No. 776,048. PATENTED NOV. 29, 1904.

J. B. FISHER.

CURTAIN SHADE LOCKING DEVICE.

APPLICATION FILED FEB. 21, 1903.

NO MODEL.

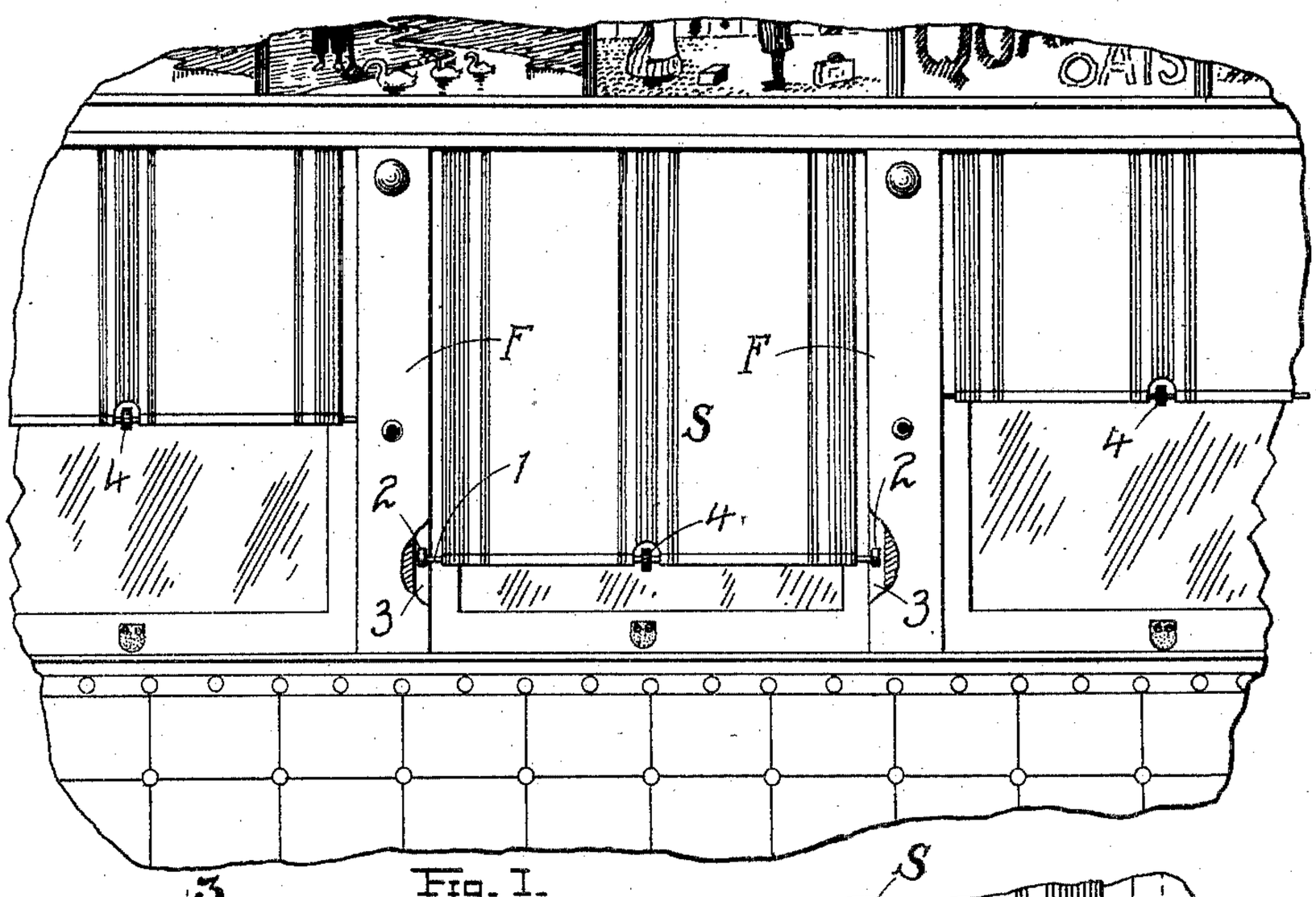

Fig. 1.

