A. A. Moss,

Sash Holder.

No. 24,653. Patented July 5, 1859.

Fig. 2.

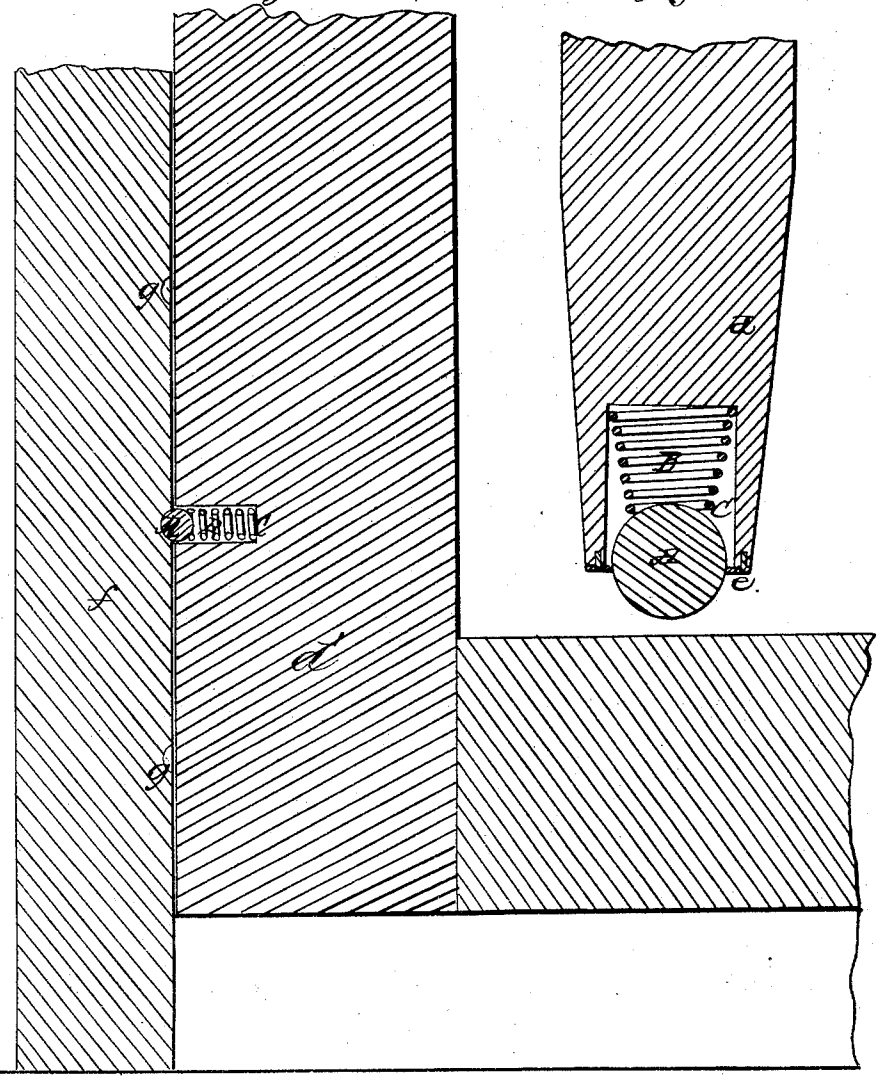


Fig. 1.

Witnesses:
Benj Morrison
George Pfeiffer

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

A. A. MOSS, OF PHILADELPHIA, PENNSYLVANIA.

ELASTIC FRICTION-ROLLER.

Specification of Letters Patent No. 24,653, dated July 5, 1859.

To all whom it may concern:

Be it known that I, A. A. Moss, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and Improved Elastic Friction Apparatus for Furniture, Window-Sashes, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents, in longitudinal section, the said device applied as a furniture caster, and Fig. 2, the same, applied as a sash-supporter—like letters, in both figures, indicating the same parts.

The nature of my invention consists in the combination and arrangement of a ball or sphere, and a spiral spring within a hole or case—substantially in the manner hereinafter described—whereby the said ball is permitted to rotate, freely, in any direction, in contact with the said spring in the hole or case, and at the same time to yield to any increase of pressure upon the ball, as hereinafter described.

In the drawings, A, represents the ball or sphere; B, the spiral spring; and, C, the hole or case for securing them in proper relation to each other. In applying them together so as to serve as a furniture caster, I bore a short hole (C), longitudinally in the leg *d*, of the furniture, a little larger than the diameter of the ball (A), and insert therein a conical spiral spring (B), made of sufficient length and strength for the purpose intended, place the ball (A) upon the spring and secure it in that position by a thin plate, *e*, which is perforated in its center so as to be annular—the opening being somewhat less in diameter than the ball—and screwed or nailed fast to the end of the leg (*d*) so as to keep the said ball from being forced out of the hole (C) in the leg.

In applying the device to support a window sash, I make a like hole (C) horizontally in the side edge of the sash, *d'*, and insert therein the spiral spring (B), and ball (A), precisely in the same manner as has been described for the caster; but as the window-frame itself will keep the ball (A) in place, the plate (*e*) is not required; and the spring (B), instead of being conical, may be made cylindrical. Shallow curves, *g*, are cut out in the frame, *f*, at different places, to receive the projecting part of the ball (A); and thus to form such stops as will force the said ball into the hole (C) when the sash (*d'*) is pushed either up or down by the force of the hand—the spring (B) being, of course, made of wire stiff enough to overcome the weight of the sash, especially when the ball is in either of the curved cavities (*g*). It may be applied, in the same manner, in the frame (*f*) instead of in the sash, for the same purpose—if a plate (*e*) is applied over it, as in the caster, to keep the ball from falling out should the sash be passed entirely off it.

It will be readily perceived that the weight of the furniture will relieve the ball from its former surrounded contact with the plate (*e*); and that the wire of which the spring (B) is made being cylindrical and smooth, and the spring, with all, elastic, and also unsteady, from its conical form, in a cylindrical hole, there will be but little chance for the balls becoming fixed or stationary when the furniture is being moved over a carpet or floor—as it will bear unsteadily and only upon the narrow end of the spring (B) and, laterally, against only a small portion of the inner edge of the plate (*e*); and that the same advantage of free motion in the ball (A) will result when the device is applied as a sash supporter, in the manner shown in Fig. 2; and also that in both cases it is cheaper, more simple and readily applied than any other device in use for the purposes. In the latter case especially, it does away with the necessity of the manipulation heretofore required to adjust catch-holders, which in said road cars especially, is always attended with more or less of difficulty and trouble not a little trying to the temper and patience of the operator.

Having thus fully described my improved device and pointed out its advantages and the different modes in which I contemplate applying the same to serve as an elastic friction roller I proceed to state that I do not claim either the ball, spiral spring, or case, separately considered, but

What I claim as new therein of my in-

vention, and desire to secure by Letters Patent, is—

The elastic friction apparatus described; the same consisting of the ball or sphere (A), spring (B), and case or hole (C), constructed, arranged and combined together, in relation to each other, in the manner set forth and described—irrespectively of the plate (*e*) or the conical form of the spiral spring (B).

A. A. MOSS.

Witnesses:
BENJ. MORRISON,
GEORGE PFEIFFER.