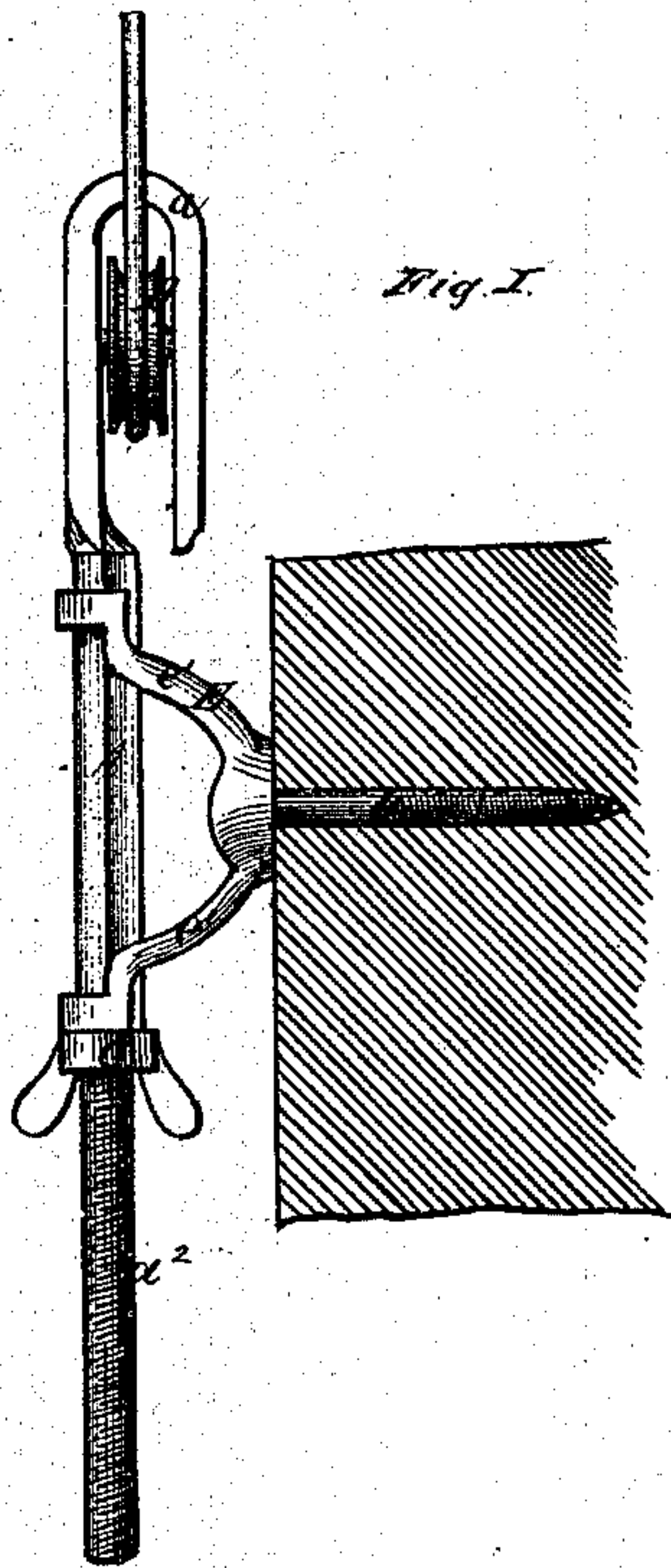


*C. H. Miller,*

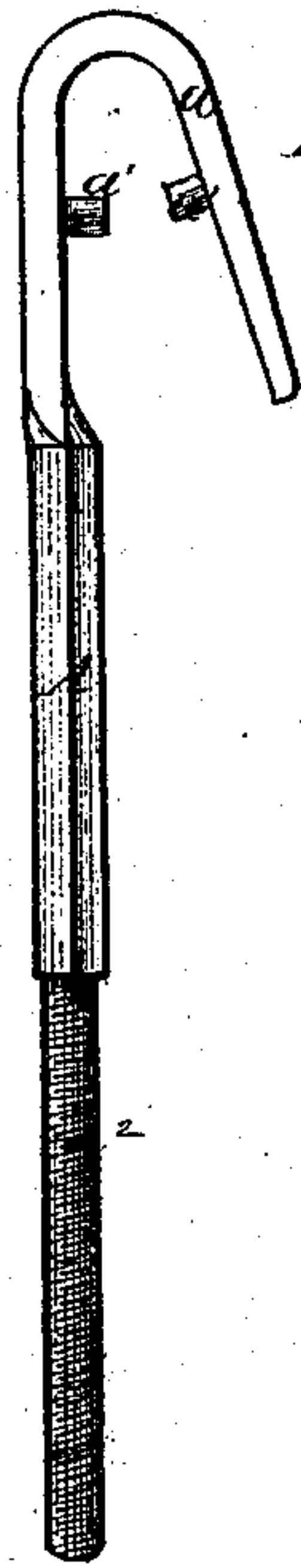
*Curtain Fixture.*

*No. 103069.*

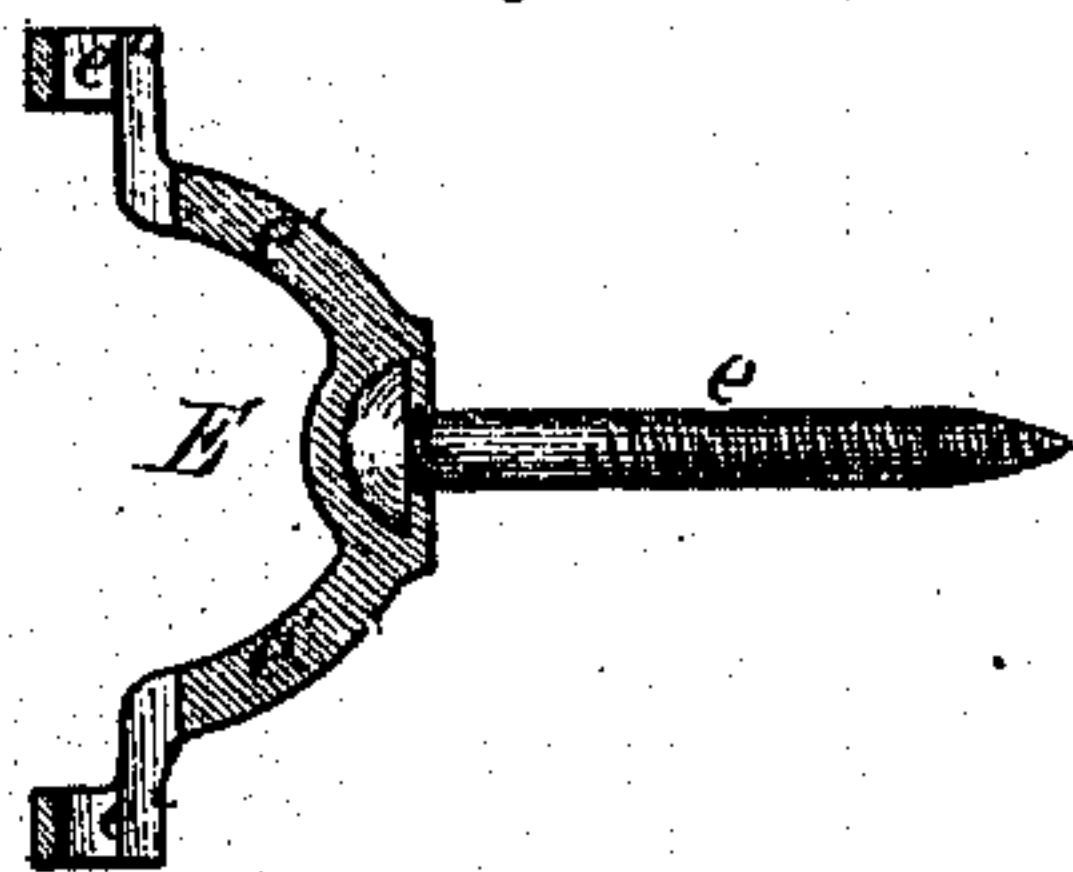
*Patented May 17, 1870.*



*Fig. I.*



*Fig. II.*



*Fig. IV.*



*Fig. III.*

*Edward Wilhelm,*  
*Jno. J. Bourner,*  
*Witnesses.*

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# United States Patent Office.

