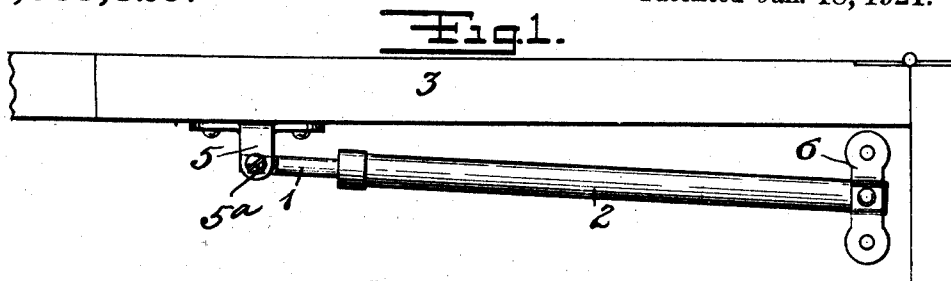
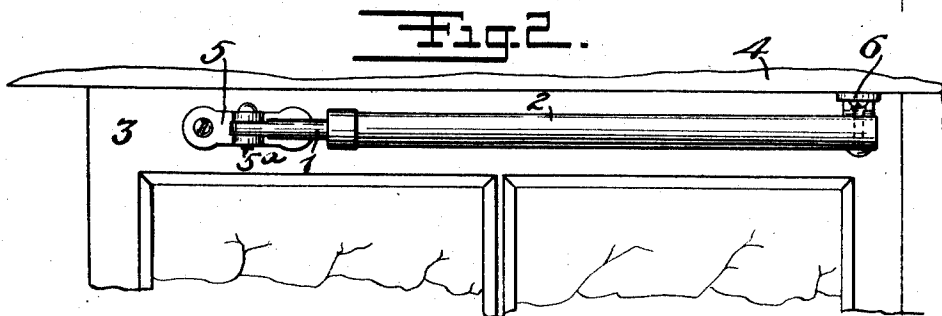
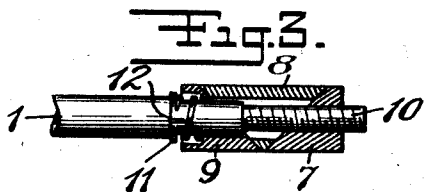
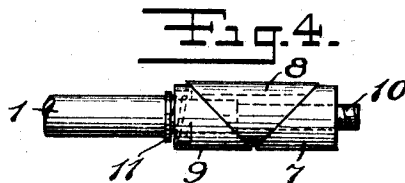
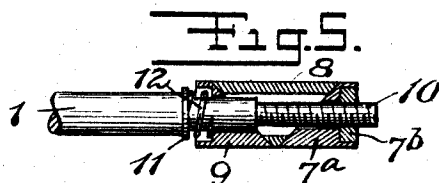
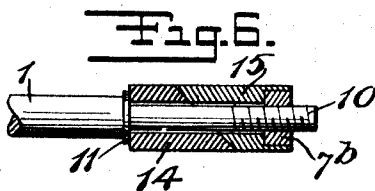
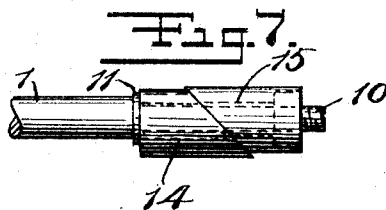


N. B. HURD.
 ADJUSTABLE TELESCOPIC CONNECTION FOR DOOR HOLDERS AND THE LIKE.
 APPLICATION FILED MAR. 24, 1920.

1,365,829.

Patented Jan. 18, 1921.



Norman B. Hurd, Inventor,
 By his Attorneys
 Mitchell Tully.

UNITED STATES PATENT OFFICE.

NORMAN B. HURD, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE AMERICAN HARDWARE CORPORATION, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ADJUSTABLE TELESCOPIC CONNECTION FOR DOOR-HOLDERS AND THE LIKE.

1,365,829.

Specification of Letters Patent.

Patented Jan. 18, 1921.

Application filed March 24, 1920. Serial No. 368,269.

To all whom it may concern:

Be it known that I, NORMAN B. HURD, a citizen of the United States of America, residing at New Britain, Connecticut, have invented a new and useful Adjustable Telescopic Connection for Door-Holders and the like, of which the following is a specification.

My invention relates to an improvement in telescopic extensible members which is particularly useful in such constructions known as casement window holders or adjusters, the purpose of the device in such a connection being to frictionally hold a casement window in whatever position it may be placed, that is to say, either closed, fully opened or partially opened. By my improvement different degrees of frictional resistance to the sliding movement of the telescopic members may be secured without the use of any special tool as will hereinafter be plainly seen.

In the drawings:

Figure 1 is a plan view of the top of a casement window with my invention applied thereto.

Fig. 2 is a front elevation of the same.

Fig. 3 is a longitudinal section of certain details.

Fig. 4 is a side elevation of the same details.

Fig. 5 is a sectional view of a slight modification.

Figs. 6 and 7 are respectively a sectional view and a side elevation of another modification.

1, 2 are telescopic members. The part 1 is in the form of a rod, while the part 2 is in the form of a tube within which the rod 1 slides. These parts may be respectively connected to a hinged casement window 3 and the overhead part of the casing 4 by means of suitable brackets 5—6. Obviously, if a frictional resistance is introduced to retard the freedom of telescopic movement, it follows that the window 3 will be prevented from freely swinging and will be held in the closed position or at any angle to which it is opened. I have invented what I believe to be a novel means for providing the afore-said frictional resistance and for permitting said means to be adjusted so as to afford varying degrees of resistance.

