A. H. SCHAFFERT.

FOLLOWER FOR FILING CABINET DRAWERS.

APPLICATION FILED APR. 23, 1914.

1,120,548. Patented Dec. 8, 1914.

FIG. 1

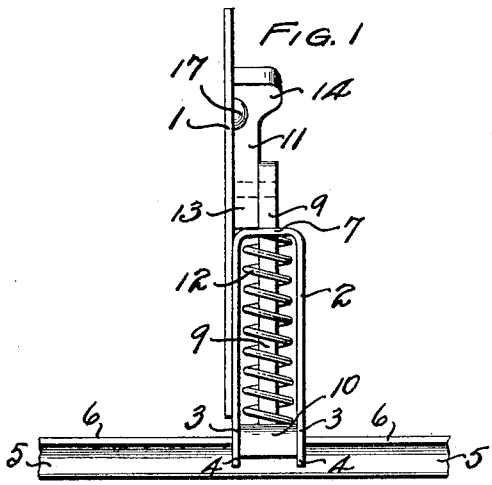


FIG. 2.

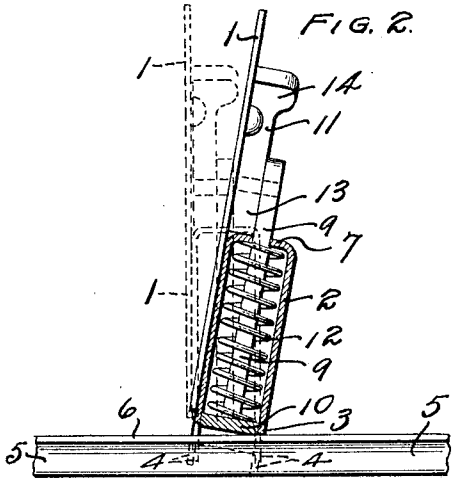


FIG. 3

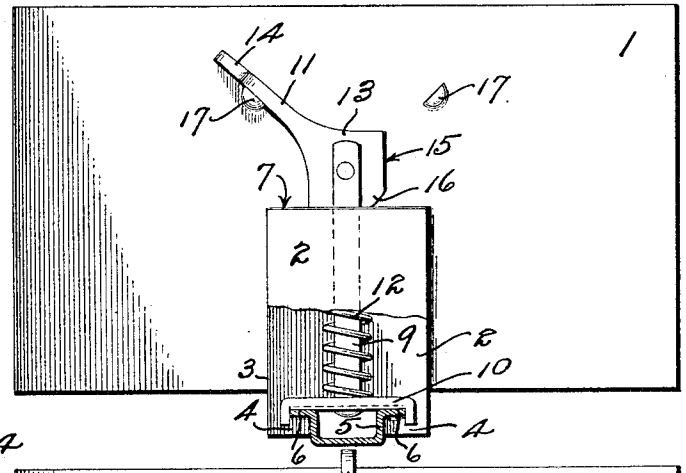
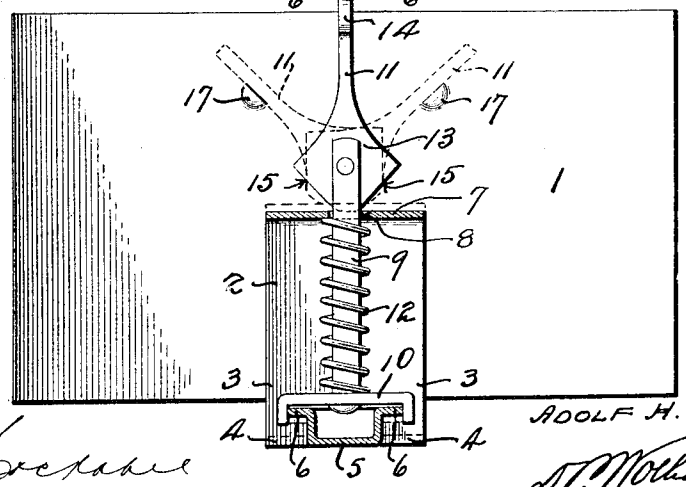


FIG. 4



Witnesses

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UNITED STATES PATENT OFFICE.

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FOLLOWER FOR FILING-CABINET DRAWERS.

1,120,548. Specification of Letters Patent. Patented Dec. 8, 1914.

