a cam-disk 40, a stud 41, passing through the top plate 13 and supporting the disk, and a button 42, whereby the device may be turned. The disk has upon the opposite sides of its center depressed surfaces 43, upon which the inner ends of the friction-levers rest when they are in action, and raised surfaces 44 also at opposite sides of the center and between the depressed surfaces. A

quarter-rotation of this button will carry the raised surfaces under the friction-levers and lift them sufficiently to release their hold upon the posts, and a further quarter-turn or a back turn of the same extent will bring the depressed surfaces again under the levers and allow the latter to resume normal positions under the power of the spring 23, which in this case, as in the others, may be similarly positioned upon the stud 41. In this modification it is desirable, though not absolutely necessary, to provide means whereby the user may know when the button has been turned to the locking or the unlocking position, or both, and this may be done by providing a projection 45 on the disk and stops 46 upon the inside wall of the clamping-bar 12.

The invention is shown in Figs. 3, 6, and 8 as acting to clamp the leaves or papers 50.

The modification shown at Figs. 4 to 6 requires a key for the operation of the releasing-screw, which may sometimes be an advantage, as the contents cannot be so readily tampered with as they can in the other constructions.

I claim—

1. In a file-binder, the combination with the bottom bar, the posts and the clamping-bar movable upon the posts, of devices carried by the clamping-bar and frictionally engaging the posts, such devices consisting of levers encircling the posts and having bends 19 at their outer ends upon which those ends are supported, and having their inner ends supported by a device movable by hand and adapted to lift those ends, and a spring for depressing the inner ends, substantially as specified.

2. In a file-binder, the combination with the bottom bar, the posts secured to the bottom bar, and a clamping-bar movable vertically on the post, of friction devices carried by the clamping-bar for frictionally engaging the posts consisting of levers 18 encircling the posts and having their outer ends bent downward so as to form supports, and also having their inner ends connected so that both move together, substantially as specified.

3. In a file-binder, the combination with the bottom bar, the posts secured to the bottom bar, and a clamping-bar movable vertically on the posts, of friction devices carried by the clamping-bar for vertically engaging the posts consisting of levers 18 encircling the posts, and having their outer ends bent downward so as to form supports, a manually-operated device connected to the inner ends of both levers and serving as a means of raising them and a spring for depressing said inner ends.

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