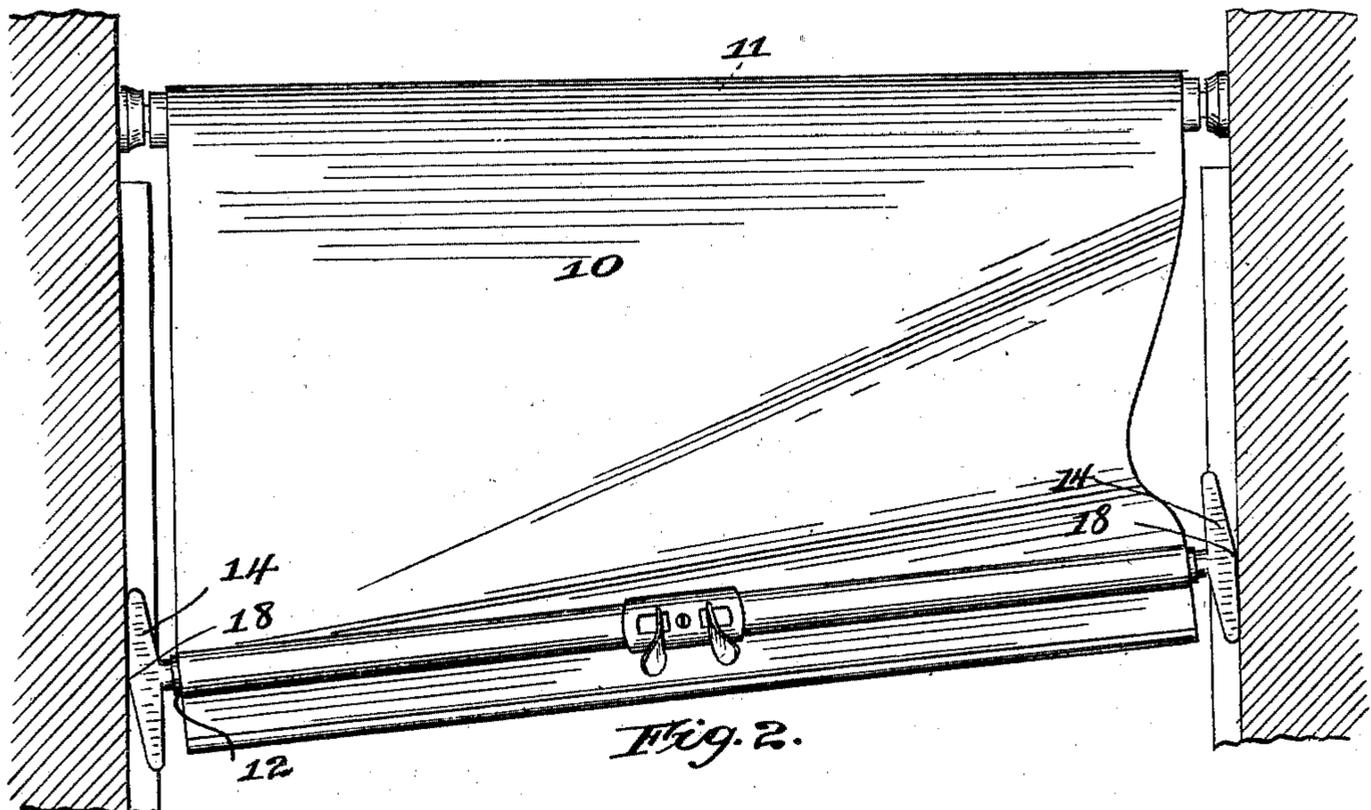