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To all whom it may concern:

Be it known that I, ADOLF H. SCHAFFERT, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Followers for Filing-Cabinet Drawers, of which the following is a specification.

This invention relates to the subject of drawer followers, and has particular reference to a novel construction thereof that is of special utility in connection with card index or filing cabinet drawers. Many devices of this character have been devised and are now in common use, but after a short time cannot be easily operated because they do not stand up under ordinary service conditions. For instance, followers having compressors commonly known as cam compressors, have proven to be more or less unsatisfactory, because it has been found that in use the movable parts of the device readily become sprung to such an extent that the cam will not lock securely. With a view to remedying the defects of this type of compressor, a cam was used that bore directly on the guide rail. This idea was also found to be unserviceable because the cam, being in direct contact with the guide rail, marred or cut the latter when locked tight thereon, so that the follower could not move freely back and forth. This was especially true unless the guide rail and cam were of unusually tough or case hardened metal. That is, if the rod was of softer metal than the cam, the latter would soon make deep cuts in the rod which would hinder the shifting of the follower, or if the cam was made of softer metal than the rod, it would wear out in a short time and render the device of no practical value. Attempts to remedy this objection either by adopting tough metal for both rod and cam, or subjecting either or both to a special hardening operation proved to be much too expensive to continue. A further disadvantage of the cam type of follower was that it had no backward play to enable its successful application to all types of filing systems. Another type of follower that has been employed in practice is the well known spring compressor wherein a spring is carried by the body of the follower and has a free compressible end and a rail or rod engaging end. In other words, this arrangement includes the follower back as a part of the compressor so that in order to move the same along the rail, it is necessary to grasp both the follower back and free end of the spring and compress them together. This is very disadvantageous especially when the drawer is filled with files or cards. Under these circumstances, it is impossible to get a firm grip on the follower back. Another objection to this type of follower is that it is impossible to maintain the back portion thereof at right angles to the bottom of the drawer as is necessary in some filing systems.

The primary object of the present invention is to provide a novel construction of follower and follower clamping means which do not have the objections incident to many of the known types, particularly those above described. That is to say, the present invention contemplates a novel follower device that is normally held upright in the drawer in a perpendicular position, or at right angles to the guide rail, thus adapting the same to true vertical filing systems which prevail, particularly in the filing of cards, while at the same time there is sufficient play provided by the rail-engaging member to permit of backward tilting of the entire follower under hand pressure for the purpose of removing cards or papers, or in those systems where the file papers exert a pressure that would tend to tilt the follower.

Another object of the invention is to provide a simple and durable device of this character having but few and inexpensive parts, whose particular arrangement is such that they may be readily assembled to constitute a follower back that is easily and quickly locked to the guide rail, and also readily and easily released from engagement therewith so that it may be shifted longitudinally along the rail to accommodate the contents of the drawer.

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—

Figure 1 is a side elevation of the follower

device forming the subject matter of the present invention in normal locked engagement with the guide rail. Fig. 2 is a view similar to Fig. 1 partly in section showing the follower tilted rearwardly in full lines, and in its normal position in dotted lines. Fig. 3 is a rear elevation of the construction shown in Figs. 1 and 2 with a portion of the spring housing broken away to show the clamping shoe in engagement with the guide rail, to hold the follower in its normal locked position. Fig. 4 is a rear elevation partly in section showing the clamping shoe disengaged from the guide rail so that the entire follower may be shifted, and also showing in dotted lines the positions that the cam lever may assume to lock the follower in engagement with the guide rail.

In carrying out the present invention, the flexibility of the locking or clamping means permits the use of either hard or soft metal, thereby eliminating any special expense attaching to a special preparation of the metal to prevent the parts from wearing out quickly as they do in the cam type of follower previously described.

By special reference to the construction shown in the drawings, it will be observed that the follower device includes in its organization a follower back 1, one side of which is free from projections or like elements to furnish a flat bearing for files or cards, and preferably coextensive with the width and height of the drawer though its dimensions may be readily varied to suit all conditions. The said follower back 1 has secured to its rear side a substantially inverted U-shaped spring housing member 2 the arms or walls of which extend below the lower edge of the follower back, as at 3, and are cut away to form inturned retaining hooks 4 more clearly shown in Figs. 3 and 4 of the drawings. These retaining hooks 4 are formed by a substantially T-shaped slot being cut in the lower ends 3 of the housing walls, thus enabling them to loosely receive a channeled guide rail 5. The upper edges of the channeled portion of the guide rail 5 are turned outwardly to form holding flanges 6, which as best seen in Figs. 3 and 4, slidably interlock with the retaining hooks 4, that engage with the underside of the holding flanges 6.

