(No Model.)

J. HARDMAN, Jr.

FRICTION SHADE ROLLER.

No. 327,161. Patented Sept. 29, 1885.

Fig. 1.

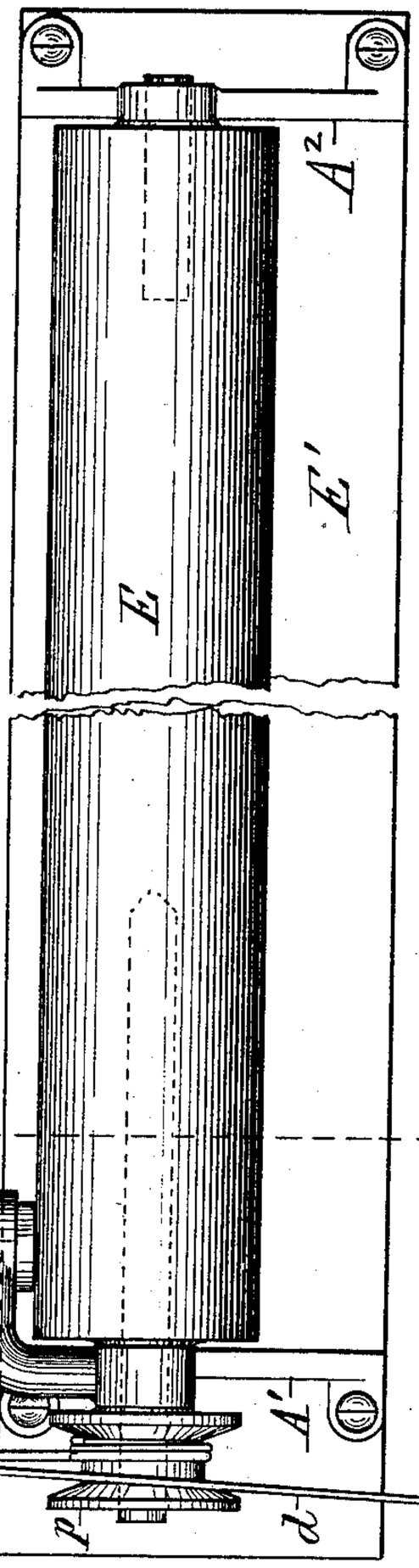


Fig. 3.

