

No. 889,525.

PATENTED JUNE 2, 1908.

C. L. HOPKINS.  
CURTAIN FIXTURE.

APPLICATION FILED SEPT. 22, 1906.

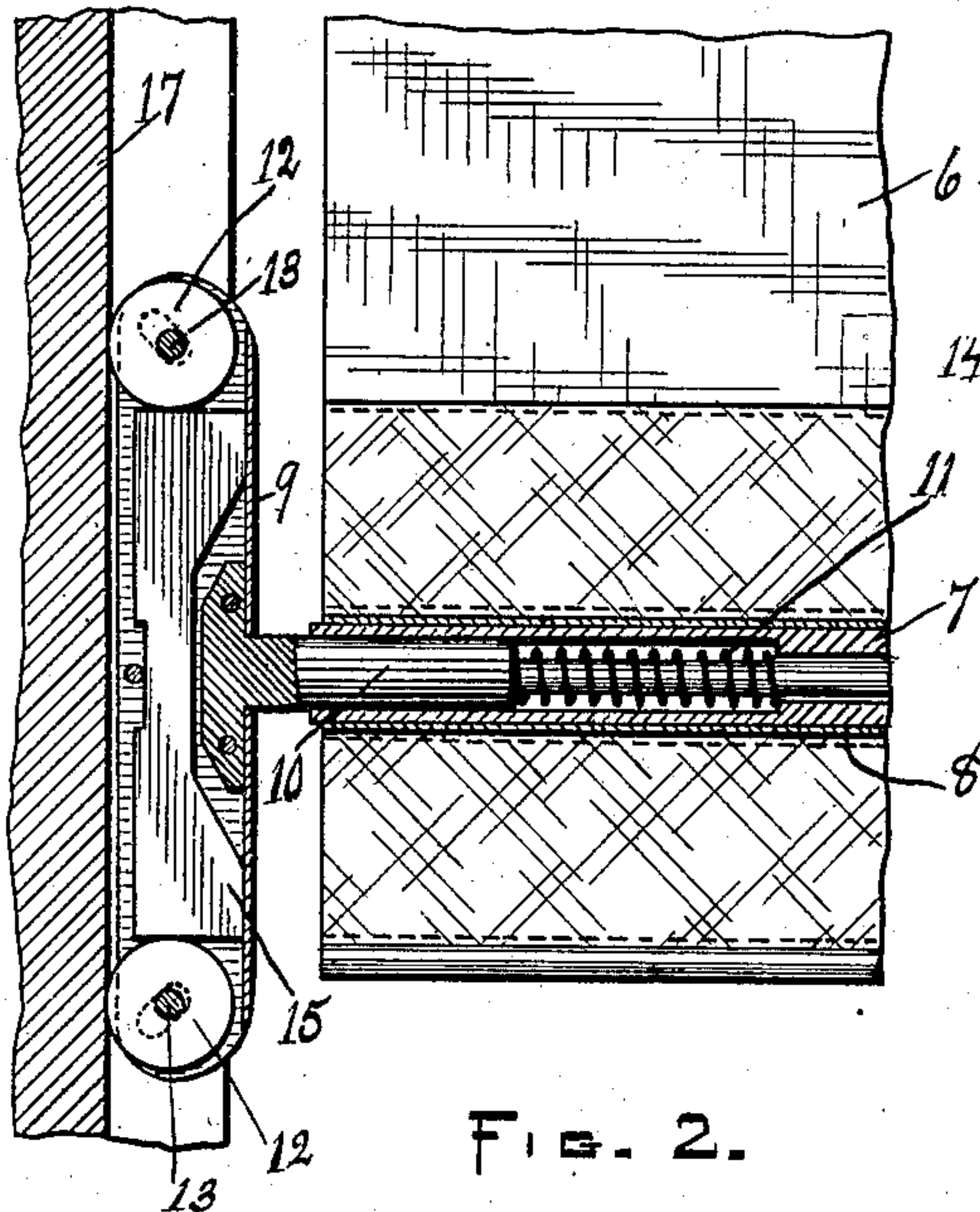


FIG. 2.