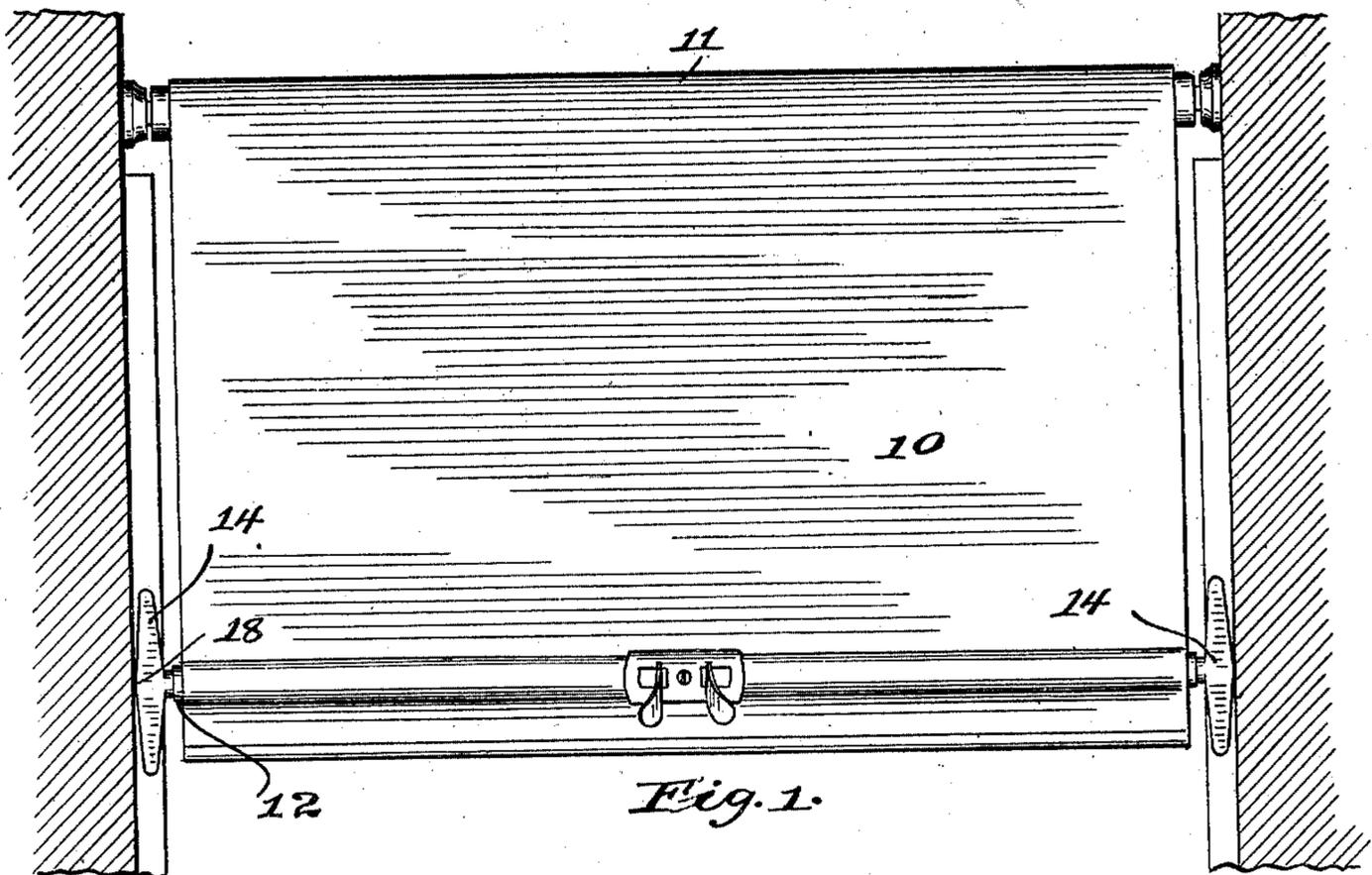


