A. S. WILLSON.

SASH HOLDER.

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945,431.

Patented Jan. 4, 1910.

Fig. 1.

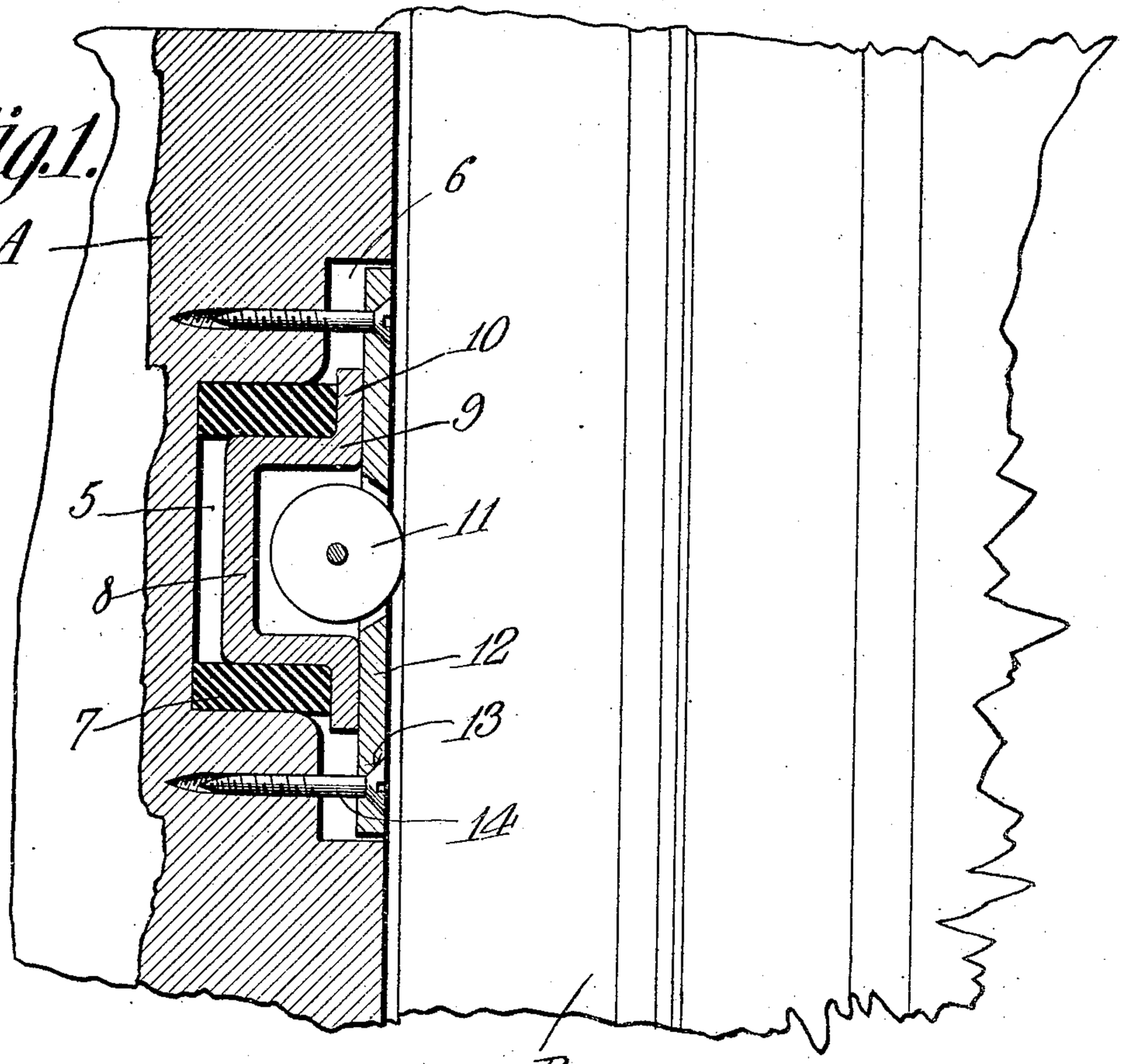


Fig. 2.