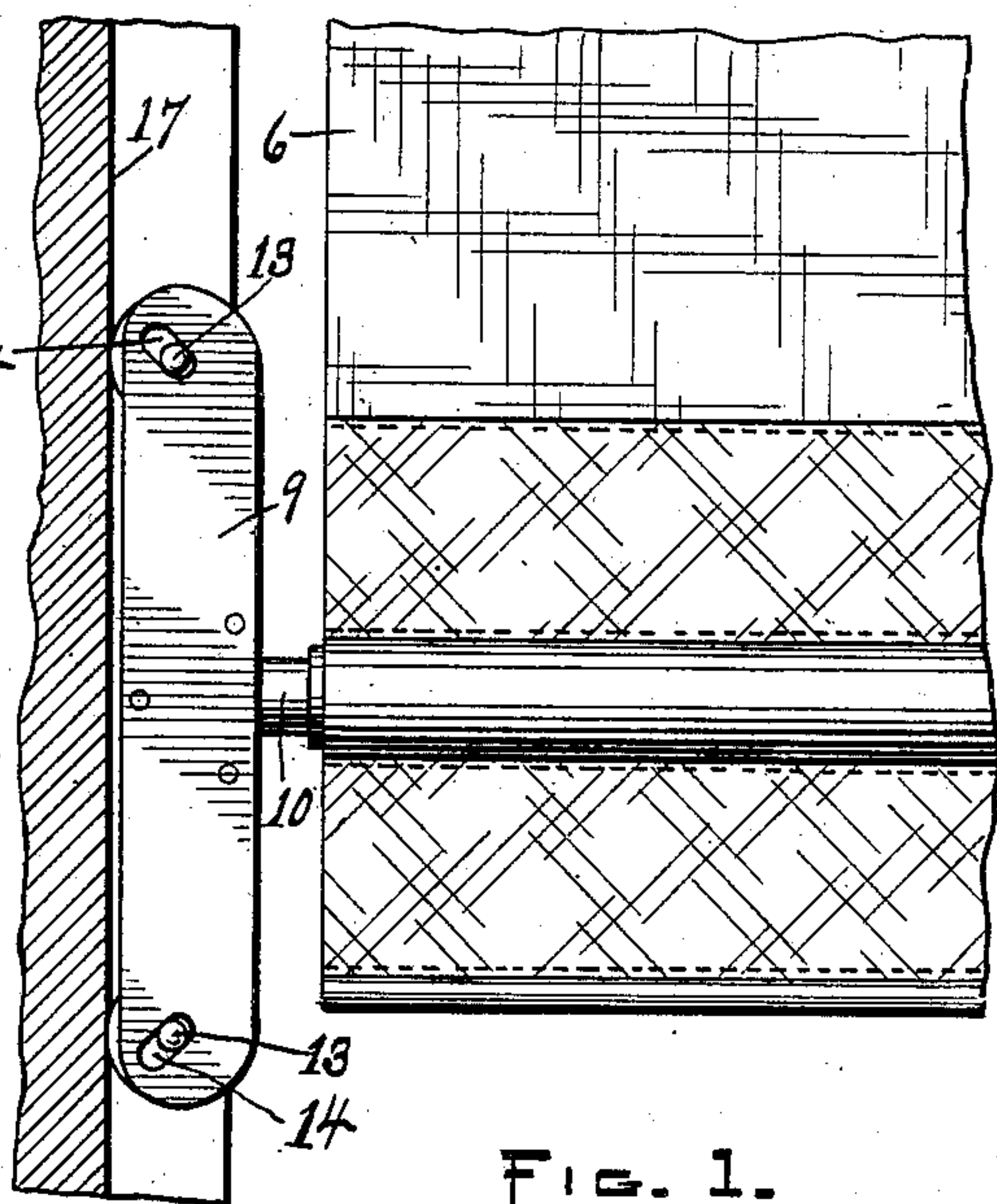


FIG. 1.