C. L. HOPKINS.
CURTAIN HOLDING DEVICE.
APPLICATION FILED OCT. 30, 1905.

967,382.

Patented Aug. 16, 1910.

2 SHEETS—SHEET 1.



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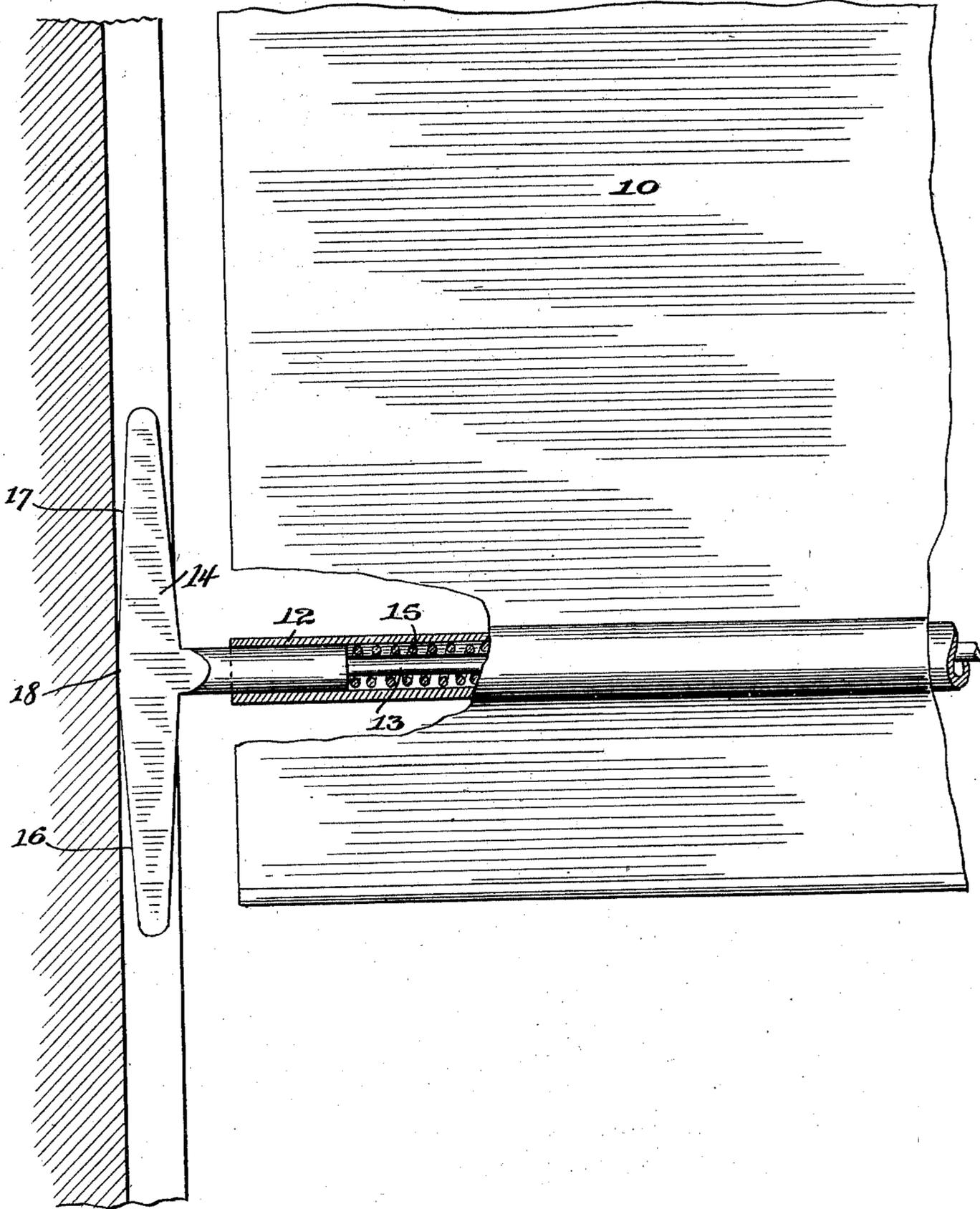
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Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES L. HOPKINS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CURTAIN SUPPLY COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CURTAIN-HOLDING DEVICE.

967,382.

Specification of Letters Patent. Patented Aug. 16, 1910.

Application filed October 30, 1905. Serial No. 285,028.

To all whom it may concern:

Be it known that I, CHARLES L. HOPKINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Curtain-Holding Devices, of which the following is a specification.

This invention relates to an improvement in curtain holding devices of that class wherein a spring-actuated curtain is provided, at or near its lower margin, with a curtain stick having outwardly spring-pressed heads at its ends, these heads being adapted to travel in grooves at the sides of the window casing as the curtain is raised or lowered and to hold the curtain at desired elevations by the frictional engagement of the heads with the bottoms of the grooves.

The invention resides principally in the form or shape of the head, whereby the device is enabled to right itself after having been left in an inclined position.

Heretofore various devices of the general class to which this invention belongs have been made wherein means are employed that are designed to render the device capable of self-righting. These means have usually taken the form of combinations of friction members and anti-friction rollers. In the device herein disclosed the self-righting is effected by reason of the peculiar form of the head, the object of the invention being the production of a self-righting curtain holding device of very simple construction and one containing no parts likely to wear out or get out of order.

In the drawings, Figure 1 is a face view of a curtain fitted to a window frame and provided with my improved curtain holding device. Parts of the window frame are broken away to expose to view the heads of the device. In this figure the curtain and its holding device are shown in their normal position with the curtain stick and the bottom of the curtain horizontal; Fig. 2 is similar to Fig. 1, but there the holding device and the bottom of the curtain are shown in an abnormal or canted position; and Fig. 3 is an enlarged elevational view of a corner

of the curtain and the end of the holding device, parts being broken away to show the interior of the curtain stick.