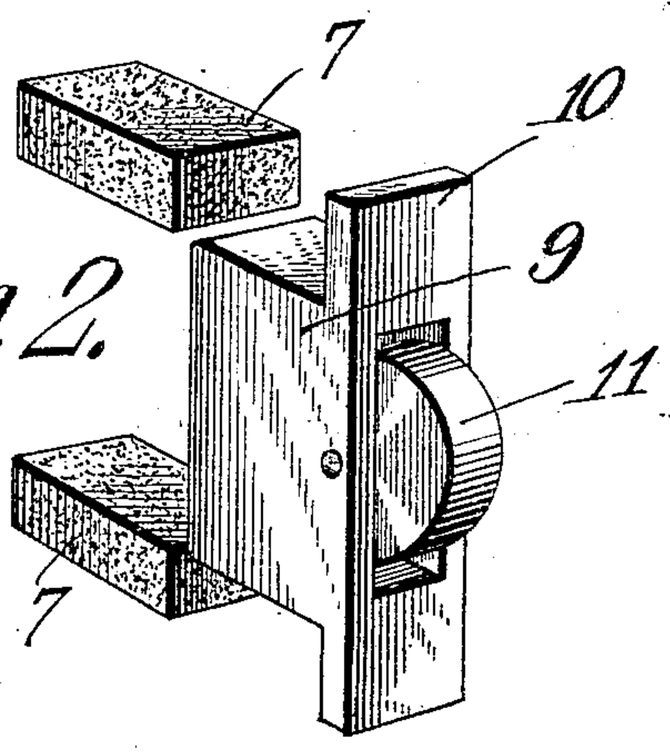
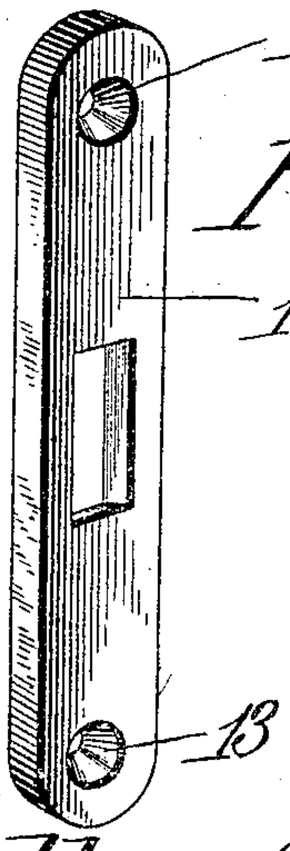


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

ARTHUR S. WILLSON, OF BARTON, VERMONT.

SASH-HOLDER.

945,431. Specification of Letters Patent. Patented Jan. 4, 1910.

Application filed April 1, 1909. Serial No. 487,158.

To all whom it may concern:

Be it known that I, ARTHUR S. WILLSON, a citizen of the United States, residing at Barton, in the county of Orleans and State of Vermont, have invented a new and useful Sash-Holder, of which the following is a specification.

It is the object of the present invention to provide an improved construction of sash holder or balance and one possessing advantages over those now in use in the omission of springs. Metallic springs employed in devices of this class are undesirable inasmuch as they soon become broken or weakened to such degree as to be useless and the present invention therefore contemplates the provision of means for securing the same results as are secured through the employment of metallic springs, and which will not be liable to become worn or weakened through use, and may be properly adjusted at any time merely by the use of a screwdriver.

In the accompanying drawings, Figure 1 is a vertical sectional view showing a sash holder or balance constructed in accordance with the present invention. Fig. 2 is a detail perspective view of the sash holder bearing member, and Fig. 3 is a view similar to Fig. 2 illustrating clearly the construction of one of the devices.