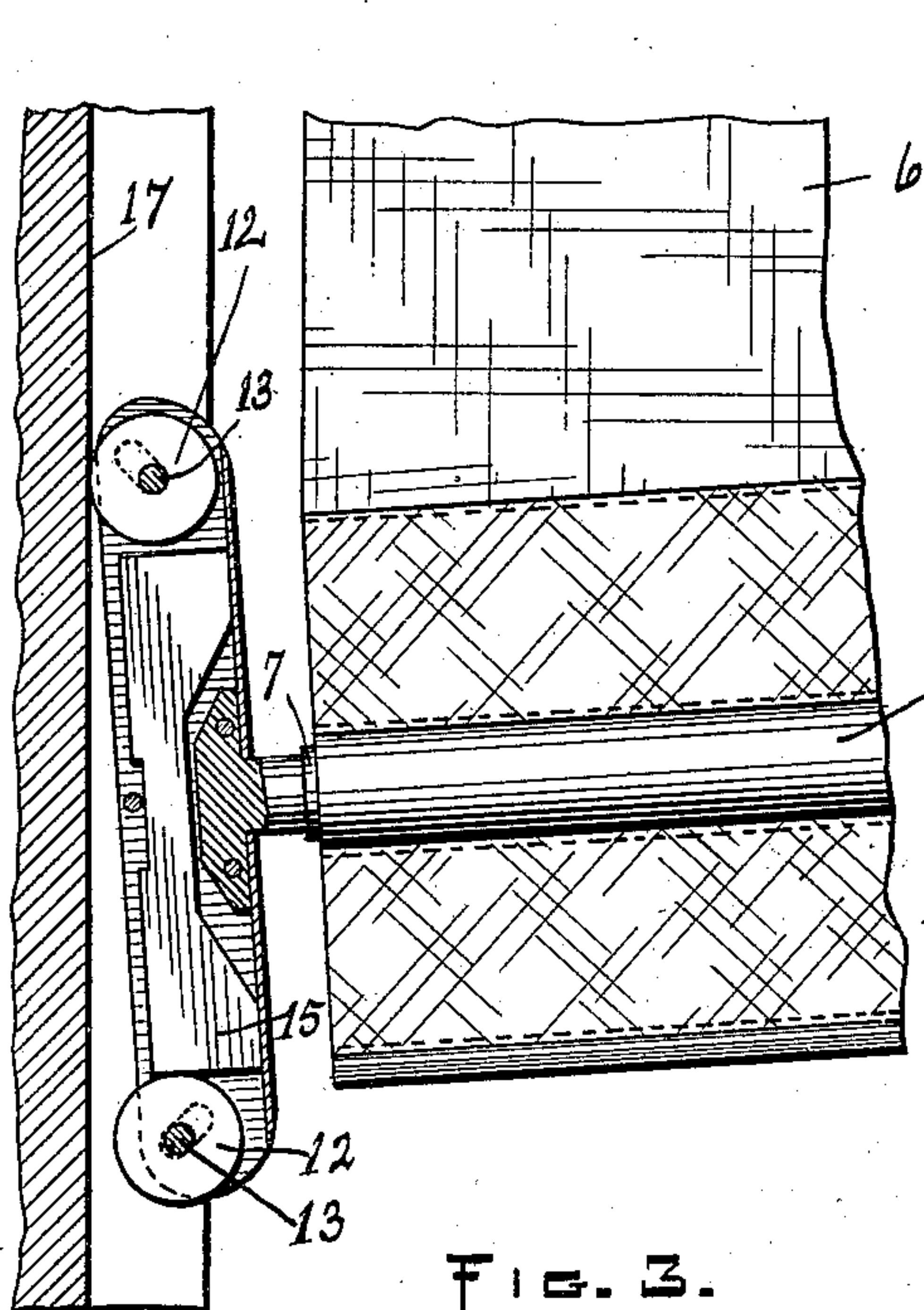


FIG. 3.