In the several figures 10 is the curtain, mounted upon the spring-actuated roller 11, which is of the continuously acting type, tending at all times to draw up the curtain. Carried by the curtain, preferably in a pocket formed therein, is a tubular curtain stick 12. Within this stick is a rod 13 arranged to have sliding movement in the stick and carrying at its outer end the head 14. Surrounding the rod 13 is a spring 15 tending to move the rod and head outwardly or toward the bottom of the groove in the window casing. The inner end of the rod may be threaded to take into threads upon suitable pinch handles or pendants in a manner well known in this art and forming no part of the present invention. The head 14 is preferably a solid casting and is formed on its face, or the side toward the window casing, with oppositely inclined elongated, straight bearing surfaces 16 and 17. Normally, or when the device is in a horizontal position, the head will engage the window casing only at the apex line 18 of the angle formed by these elongated bearing surfaces, but when the device is inclined these elongated surfaces are tilted into engagement with the window casing.

The operation of the device is as follows: The springs 15 press the heads 14 into engagement with the bottoms of the grooves in the window casing. The heads, when the device is in its normal horizontal position engage the window casing only at the transverse apex lines 18 on the heads 14, as shown in Fig. 1, and as these lines present only a limited extent of surface to the window casing the holding power is great enough to maintain the curtain against the upward pull of its spring rollers. If, however, the device be pushed up at one end, the device will be canted up until one of the elongated surfaces on the head at the other end of the device comes into engagement with the window casing. The head will then begin to slide along the window casing and the curtain will ascend without its holding device being thrown out of the

grooves. If the device be drawn down by one end, the tip at the other end will slide downwardly along the groove in the same manner. If the device be left in an inclined position it will right itself, one head sliding upwardly along the groove under the upward pull of the curtain roller, the other head sliding downwardly under the influence of gravity.

10 I am aware of the law of physics to the effect that "friction is independent of the extent of the surfaces in contact if the pressure is the same." I have found by repeated demonstrations that this law does
15 not apply to a device constructed in accordance with the present invention, and for what I believe to be the following reasons. In the first place, when the curtain stick is canted, as shown in Fig. 2, the
20 spring pressure on the heads is not the same as when the stick is horizontal, for the reason that the stick is lengthened and consequently the spring pressure has decreased. In the second place, while the law doubtless
25 holds true as applied to perfectly smooth and unyielding surfaces, yet the present invention presents the case of a substantially line bearing upon a more or less yielding surface (the bottom of the groove of the
30 window casing) and undoubtedly the linear bearing at the apex of the head produces in the bottom of the groove a slight depression. In other words, it obtains a slight bite on the guide. The fact that the head
35 is elongated also tends to make the latter move along the groove when the opposite end of the device is moved up or down, as any further tilting beyond the angle at which the elongated surface is in engage-
40 ment tends to compress the springs within the tube.

It is to be observed that the self-righting of this device is not accomplished by the provision of contacting surfaces formed of
45 materials having unlike coefficients of fric-

tion, but by reason of the peculiar form or shape given the head.

I claim:

1. In a curtain holding device the combination of a stick, and a spring-pressed
50 head at the end of the stick, said head being extended above and below the stick and having elongated oppositely inclined straight guide-engaging surfaces, said surfaces hav-
55 ing a fixed angular relation to each other substantially as and for the purpose set forth.

2. In a curtain holding device, the combination of a stick, an elongated head at the end of the stick having a substantially linear
60 transverse bearing surface adapted to normally engage the guiding frame, and elongated oppositely inclined bearing surfaces adapted to engage the guiding frame and to
65 slide thereon when the device is canted into an abnormal position, and spring means for pressing the head toward the frame.

3. In a curtain holding device, the combination of a stick and a head at the end of the stick adapted to be thrust into engagement
70 with the guiding frame, said head having extended ends above and below the stick, said ends being formed with oppositely inclined elongated straight faces upon which
75 the fixture may slide when the device is moved along the guiding frame in abnormal positions.

4. In a curtain holding device the combination of a stick, a head at the end of the stick adapted to engage the guiding frame,
80 said head having inclined elongated bearing surfaces forming an angle with each other, said head being adapted to normally contact with the frame at the apex of the angle
85 formed by said surfaces, and a spring for pressing the head toward the frame.

CHARLES L. HOPKINS.

Witnesses:

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