The top end wall 7 of the spring housing 2 is provided with a centrally located guide opening 8 which slidably receives a plunger rod 9 having at its lower end a flanged clamping shoe 10, while its upper end is pivotally connected with a cam lever 11. A coil spring 12 surrounds the plunger rod 9 so that one end thereof bears against the clamping shoe 10 and its opposite end abuts against the underside of the end wall 7 of the spring housing 2. This arrangement of the spring 12 tends to exert a binding force upon the clamping shoe 10, so that the latter unless restrained by the cam lever 11 is always normally in contact with the upper faces of the holding flanges 6.

With special reference to the cam lever 11, it will be observed that the same is formed at its lower end with a cam head 13 and at its upper portion with a finger piece 14, while one face or side thereof has a bearing contact with the rear side of the follower back 1. The cam head 13 of the lever 11 is provided with a pair of flat locking faces 15 which are at substantially right angles to each other, and at their meeting points merge into the central cam-projection 16.

The above described construction of cam controls the locking and unlocking of the clamping portions of the follower with the guide rail so that the former may be freely shifted back and forth. That is to say, the particular arrangement of clamping elements as shown in the drawings is such that the holding flanges 6 are clamped or engaged on both their upper and lower faces, and in this connection it will be noted that owing to the spaced apart relation of the retaining hooks 4 and the width of the clamping shoe 10, that the follower back 1 will always be in a perpendicular plane with respect to the guide rail when the parts are in their clamping position.

Figs. 1 and 3 show the follower back in its normal clamped position. That is, when the spring 12 is exerting its clamping force upon the shoe 10 because the cam head 13 of the lever 11 has one of the flat locking faces 15 in contact with the end wall 7 of the spring housing 2. Thus, the spring 12 is pushing down on the clamping shoe 10 to bind the same on the top of the holding flanges 6 of the guide rail, and at the same time exerting an unrestrained upward pressure on the underside of the end wall 7 of the spring housing, thereby pushing the spring housing 2 upward and causing the retaining hooks 4 to grip or bind against the underside of the holding flanges 6.

Fig. 4 shows the follower device released from locking engagement with the guide rail, so that the same may be shifted thereon to accommodate the contents of the drawer. In other words, the spring 12 is shown under compression, being restrained from exerting its clamping force because of the vertical position of the clamping lever 11. When the said lever 11 is in the vertical position, the central rounded point or cam projection 16 of the cam head 13 is resting upon the upper face of the end wall 7 of the housing 2, thus lifting the clamping shoe 10 from binding engagement with the guide rail 5 so that a clearance is provided between the clamping face of the shoe 10 and the top of the holding flanges 6 as clearly shown in the drawings. Because of

the compression of the spring 12, and the clamping shoe 10 being withdrawn from the top of the holding flanges 6, the retaining hooks 4 become disengaged from the undersides of the holding flanges 6, thereby providing ample clearance to enable the follower back to be readily shifted from one position to another.

With further reference to the cam lever 11, it will be observed from the foregoing that when in its vertical position as shown in full lines in Fig. 4, all of the clamping parts of the follower are released from engagement with the guide rail, and in order to bring the said clamping parts into locking engagement with the rail as shown in Fig. 3, the said lever 11 may be shifted to either one side or the other by merely a gentle pressure of the thumb or finger in either direction as shown by dotted lines in Fig. 4. The rear face of the follower back 1 may be provided with stop lugs 17 to engage with the shank of the cam lever when it is in either one of its locked positions and prevent the same from being pushed further than necessary to effect the locking of parts.