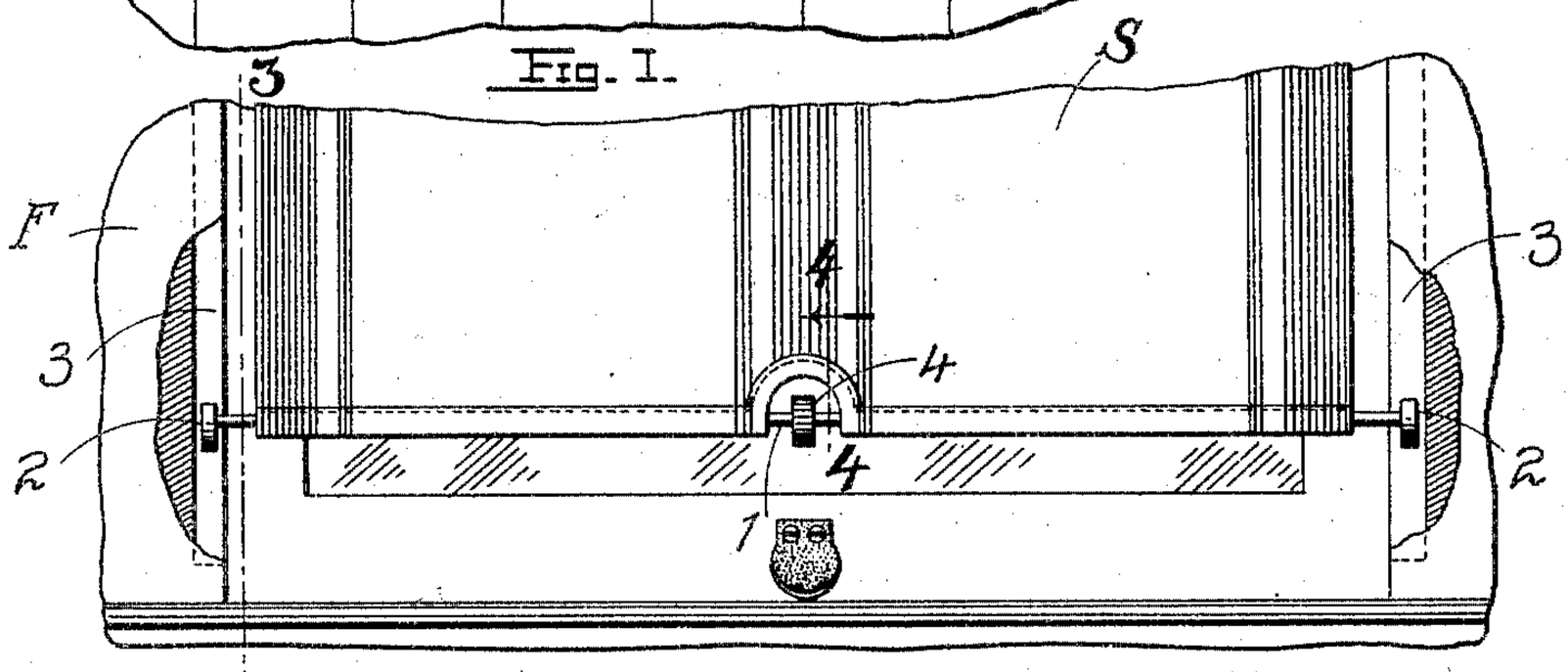

Fig. 2.

