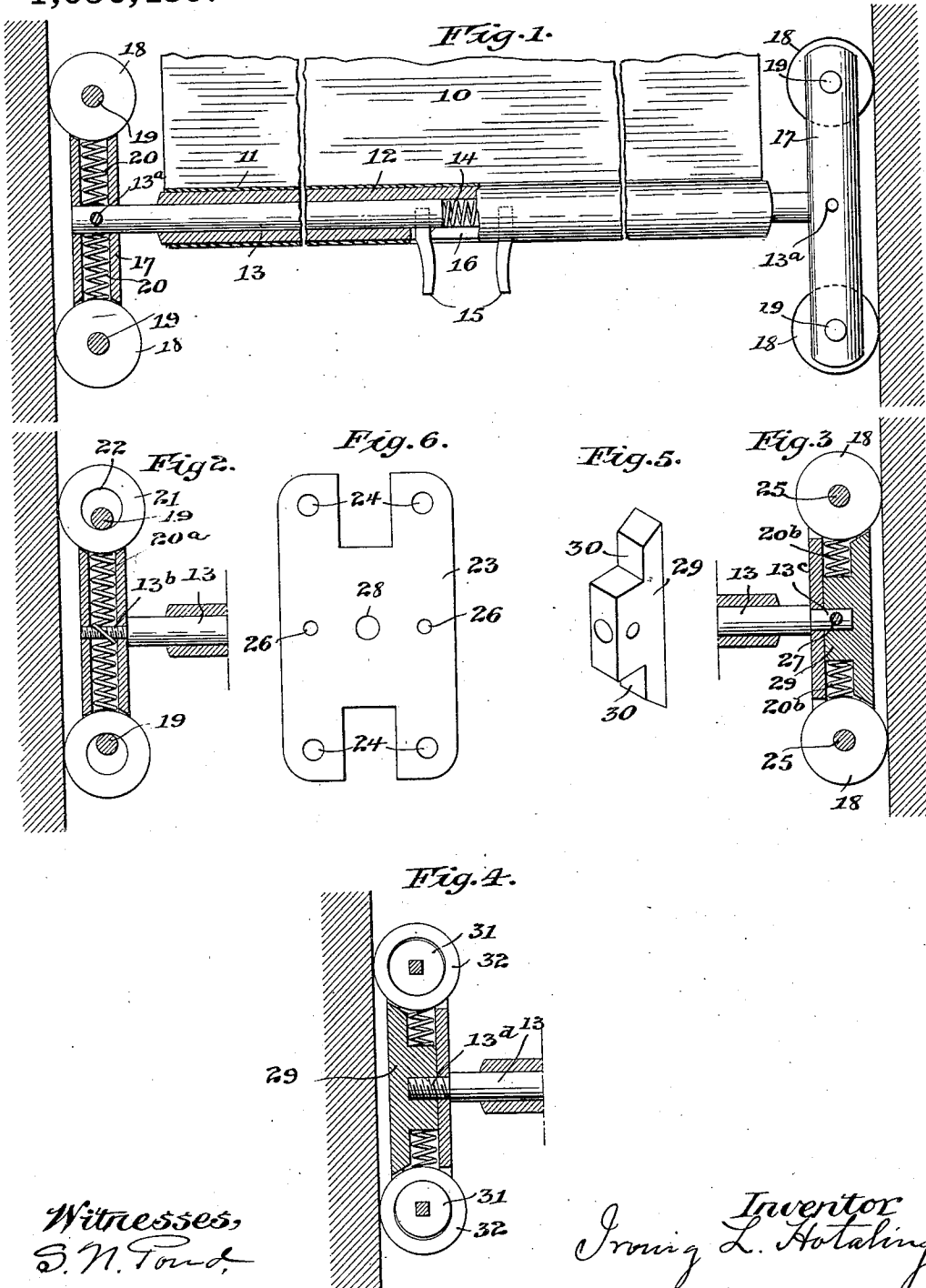


I. L. HOTALING.
CURTAIN FIXTURE.
APPLICATION FILED FEB. 10, 1906.

1,050,459.