In the drawings, there is shown a window sash, indicated by the reference character A, and one stile of the window frame in which the sash is mounted, the said stile being indicated by the reference character B. As shown in the drawings, the stile B of the window frame is bored to form a recess or socket 5 which is enlarged at its open end as at 6 and disposed within the recess 5 at each end thereof is a cushion block 7 which may be of soft rubber or any other suitable material possessing similar properties or in other words any material which will yield to the proper degree and will resume its normal shape when relieved of pressure such as would cause it to yield and the said blocks are of a width to extend entirely across the said recess 5 at each end thereof and receive between them the socket portion 8 of a bearing 9 the bearing being formed at each end with a lug 10 and having journaled in its socket portion 8 a roller 11 which may be of any suitable size and of any suitable material although preferably of metal.

The socket portion 8 of the bearing is, as heretofore stated, received or confined between the two cushion blocks 7 and these blocks are of such length as to project at their outer ends beyond the shoulders formed at the ends of the recess by enlarging the same. Against the said outer ends of the blocks 7, the lugs 10 constantly bear and against the outer faces of these lugs and the outer edges of the socket portion 8 of the bearing is disposed a face plate 12 which plate is of substantially the same dimensions as the enlarged portion 6 of the recess or mortise. The face plate 12 just described is however of a thickness less than the depth of the enlarged portion 6 of the recess in the stile of the window frame and consequently upon yield of the cushion blocks 7, they have slight movement into the said enlarged portion of the recess, it being however at all times received at least flush within the same so as not to come in contact with the edge of the window sash A. Furthermore, the face plate 12 is formed with openings 13 and through these openings are engaged screws 14 which serve not only to hold the face plate in position snugly against the lugs and edges of the bearing 9 but also serve as a means whereby the face plate may be adjusted to compress to a greater or less degree the cushion blocks 7, and thereby render the same more or less yieldable as may be desired. In other words, when the face plate 12 is adjusted inwardly so as to bring considerable pressure to bear upon the blocks 7, they cannot of course be compressed to any great degree by the frictional engagement of the stile of the window sash with the roller 11 while on the other hand should the screws 14 be loosened so as to cause the plates 12 to exert less pressure against the blocks 7 or rather in a direction to compress the blocks, the roller 11 together with its bearing may be forced inwardly to a greater degree than in the first instance, due to the frictional contact of the stile of the window sash therewith.

One of the advantages of the device heretofore described and as shown in the drawings and embodying the present invention resides in the fact that the cushion blocks 7 may be readily removed at any time and replaced should they become useless from age although it will at the same time be appreciated that the blocks will maintain their yieldable and elastic properties for a con-

siderable length of time and certainly for a much longer time than would metallic springs employed under the same conditions. Furthermore, the provision of seats, sockets, housings, etc. for inclosing such spring is entirely obviated by the employment of the specific form of cushioning elements herein shown and described.

It will further be understood that not only is the socket bearing 9 supported in such manner as to permit of its yield in a direction inwardly from that face of the stile of the frame which is presented toward the sash but that owing to the fact that the socket portion of the bearing is confined between the cushion or elastic blocks 7, there may be also a slight yield upwardly or downwardly depending upon whether the window is being raised or lowered. This yield is of course very slight but nevertheless it is believed that there are advantages to be secured by so arranging the bearing of the device and that under actual working conditions there would be a slight yield of the bearing in an up or down direction with respect to the face plate inasmuch as it is not rigidly secured to the same but merely bears against the same.

What is claimed is:—

In a device of the class described, the combination with a frame piece formed with a mortise, a base-plate formed with a slot, and adjustable in said mortise, means for so adjusting the base-plate, a bearing disposed against the base-plate, a roller mounted in the bearing and projecting through the slot in the base-plate, the said bearing being formed at opposite ends with oppositely extending lugs, and cushion members bearing against said lugs and holding said bearing yieldably against the base-plate.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ARTHUR S. WILLSON.

Witnesses:

M. C. Heath,

J. L. Twombly.