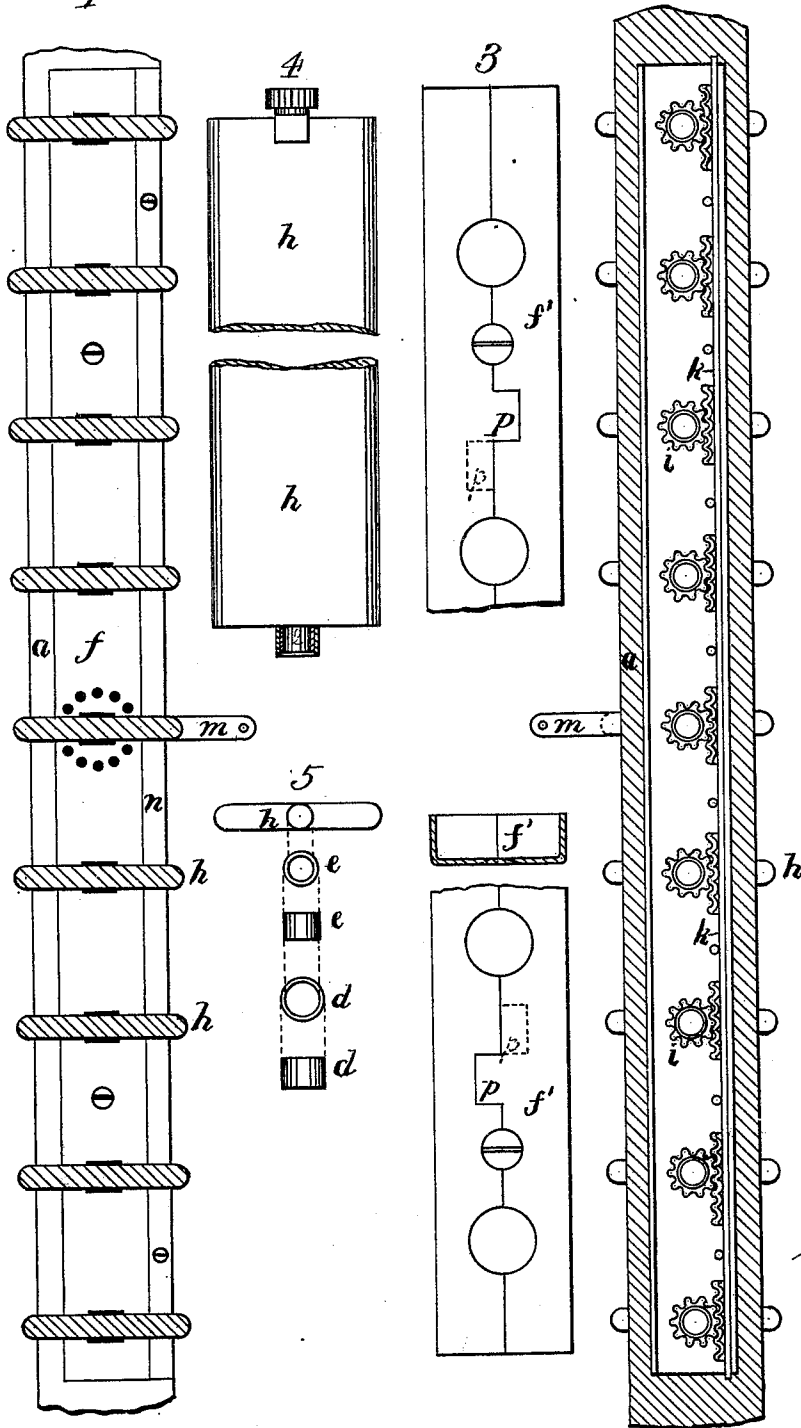


J. W. BLISS.
WINDOW-BLIND.

No. 175,236.

Patented March 28, 1876.



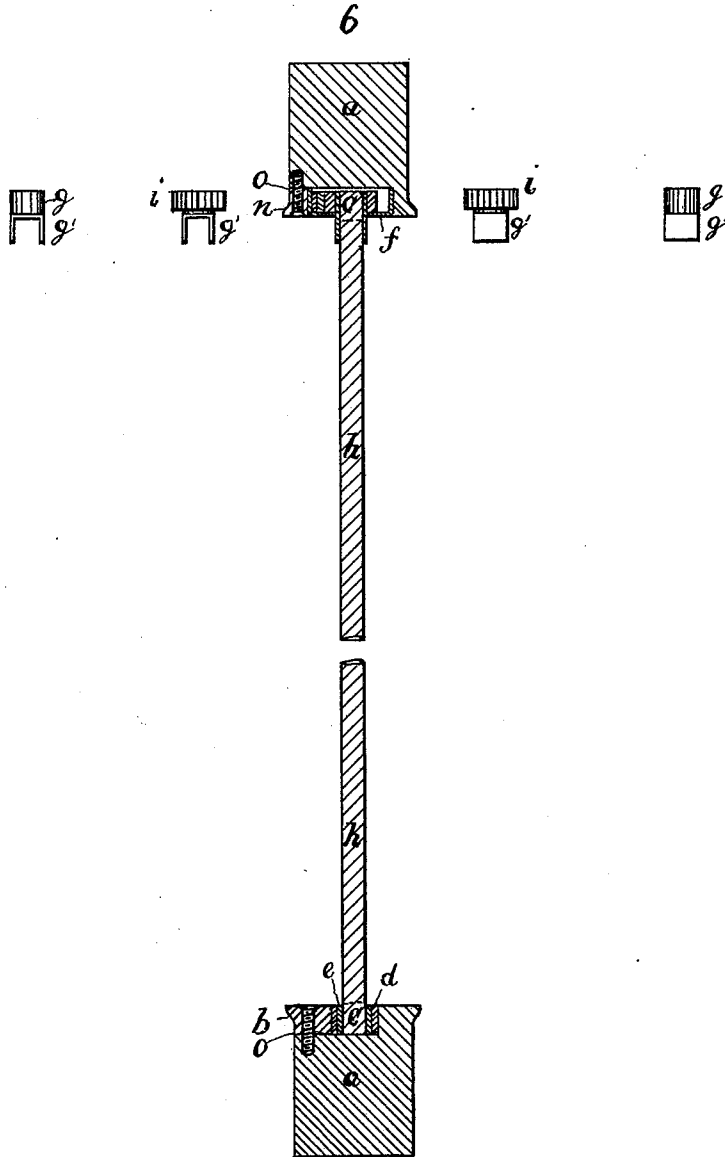
Witnesses
Charles F. Angell
Edmund B. Wilcox.