As pointed out in the preface of the specification, the flexibility of the clamping parts is one of the important features of the present invention, because this flexibility permits of a rearward tilting of the follower back while the clamping shoe 10 and retaining hooks 4 are in clamped engagement with the holding flanges 6 of the guide rail. This feature is fully illustrated in Figs. 1 and 2, and in the latter figure particularly, wherein the lower edge of the rear wall of the spring housing 2 acts as a fulcrum upon which the entire follower back may tilt under a tilting pressure. Fig. 1 shows the normal position of the follower back. That is, under tension of the spring 12 and the flat engagement of the clamping shoe 10 with the upper faces of the flanges of the guide rail, the follower back is held perpendicular or at right angles to the rail, thus adapting the same to true vertical filing systems which are used, especially in the filing of cards. However, at the same time, it will be noted that there is sufficient play permitted between the flanges 6 of the rail and the retaining hooks 4 at the bottom corners of the spring housing or casing to permit of backward tilting of the entire follower under hand pressure for the purpose of removing cards or papers, or in those systems where the file papers exert a pressure that would tend to tilt the follower.

From the foregoing description, it is believed that the many features and advantages of the invention will be readily apparent, and that the same provides many novel and distinctive features which enable its application to various filing systems.

I claim:

1. A drawer follower including in combination with a guide member, a follower back shiftable along said guide member and having means for normally holding the same perpendicular in engagement therewith, said means being yieldable to permit the follower back to tilt rearwardly while locked to the guide member.

2. A drawer follower including a flanged guide rail, a follower back shiftable thereon, spring pressed plunger clamping means carried by the follower back for engaging said guide rail to hold the same in position, the plunger movement of said clamping means being operable in a plane parallel to the follower back, and means for actuating said clamping means.

3. A drawer follower including a flanged guide rail, a follower back shiftable on said rail, spring actuated means for holding the follower back in any position on said guide rail, and a separate locking device for holding said spring actuated means either engaged or disengaged.

4. A drawer follower including a channeled guide rail having oppositely disposed flanges, a follower back, means carried by said follower back for engaging the underside of said flanges, and means for engaging the top of said flanges including a spring pressed clamping shoe and a cam lever for actuating said shoe.

5. A drawer follower including a channeled guide rail having oppositely disposed flanges, a follower back, means carried by said follower back for engaging the underside of the rail flanges, and spring pressed cam-actuated means for engaging the opposite sides of the rail flanges.

6. A drawer follower including a channeled guide rail having oppositely disposed flanges, a follower back having an abutment and means for engaging the underside of said rail flanges, a clamping shoe having a spring arranged between itself and said abutment on the follower back, and a cam lever pivotally connected with the clamping shoe and having a bearing on said abutment.

7. A drawer follower including a channeled guide rail, a follower back, a spring housing carried by said follower back and provided with rail engaging means, a clamping shoe carried by said spring housing, and shiftable means including a spring for causing the clamping shoe to engage with the guide rail and draw the rail engaging means of the spring housing into engagement with the guide rail.

8. A drawer follower including a channeled guide rail having oppositely disposed flanges, a follower back having an abutment and also having means for engaging the underside of the rail flanges, spring pressed clamping means also carried by the

follower back for engaging the top side of the rail flanges, and a cam lever pivotally connected to said spring pressed clamping means and having a bearing at its cam end on said abutment, said cam lever when in a vertical position lifting the said clamping means to release the entire follower from engagement with the rail, and when shifted to either side of the vertical adapted to lock the follower to the rail.

9. A drawer follower including a channeled guide rail having oppositely disposed flanges, a follower back shiftable on said guide rail, a spring housing having opposite side walls and a connecting end wall, retaining hooks formed at the lower ends of said side walls and adapted to engage with the underside of the flanges of the guide rail, a clamping shoe having a guide rod projecting through the end wall of the spring housing, a spring surrounding said guide rod and having its ends bearing beneath the end wall of the housing and clamping shoe respectively to clamp the latter against the upper faces of the guide flanges, and a shiftable cam lever pivotally connected to said guide rod and bearing against the upper face of the end wall of the casing.

10. A drawer follower including a guide rail, a follower back shiftable thereon, plunger clamping means carried by the follower back and including a member engaging one side of the guide rail, and another member engaging the opposite side of the guide rail, a spring element common to both of said members and arranged to place one under compression and the other under tension, said clamping means being adapted to yield when rearward pressure is applied to the follower back to permit the same to tilt.

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

ADOLF H. SCHAFFERT.

Witnesses:
H. E. WHITE,
O. D. KAISER.

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