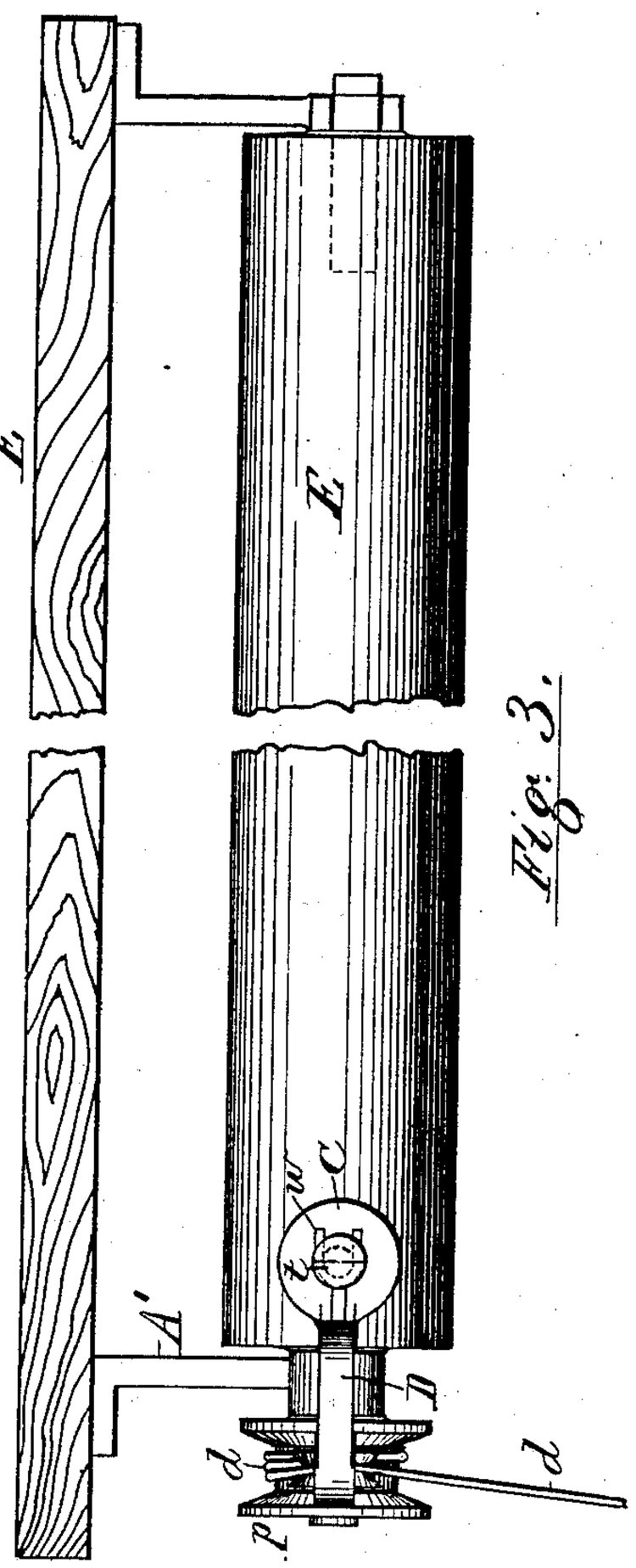


Fig. 2

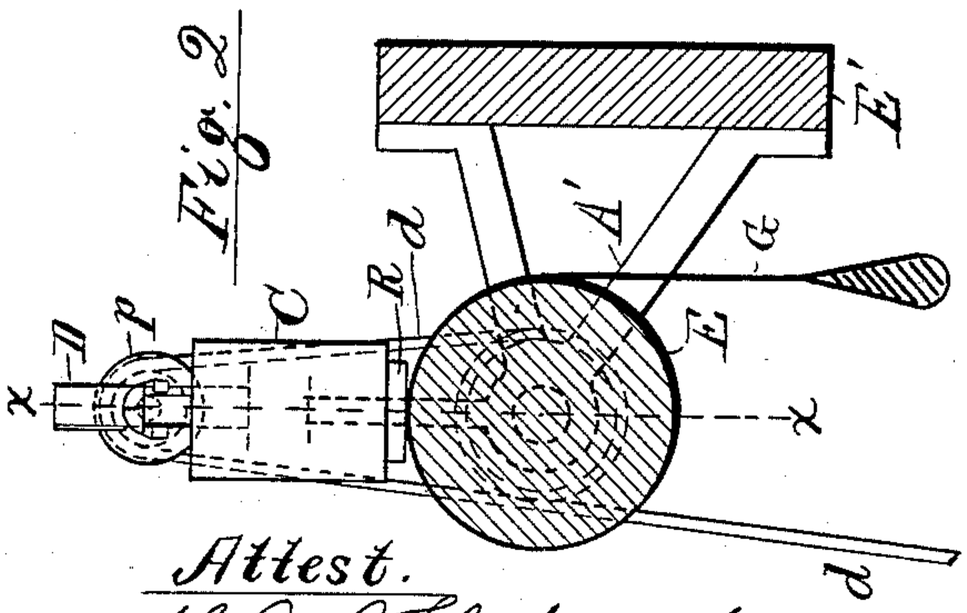
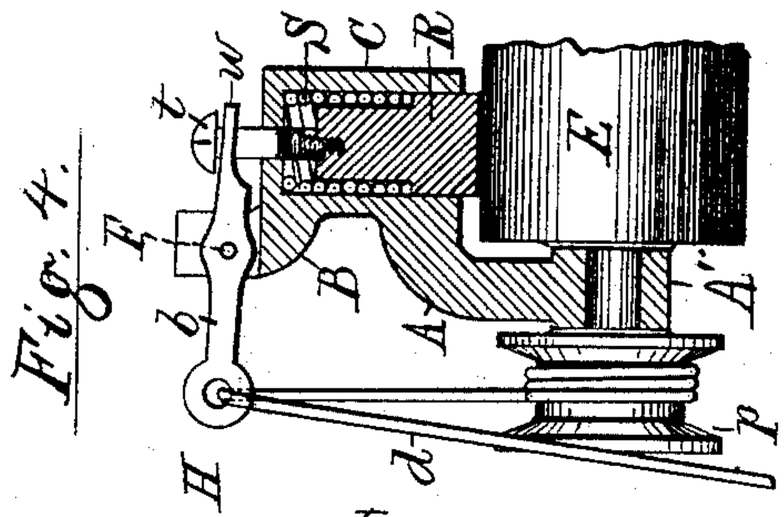


Fig. 4.



Attest.

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UNITED STATES PATENT OFFICE.

JAMES HARDMAN, JR., OF BELLEVILLE, NEW JERSEY.