CHARLES H. MILLER, OF BUFFALO, NEW YORK.\*

Letters Patent No. 103,069, dated May 17, 1870.

## IMPROVED CORD-TENSION DEVICE FOR WINDOW-SHADES.

The Schedule referred to in these Letters Patent and making part of the same.

I, CHARLES H. MILLER, of the city of Buffalo, in the county of Erie and State of New York, have invented an Improved Cord-tension Device for Window-Shades, of which the following is a specification.

My improvements relate to an old device for tightening the endless cord or band by which window-shades, attached to a roller, are raised and lowered.

As heretofore constructed, this device is composed of a slide-bar, arranged vertically in a guide-bearing attached to the window-casing and having a pulley or bearing for the cord at its upper end, while its lower end is provided with a thread and thumb-screw by which to regulate the tension of the cord.

The bearings for the pulley have been formed by doubling the upper end of the slide-bar in the form of a hook and mounting the pulley within the latter on a rivet passing through the doubled end of the slide, which construction involves the labor and expense of drilling or otherwise forming two holes, and inserting and securing the rivet therein.

The guide-bearing for the slide has consisted of a sleeve for the passage of the slide, projecting from a base-plate, which is secured to the casing by screws passing through holes drilled therein. The cost of this bearing, in connection with the cost of mounting the pulley, is such as to prevent the adoption of the device, except to a very limited extent.

The object of my invention is to overcome this objection; and

The invention consists—

First, of a guide-bearing of peculiar construction, composed of a single wood screw, to which is cast the guide portion complete, requiring no finishing or drilling of holes, the bearing being attached to the casing by simply screwing it therein, for which purpose the cast portion forms a suitable thumb-piece.

Second, in casting the slide-bar with the upper end partially bent in the form of a hook with two short spurs or pins projecting inward, and in line of each other, so as to form the axis of the pulley by pressing the hook together after the insertion of the pulley therein.

In the accompanying drawings—

Figure I is a view in elevation of my improved device, attached to a window-casing.

Figure II is a view showing the form in which the upper end of the slide-bar is cast.

Figure III is a plan of the guide-bearing, detached. Figure IV is a section of the same.

Like letters of reference designate like parts in each of the figures.

A is the slide-bar or rod;

*a* the upper or hooked portion;

*a*<sup>1</sup> *a*<sup>1</sup> the spurs cast therewith, in the separated position shown in Fig. II;

*a*<sup>2</sup> the thread formed on the lower end; and

C the thumb-screw fitting thereon.

D is the pulley, which is inserted within the hook, and between the separated ends of the spurs *a*<sup>1</sup>, when the bent end of the bar is partially closed, causing the spurs to enter the axial hole in the pulley till their ends come in contact, thus securing the pulley in place, without the use or necessity of a rivet or the labor of drilling holes therefor.

E is my improved screw-bearing for the slide, consisting of an ordinary wood screw, *e*, to which are cast two guide-arms, *e*<sup>1</sup> *e*<sup>1</sup>, with a hole, *e*<sup>2</sup>, in the end of each for the passage of the slide-bar. The ends of these arms being formed as shown in the drawings, the holes are readily cast therein, without requiring the use of cores, the device being complete as it comes from the mold.

The great saving which is effected by my improved modes of construction is obvious, and enables the fixture to be produced at such a trifling cost as to fully overcome the objections which have heretofore existed against it on that account, and enables it to successfully compete with the other devices in use for the purpose, while it is more enduring, more sure in its operation, and less liable to get out of order than most of them.

What I claim as my invention is—

1. The guide-bearing E, composed of the screw *e* and guide-arms *e*<sup>1</sup> *e*<sup>1</sup>, provided with holes *e*<sup>2</sup>, cast complete, substantially as hereinbefore set forth.

2. The slide-bar A, when cast with a hook, *a*, and projecting spurs *a*<sup>1</sup> *a*<sup>1</sup>, separated from each other, as shown in Fig. II, to permit the introduction of the pulley and to form the axis thereof, as hereinbefore set forth.

CHARLES H. MILLER.

Witnesses:

MICHAEL DOLL,  
JNO. J. BONNER.

\* Assor to self and Michael Doll, of same place.