In the drawings, it will be seen that the rod 1 is provided with a friction head which

slides with friction resistance in the tubular member 2. In the form shown in Figs. 3 and 4, this friction head comprises three tubular members 7, 8 and 9. These three members are mounted on the inner end of the rod 1 preferably in the manner shown in the sectional view, Fig. 3, in which it appears that the end of the rod is turned down and provided with a screw thread 10. The member 7 is provided with a thread to correspond with the threaded part 10. The member 8 is provided with a central bore somewhat larger than that part of the rod passing through the same. The member 9 is located on the rod so as to bear against the member 8 on the opposite end from the member 7. 11 is an abutment. 12 is a spring located between the abutment and the member 9. As shown, the adjacent ends of the three tubular members 7, 8 and 9, are beveled, so that if the members 7 and 9 are moved toward each other, the member 8 will be pressed laterally by the wedging action of the members 7 and 9 against the beveled ends of the part 8. When the parts are assembled, as shown in Figs. 1 and 2, the desired degree of frictional resistance to a telescopic sliding movement may be secured by removing screw 5^a and simply turning the rod 1 in the tube 2 or vice versa. This turning movement causes the screw 10 to turn in the part 7 so as to move it in the desired direction. Assuming it is desired to increase the friction, the rod 1 is turned in a direction to draw the part 7 toward the part 9. This forces the part 8 laterally relatively to the parts 7 and 9, and hence the said friction head is relatively expanded so as to fit more snugly in the tube section 2 and thereby offer an added degree of friction to sliding movement. By this very simple expedient and without the use of any special tools, the desired degree of friction may be secured. The spring 12 serves to put a slight degree of tension between the interengaging threads so as to check any tendency of the part 7 to become accidentally unscrewed by jarring. This spring also compensates for wear and for expansion and contraction of the friction head. In Figs. 3 and 4, I have shown the part 7 as internally threaded so as to turn on the threaded end 10 of the rod. If this member 7 should be made of relatively soft metal, which for the purposes of

friction may be preferable in some cases, it may be desirable to provide a bushing of hard metal to receive the thread. To that end I have shown in Fig. 5 a modification in which the part 7^a corresponds to the part 7 shown in the other views excepting that it is provided with a hard metal bushing 7^b, which latter is threaded.

In Fig. 6 I have shown the friction head as being made of two tubular pieces 14, 15, instead of three pieces. It will also be seen that in this instance I have provided the piece 15 with the hard metal insert 7^b, which latter is threaded to turn on the thread 10, as in Fig. 5. When the rod 1 is turned, the parts will be acted upon as in the previous case, that is to say, if the rod 1 is turned in the direction to draw the part 15 toward the abutment 11, it will tend to force the other part 14 laterally, as shown in Fig. 7, thereby more tightly fitting in the complementary tubular member so as to produce the desired degree of resistance to sliding movement. The several pieces of the friction head in all cases may be made of any desired material best adapted to withstand wear due to friction. But I do not intend to limit myself to the selection of any particular material or metal, although obviously, some materials and some metals are preferable to others, the particular selection being left to the skill of the mechanic.

What I claim is:

1. A pair of telescopic members, a friction head carried by the internal member and slidably fitting within the external member, means for expanding said friction head controllable by rotating one of said telescopic members relatively to the other.
2. A pair of telescopic members, a friction head carried by the internal member and slidably fitting within the external member, means for expanding said friction head controllable by rotating one of said telescopic members relatively to the other, said friction head comprising a plurality of pieces mounted on the inner end of the internal member, the adjacent ends of said pieces being beveled to move said pieces in opposite directions laterally when the same are drawn toward each other.
3. A pair of telescopic members, a friction head carried by the internal member and slidably fitting within the external member, means for expanding said friction head controllable by rotating one of said telescopic members relatively to the other, said friction head comprising a plurality of pieces mounted on the inner end of the internal member, the adjacent ends of said pieces being beveled to move said pieces in opposite directions laterally when the same are drawn toward each other, one of said

pieces being held against longitudinal movement by an abutment on the internal member and a spring located between said abutment and piece, the other piece being threaded on the rod whereby it may move longitudinally thereon when the rod is turned therein.

4. A pair of telescopic members, a friction head carried by the internal member and slidably fitting within the external member, means for expanding said friction head controllable by rotating one of said telescopic members relatively to the other, said friction head comprising a plurality of pieces mounted on the inner end of the internal member, the adjacent ends of said pieces being beveled to move said pieces in opposite directions laterally when the same are drawn toward each other, one of said pieces being held against longitudinal movement by an abutment on the internal member and a spring located between said abutment and piece, the other piece being threaded on the rod whereby it may move longitudinally thereon when the rod is turned therein.

5. In a telescopic connection, two members, one slidable within the other, a screw thread on the inner end of the internal member, an abutment on the internal member near said screw thread, a friction head comprising a plurality of pieces mounted on the inner end of said internal member, one of said pieces being held by a spring bearing against said abutment, the other piece being provided with a threaded portion to turn on the screw thread, the adjacent ends of said pieces being shaped so that when the same are drawn toward each other the said head will be expanded laterally to more tightly bind within the outside tubular member.

6. In a telescopic connection, two members, one slidable within the other, a screw thread on the inner end of the internal member, an abutment on the internal member near said screw thread, a friction head comprising a plurality of pieces mounted on the inner end of said internal member, one of said pieces being held by a spring located between said abutment and piece, the other piece being provided with a threaded portion to turn on the screw thread, the adjacent ends of said pieces being shaped so that when the same are drawn toward each other, the said head will be expanded laterally to more tightly bind within the outside tubular member, the threaded member including a hard metal bushing, the threaded portion of said member being formed in said bushing.

NORMAN B. HURD.