Dorman & Stearns,

Shutter Worker.

No. 21,638. Patented Sep. 28, 1858.

Fig. 1.

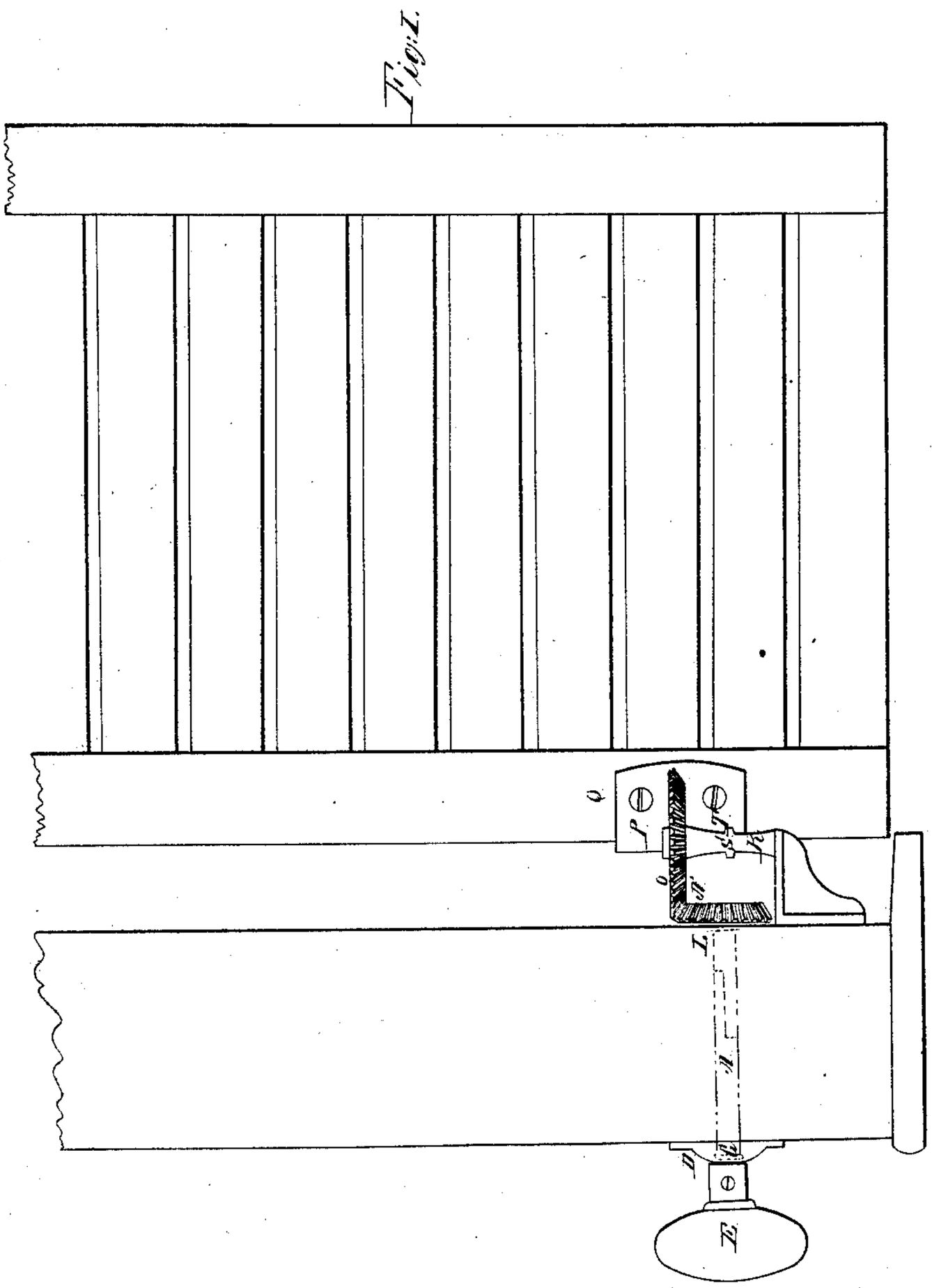
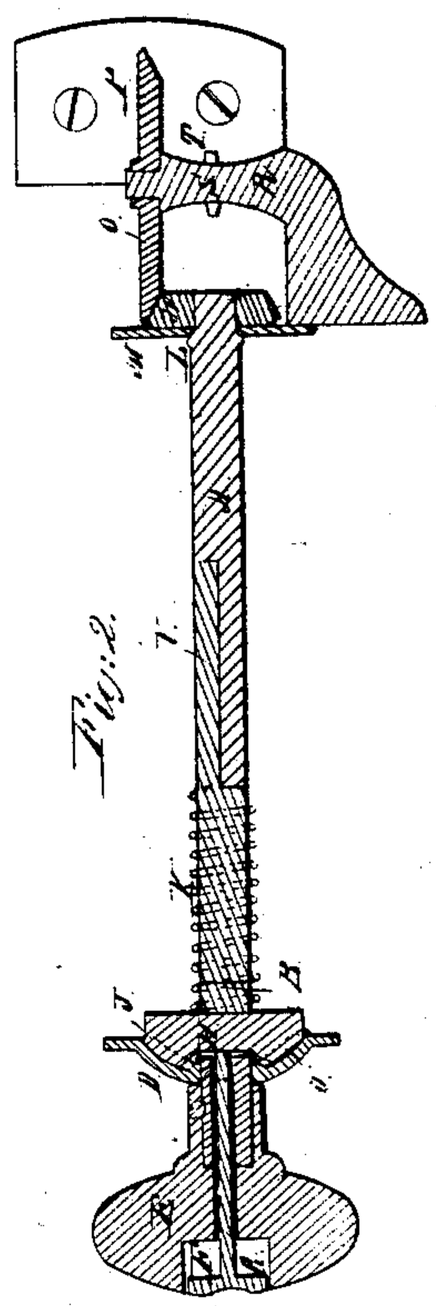
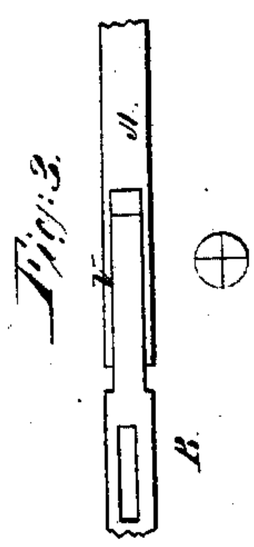