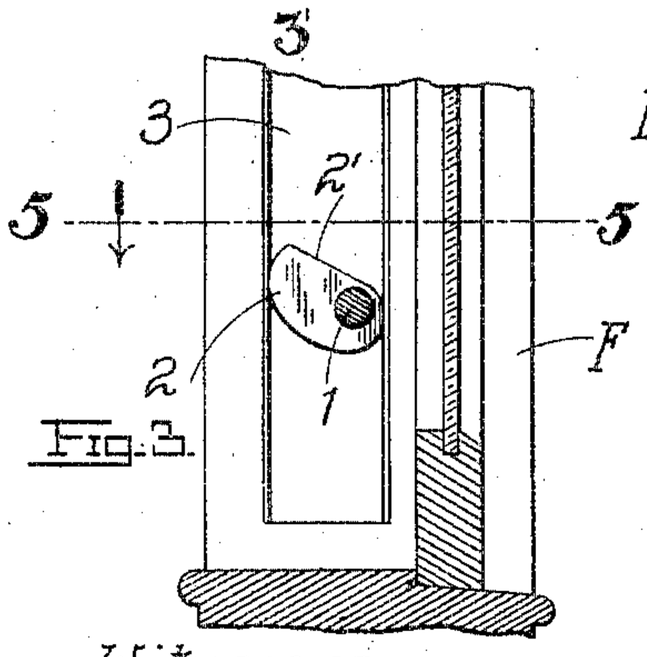

Fig. 3.

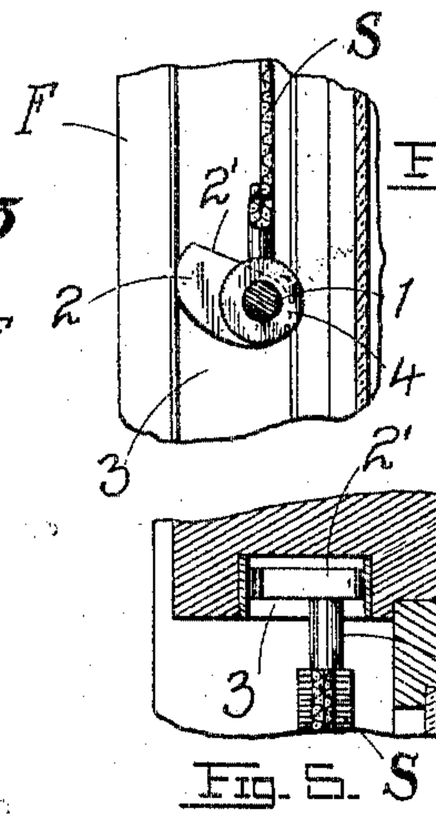

Fig. 4.

Fig. 5.

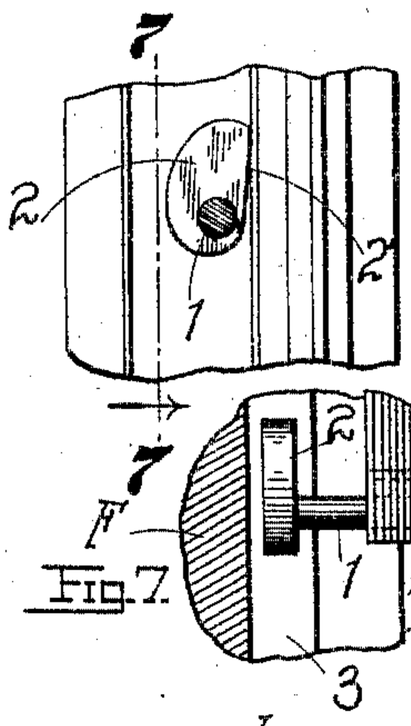

Fig. 6.

Fig. 7.

Witnesses:
Fred. J. Dawn
Rosa Rose

Inventor
James B. Fisher
By His Attorney
Emil Stauc

No. 776,048. Patented November 29, 1904.

UNITED STATES PATENT OFFICE.

JAMES B. FISHER, OF ST. LOUIS, MISSOURI.

CURTAIN-SHADE-LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 776,048, dated November 29, 1904.

Application filed February 21, 1903. Serial No. 144,446. (No model.)

To all whom it may concern:

Be it known that I, JAMES BUCKNER FISHER, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Curtain-Shade-Locking Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in curtain-shade-locking devices; and it consists in the novel arrangement and combination of parts more fully set forth in the specification, and pointed out in the claim.