Inventor
Jeremy W. Bliss.

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Edward B. Wilder.

Inventor

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UNITED STATES PATENT OFFICE.

JEREMY W. BLISS, OF HARTFORD, CONN., (ROSETTA BLISS, EXECUTRIX.)

IMPROVEMENT IN WINDOW-BLINDS.

Specification forming part of Letters Patent No. **175,236**, dated March 28, 1876; application filed February 28, 1876.

To all whom it may concern:

Be it known that I, JEREMY W. BLISS, of the city and county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Window-Blinds and Device for Operating their Slats; and to enable others skilled in the art to make and use the same I will proceed to describe, referring to the drawings, in which the same letters indicate like parts in each of the figures.

The nature of this invention will be understood from the specification and drawings.

Figures 1 and 2 show the inner edge of a blind-stile, having a removable slat holding and operating case and removable slat-holding stop, secured in rabbets formed therein, so that the slats may be readily removed from the frame when desired. Fig. 3 shows a portion of a case made in two parts, for the purpose of allowing the gears to be secured upon the ferrule before they are arranged in the case. Fig. 4 shows a slat broken near its center, having a flanged ferrule and toothed gear fixed upon one of its tenons, and a ferrule fixed upon the tenon of the other end. Fig. 5 shows an end view of a slat and its tenon, and a side and end view of a bushing arranged in the stop, and in which the slat rotates. Fig. 6 shows a cross-section through one of the slats, with side and edge views of the flange-ferrule, with and without gear thereon.

a is a blind-frame stile. *b* is a removable stop, fitted and secured in a rabbet formed in the edge of the stile. In the face of this stop orifices or bearings are made for the slat-tenons. These orifices or bearings are made to receive the slat-tenons, with or without bushings *d*, and the tenons *c* are made to use with or without the ferrule *e*.

The object of these bushings and ferrules is to secure a free and uniform action of the slats, unaffected by the weather. *f* is a case, in which are formed bearings to receive the round portion of the bearing of the flange-ferrule *g g'*. The gear *i* is secured upon the end of the ferrule *g* by soldering. The flanged portion *g'* of this ferrule is placed

astride of the body of the slat *h*, and holds it from turning, except as it turns with the slat. *i* is a gear secured upon the end of the ferrule *g*. *k* is a ratchet-rod, which connects and plays in the gear *i*, and rotates simultaneously all the slats by means of a lever, *m*, secured to one of the ferrules *g*, between the case *f* and the end of the slat *h*. This case is secured in the rabbet of the stile by screws and stopper *n*.

By the use of these rabbets *o* the blind-frames can be made and finished before the slats are placed therein, and the slats can be readily removed at any time when desired, and transparencies, wire-gauze, fancy-figured net-work, scroll-work, or other desirable filling may be inserted and removed at pleasure.

The case *f'* is made in two parts, having prongs *p* fitting into recesses alternately over and under each other, which serve to keep the two surfaces flush one with the other. The slat-tenon bearings are formed in the same way as those in the case *f*. This two-part case *f'* is also provided with fastening or supporting bars. This case is designed to be secured in the rabbet of the stile by screws and stops in the same way as the case *f*.

The gears are formed from tubing drawn in the shape shown by the gears, of various lengths, and cut up into the required thickness by a saw-machine, such as those in common use for cutting metal.

The flange-ferrules are formed in one piece of metal, by machine, similar to the machines now in use for making cartridges.

These gears, because of their cheapness, are peculiarly adapted for various other purposes, as toys, &c. The flange-ferrules *g g'* are also adapted, because of their cheapness, for various other useful purposes.

By this improvement I am enabled to greatly cheapen the manufacture and produce a more perfect article of manufacture and use.

Having thus set forth the nature, construction, and advantage of this improvement, what I claim, and desire to secure by Letters Patent, is—

1. The gear *i*, formed of tubing, in combi-

nation with a flange-ferrule, *g g'*, formed of one piece of metal, and blind-slat *h*, substantially as and for the purpose set forth.

2. The ferrule *e*, in combination with the bushing *d*, stop *b*, and slat *h*, substantially as and for the purpose set forth.

3. The two-part case *f'*, in combination with

gears *i* and ratchet *k*, substantially as and for the purpose set forth.

JEREMY W. BLISS.

Witnesses:

CHARLES F. ANGELL,
EDWARD B. WILDER.