Fig. 2.





UNITED STATES PATENT OFFICE.

JAS. A. DORMAN AND JOS. E. STEARNS, OF WORCESTER, MASSACHUSETTS, ASSIGNORS TO SAID JAS. A. DORMAN.

BLIND-OPERATOR.

Specification of Letters Patent No. 21,638, dated September 28, 1858.

To all whom it may concern:

Be it known that we, JAMES A. DORMAN, and JOSEPH E. STEARNS, of the city and county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Inside-Blind Operators, Used for the Purpose of Turning and Fastening Window-Blinds from the Inside of the Window; and we hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, due reference being had to the accompanying drawings by the letters marked thereon.

In which drawings Figure 1 represents the improved operator applied to a blind and window frame. Fig. 2 shows a vertical section of it taken through the center of knob shaft and wheels. Fig. 3 represents the coupling with a cross section of same.

To construct our improvement in blind-operators make the shaft A with an oblong slot B through its center near one end and a hole in its center extending from the same end to the oblong slot, around the shaft at the outer end of the slot make a ring or projection C for the purpose of preventing the shaft from being pulled through the catch-plate D while the knob E fastened on the end of the shaft will prevent it from being pushed in; this knob has a recess F, made in its center to receive the head of rod G the recess being made deep enough to allow the head to be pushed in more or less. In the oblong slot B fit a piece of metal H so as to slide freely and for the purpose of moving this sliding piece H the rod G is to be put through the hole in the shaft and have its inner end fastened to H. The catch plate D is fastened to the inside of the window frame I and has on its inner surface recesses or notches J to receive the ends or edges of the slide-piece H when it is pressed up against it by the spring K. Near the outer end of the shaft there is a ring or projection L to prevent the shaft from being pushed out through the plate M which is fastened on the outside of the window frame while the bevel gear N prevents it from being pulled in.

O is a segment of bevel gear cast with or secured to the double flanged piece P which holds the blind Q the bevel gear or segment O gears into and is turned by the bevel gear N and turns on the stud R which is fastened to the outside of the window frame. Upon this stud at S is formed a projection which fits into a recess T in the corner of the double flanged piece P. The object of this projection is to prevent the blind from being thrown up and out of gear, and to allow of the blinds being taken off when wide open, that part of the projection that would then be in the recess of is left off, so that the projection does not continue clear around the stud.

As window frames are made of various depths from the inside to the outside, and also to allow for the shrinking of the wood work, and expansion and contraction of the metal which would cause the shaft to bind at its bearings so that it could not be turned the shaft A is made in two parts and joined by a slide coupling at V which is made by cutting out the two opposite quarter segments of the inner ends of the two parts of the shaft (as seen at Fig. 3) any distance or from the ends that may be thought best. As the two ends are made alike the quarter segments left on one end will fit into the vacancies caused by cutting them out on the other end. This forms a sliding coupling that will allow of a variation in the distance between the bearings of the shaft from any cause without interrupting its connection.

To operate our improvement, after it has been attached to the window-frame, grasp the knob E with the hand at the same time press the head of the rod G in with the thumb this will push the slide piece H out of the recess in the catch-plate D and the shaft will be free to turn in either direction at the same time it will move the blind in an opposite direction by means of the bevel gears. To fasten the blind remove the thumb from the head of the rod G and the spring K will press the piece H into the recesses of the catch-plate D which recesses are so arranged as to hold the blind at any desired place.

We do not claim an inside blind-operator as such but

What we claim as our invention and desire to secure by Letters Patent is—

1. The combination of the rod G, slide piece H, and spring K with the catch plate D and knob E when constructed and operating substantially as described.

2. The manner of holding the blind down in place by combining with the stud R the projection S, fitting into the recess T as herein specified.

JAS. A. DORMAN.
JOS. E. STEARNS.

Witnesses:
CHAS. W. RICE,
J. C. LAWRENCE.