Patented Jan. 14, 1913.



Witnesses,
S. N. Ford,
E. Mann,

Inventor
Irving L. Hotaling,
By *Offield, Towle & Smith*
Attys.

UNITED STATES PATENT OFFICE.

IRVING L. HOTALING, OF RIVERTON, NEW JERSEY, ASSIGNOR TO THE CURTAIN SUPPLY COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CURTAIN-FIXTURE.

1,050,459.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed February 10, 1906. Serial No. 300,437.

To all whom it may concern:

Be it known that I, IRVING L. HOTALING, a citizen of the United States, residing at Riverton, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Curtain-Fixtures, of which the following is a specification.

This invention relates to curtain fixtures of that type wherein a curtain stick, secured in or to the lower portion of a curtain, is provided with a head at each end carrying devices engaging a guiding groove of the window-frame, and automatically resisting, through frictional engagement with the guide, the upward pull of the curtain-roller spring, while permitting the curtain and fixture to be freely drawn downwardly.

The object of the invention is to provide a simple, economical, easily assembled, and efficient curtain fixture of the class described, and this object I attain by means of a construction characterized principally by the provision, in association with a curtain stick and a hollow or recessed head carried thereby, of a roller or rollers carried by the head and adapted to engage the casing guide, and one or more spring brakes housed in the head and engaging the periphery of the roller or rollers to retard the rotation of the latter. In its simplest and preferred form, said spring brake comprises simply one or more coiled compression springs directly engaging the periphery of the roller or rollers.

My invention will be readily understood when considered in connection with the accompanying drawing, wherein—

Figure 1 is an elevational view, in longitudinal section through one side of the fixture, of the lower end of a curtain equipped with my improved fixture; Fig. 2 is a sectional view showing a modified form of spring brake consisting of a single spring engaging the two rollers of the head at its opposite ends; Fig. 3 is a similar view, disclosing a modified construction of head; Fig. 4 is a similar view, disclosing a modified form of roller; Fig. 5 is a detail perspective view of a separable spring abutment block employed in the form of head shown in Figs. 3 and 4; and Fig. 6 is a plan view of a blank from which may be formed the side and rear walls of a fixture head such as is represented in Figs. 3 and 4,

adapted for coöperation with the spring abutment block illustrated in Fig. 5.

Referring to the drawing, 10 may designate the lower end portion of a curtain or shade, in and across which is formed a pocket 11 containing a tubular curtain-stick 12. Slidably mounted in this latter are a pair of rods 13, the outer ends of which project beyond the ends of the curtain stick, said rods being normally forced apart by a compression spring 14 located between their inner adjacent ends, and retracted in opposition to said spring by means of pinch handles 15 projecting through a slot 16 of the curtain stick. Secured on the outer end of each rod 13, as by a rivet 13^a, is a fixture head, which, as shown in Figs. 1 and 2, comprises simply a piece of hollow tubing 17 longitudinally slotted at its ends to receive rollers 18 rotatably mounted therein on pivot pins 19. Within the tubular head, on either side of the rod 13, and at their inner ends abutting against the latter, are housed a pair of coiled springs 20, which, at their outer ends, bear against the peripheries of the rollers 18 with a braking effect, serving to prevent the free rotation of said rollers.

In the modified form of structure illustrated in Fig. 2, the fixture head is secured to the rod 13 by screwing onto a threaded reduced end 13^b of the latter, which connection of said parts permits the use of a single spring 20^a, which bears at its upper and lower ends against the peripheries of the upper and lower rollers, respectively. These latter are herein shown as made in ring form 21, having enlarged central openings or apertures 22 providing for lost motion relatively to their confining pins 19. This construction affords an auxiliary braking effect between the periphery of the roller and the bottom of the slot in which it is mounted, in addition to the braking effect of the spring itself.