FRICTION SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 327,161, dated September 29, 1885.

Application filed October 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES HARDMAN, Jr., a citizen of the United States, residing in Belleville, Essex county, New Jersey, have invented certain new and useful Improvements in Friction Shade-Rollers, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

Figure 1 is an elevation of my improved roller and its brackets. Fig. 2 is a vertical section taken on line *y y* on Fig. 1. Fig. 3 is a plan, and Fig. 4 a vertical section taken on line *x x* in Fig. 2, showing the friction-brake, spring, and lever, together with their connections, the roller, pulley, and lever not being in section.

The object of my invention is to furnish a simple means of raising and lowering a shade and of holding it firmly in any desired position.

This invention consists in an improved construction for a roller-bracket and friction-brake, whereby a lever is pivoted upon the bracket to operate the brake, and the lever is actuated by the winding-cord, which is applied to the end of the roller or to a fast pulley thereon.

In the drawings, E is an ordinary solid shade-roller, with a fast pulley, *p*, upon one end, which roller is rotated by a cord applied to the pulley *p*. The roller-pivot is supported in a bracket, B, upon which are mounted the brake and its actuating-lever.

C is a socket, in which a block, R, is inserted and pressed toward the periphery of the roller by a spiral spring, S, the friction developed being sufficient to sustain the entire weight of the shade G, which is shown only in Fig. 2. With such a brake it is obvious that the shade could be raised by pulling the cord hard enough to overcome the resistance of the brake as well as the weight of the shade, and that the shade could be pulled down by the fingers of the operator without the use of the cord. A means of detaching the brake and removing its resistance when raising or lowering the shade is, however, provided in the lever *b*, pivoted adjacent to the brake-block, and having one of its arms, *w*, connected to the same by a screw, *t*. The lever has its other arm extended over the pulley *p*, and provided with a pulley, *p'*, or an eye, H, to receive the cord *d*, and has its fulcrum at F, between the two ends, so that a downward pull upon the outer end will raise the brake-block R and permit the free rotation of the roller.

The socket C, in which the friction-block moves, is attached to the bracket by means of the foot A, and a projection from the upper portion of the socket affords a support for the fulcrum of the lever *b*, and may also be shaped at its extremity so as to form a guide, D, for a cord if the pulley *p'* be used. In order to raise the shade without the resistance of the brake, the cord is passed over the pulley *p'* or through the eye H, and when pulled downward to rotate the roller E depresses the outer arm of the lever and raises the other arm, together with the brake attached. The roller, being thus released from the friction of the brake, revolves freely, and the shade is drawn up by the pull on the cord.

When the cord is released from the hand, the lever resumes its normal position, being drawn down at its opposite end by the spring, which presses the friction-block against the roller, and thus instantly arrests the movement of the shade.

In lowering the shade with the cord thus arranged, the friction brake-lever is first raised by the pull on the cord in the same manner as before, and the shade will then fall by its own weight until arrested by the fall of the brake. This is controlled by the pull upon the cord in the same manner as when raising the shade, the diameter of the pulley *p* and the strength of the spring S being so proportioned that the spring will yield with a lesser tension than that required to lift the shade by pulling the cord. By making the pulley *p* of lesser diameter than the roller E it is obvious that the pull on the cord will materially exceed the weight of the shade.

It is obvious, however, that the weight of the shade might be such that the cord could be applied directly to the roller, the end of which would then be a precise equivalent for the fast pulley.

The brake-block is preferably made of india-rubber, on account of its frictional character; but wood or other substance may be used.

Having thus shown how my invention may be constructed and used, I claim the construction as follows:

1. The combination, with a roller-bracket, of a socket, C, containing a brake-block, R, and spring S, as described, and provided with a lever connected to the brake-block and adapted to receive the cord for actuating the roller, substantially as and for the purpose set forth.

2. The combination, with a roller having a fast pulley, *p*, at the end, as described, of a roller-bracket, B, a brake-block operated by a spring and applied to the upper side of the roller, and a lever pivoted upon the bracket, with its inner end connected to the brake-block, and its outer end provided with the pulley *p'*, to receive the cord *d* from the pulley *p*, as and for the purpose set forth.

3. The combination, with the roller-bracket and the socket C, containing the brake-block R and spring S, as described, of the lever adapted to receive the cord for actuating the roller, and connected with the brake-block by the actuating-screw, as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

J. HARDMAN, JR.

Witnesses:
L. LEE,
HENRY J. THEBERATH.