In the drawings, Figure 1 is an elevation of a series of car-windows, showing my invention applied thereto. Fig. 2 is a similar enlarged view of a single window, parts being broken away. Fig. 3 is a transverse vertical enlarged section taken on the line 3 3 of Fig. 2, showing the shade locked. Fig. 4 is a similar section on line 4 4 of Fig. 2. Fig. 5 is a horizontal section on line 5 5 of Fig. 3. Fig. 6 is a section similar to Fig. 3, but with the locking-head swung to its disengaging position; and Fig. 7 is a vertical section on line 7 7 of Fig. 6.

The object of my invention is to construct a locking device for curtain-shades which may be made effective with a minimum amount of manipulation, the locking being accomplished by frictional or positive engagement between the locking device and the walls of the groove of the window-frame in which the same is mounted. In the present instance the engagement between the locking device and walls of the groove referred to is at two opposite points of contact, this resulting from the specific formation and dimensions of said locking device.

In detail the invention may be described as follows: Referring to the drawings, F represents a car-window frame, and S the shade, the latter being mounted on an ordinary spring-roller adapted to wind the shade when released from a locked position. These features of course are old and well-known and require no detailed description. Disposed along the lower end of the shade (or the upper end where the shade is mounted at the bottom of the window-frame) is a rod 1, whose projecting ends are provided with the locking heads or blocks 2 2, the latter operating in the longitudinal grooves or ways 3, formed for their reception in the frame F. The center of the rod 1 is provided with a milled disk 4, by which the same may be rotated or rocked to effect the necessary engagement or disengagement of the locking-heads, as presently will appear. The locking-heads 2 in the present instance are cam-shaped, being rotatable about their axes of oscillation with the rod 1, to which they are attached, the curvature of the edge of the head being in the nature of an evolute, though it is to be understood that I do not limit myself to this specific configuration. The head 2 has its axis of oscillation near the base of the evolute, the outer end of the curve being connected to said base by a straight edge 2′. The maximum dimension of the head is of course greater than the width of the groove 3, so that if oscillated to a degree to cause the curved edges thereof to engage the adjacent walls of the groove the tension exerted by the spring-roller on which the shade is mounted will force or wedge said curved edges against said walls, and thus effectively lock the shade against further movement, Figs. 3, 4, 5. If the rod 1 is rotated so as to rock the heads to the position indicated in Figs. 6, 7—that is, with the straight edges 2′ opposite to the adjacent wall of the groove—the shade will be free to be drawn or adjusted to any desirable position. The rotation or rocking of the rod 1 is accomplished through the medium of the milled disk 4, which is seized by the thumb and forefinger and given a turn in the required direction until either an engagement or disengagement of the head 2 is effected, it being understood that the rod 1 is loose in the shade and free to turn therein.

I do not, of course, wish to be limited to the details herein shown, as these may in a measure be departed from without affecting the nature or spirit of my invention. The head 2 may be any convenient shape and may be made of any suitable material. It is to be

further understood that I need not limit the application of the present lock to curtain-shades.

As stated above, while I do not wish to be limited to any specific configuration of the cam-head yet the latter should be so formed that the radii defining the curvature of the surface of contact of the head with the walls of the groove should increase progressively toward the free end of the straight edge or free end of the cam, so that the contacting surface shall be as extensive as possible. In this way as one point of the cam-engaging surface wears away fresh portions will be presented to the wall of the groove and the life of the cam be prolonged indefinitely. Of course to effect engagement at any time the cam must be oscillated toward the cam-surface and away from the straight edge.

Having described my invention, what I claim is—

In a curtain-shade-locking device, a suitable spring-actuated roller-shade, an oscillating cam-head having a straight edge, carried at opposite sides of one end of the shade, said locking-head having a cam-engaging surface the radii of whose curvature increase progressively from the base or axis of the cam toward the free end thereof, and being rotatable about a fixed axis located substantially at the point of convergence of the several radii, the frame of the window having a groove for the reception of the head, means for rocking the head toward the cam-surface thereof to effect engagement of the same with the walls of the groove, and for rocking the head with the straight edge opposite the adjacent wall for disengaging the same, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES B. FISHER.

Witnesses:
EMIL STAREK,
ROSA ROSS.