The remaining figures of the drawing illustrate a modified form of head which may be used in place of the simple, tubular head above described; the same including a shell that may conveniently be formed from the blank 23 shown in Fig. 6, by bending the same longitudinally to provide an inner or rear wall and a pair of parallel side walls. The side walls are provided with upper and lower apertures 24 to re-

ceive the pivot pins 25 of the rollers 18, and with central apertures 26 adapted to receive a fastening pin or rivet 27 engaging the reduced end 13^c of the rod 13, inserted through a central aperture 28 in the inner or rear wall of the head.

29 designates a block adapted to fit between the side walls of the head and formed on its inner side with upper and lower notches 30 which form, in connection with the side and inner walls of the head, sockets or recesses for the reception of the brake springs 20^b, the outer ends of which latter frictionally engage the peripheries of the rollers.

In the construction shown by Fig. 4, the reduced end 13^d of the rod 13 is threaded and screws into the spring abutment block 29, thereby securing the latter in the head; and the ends of the head carry non-rotatable disks 31, on which are loosely mounted rings 32, of rubber, leather, or similar material possessing relatively large frictional capacity, adapted to engage the casing guide.

The principle of operation of all of the several forms of the invention illustrated is the same. The spring or springs contained within the fixture head constitute in effect continuously-acting brakes of sufficient power to prevent the rotation of the rollers or rings under the upward pull of the curtain-roller spring, whereby said rollers or rings, under the thrust of the spring 14, are caused to engage the surface of the casing guide with sufficient friction to hold them stationary in any adjusted position. At the same time, the curtain can be readily drawn downwardly by contracting the pinch handles 15 and withdrawing the rollers from engagement with the casing guides.

I am aware that it is old, prior to my invention, to provide the rollers of curtain-fixture heads with brakes that are actuated by the outward thrust of the head; but, so far as I am aware, I am the first to provide a fixture head with a constantly-acting spring-brake acting against the peripheries of the rollers that is independent of the outward thrust of the head. I do not therefore limit the invention to the particular mechanical embodiments thereof illustrated in the drawing.

I claim:

1. A curtain fixture comprising a curtain stick, a head carried thereby, a roller mounted on said head, and a spring carried by said head and directly contacting the periphery of the roller, whereby said spring

exerts a constant retarding or braking action upon said roller, substantially as described.

2. A curtain fixture comprising a curtain stick, a spring-pressed rod carried thereby, a head mounted on the end of said rod, a roller mounted on said head, and a spring carried by said head and directly contacting the periphery of said roller, whereby said spring exerts a constant retarding or braking action upon said roller, substantially as described.

3. A curtain fixture comprising a tubular curtain stick, a spring-pressed rod slidably mounted therein, a head mounted on said rod, a roller mounted on said head, and a spring mounted in said head and directly contacting the periphery of said roller whereby said spring exerts a constant retarding or braking action upon said roller, substantially as described.

4. A curtain fixture comprising a curtain stick, a spring-pressed rod carried thereby, a head mounted on the end of said rod, rollers mounted in the opposite ends of said head, respectively, and springs carried by said head and at one end continuously engaging the peripheries of said rollers, whereby to exert a constant braking action upon the latter, substantially as described.

5. A curtain fixture comprising a curtain stick, a spring-pressed rod carried thereby, a hollow head mounted on the end of said rod, rollers mounted in the ends of said hollow head, and springs housed in said head and at their outer ends engaging the peripheries of said rollers, substantially as described.

6. A curtain fixture comprising a curtain stick, a tubular head carried thereby, a roller mounted on said head, and a coiled spring disposed within said head with one end bearing upon the periphery of the roller whereby to exert a braking action upon said roller, substantially as described.

7. A curtain fixture comprising a curtain stick, a spring pressed rod carried thereby, a tubular head mounted on the end of said rod, rollers mounted in the opposite ends of said head and coil springs disposed within said head and bearing outwardly with their ends upon the peripheries of said rollers whereby to exert a constant braking action upon the latter, substantially as described.

IRVING L. HOTALING.

Witnesses:

LAWRENCE B. READER.
ERNEST BARTELT,