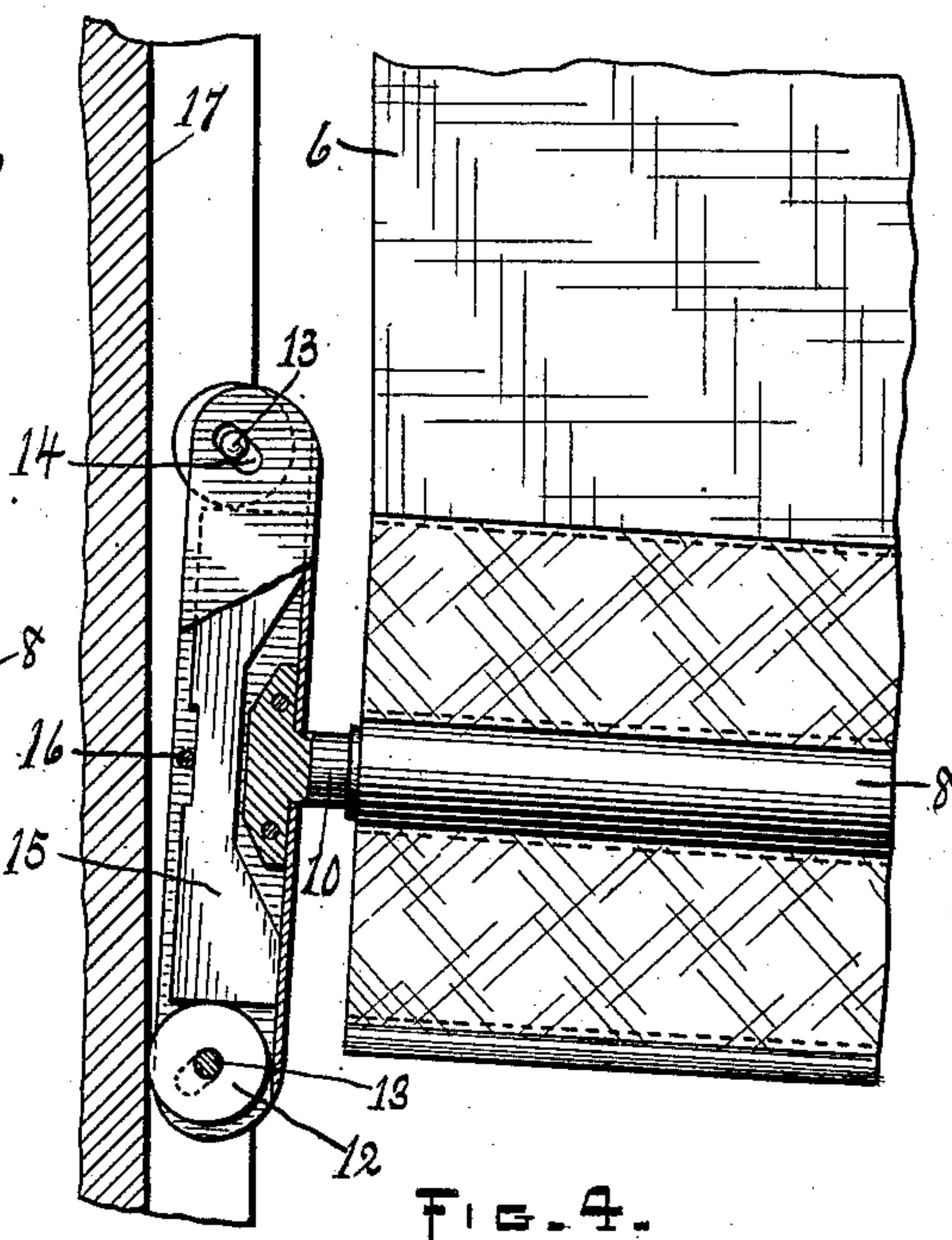


FIG. 4.

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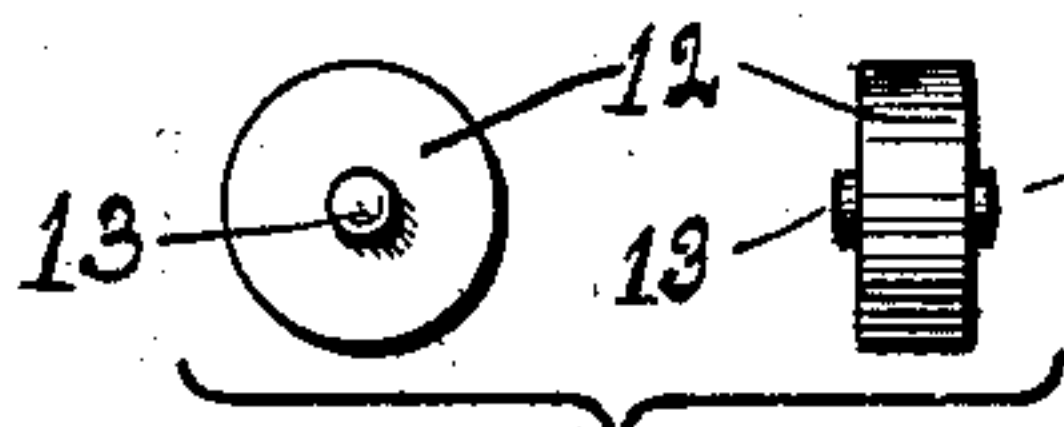


FIG. 5.

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# UNITED STATES PATENT OFFICE.

CHARLES L. HOPKINS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CURTAIN SUPPLY COMPANY,  
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## CURTAIN-FIXTURE.

No. 889,525.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed September 22, 1906. Serial No. 335,676.

*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-Fixtures, of which the following is a specification.

This invention relates to improvements in curtain-fixtures such as are secured to a spring-actuated curtain or shade, at or near the lower margin of the latter, and adapted to guide the same in its movement and to hold it at any desired point of adjustment against the upward pull of its spring roller.

The objects of my invention are to provide a device of this general class which is of simple construction and inexpensive to manufacture, which securely holds the curtain against upward movement, and which is capable of maintaining itself in its proper horizontal position under the careless and unskilful handling to which devices of this class are subjected.

Under the conditions met in practice on street and railway cars, where fixtures of this kind are extensively used, there is great liability of the device being canted up into an inclined position and either left in this position or thrown out of place, in the latter case the heads or "tips" of the fixtures coming out of the guideways or grooves in which they are designed to run. To fulfil perfectly the requirements of service in public vehicles the fixture should be so constructed that if it be attempted to adjust the device to a new position by grasping the stick near one end and moving it up or down the head at the opposite or free end of the fixture may move up or down as required to keep the stick level, thereby preventing the device from becoming canted or thrown out of the grooves.

In the device forming the subject of the present invention, I provide a tubular stick having outwardly-spring-pressed reciprocating heads, these heads being extended above and below the stick. At each extremity of a head I rotatively mount a wheel or roller adapted to bear upon the window-frame and provide means intermediate these rollers and extending from one to the other of said rollers through which said rollers act upon each other to prevent rotation while the device is

in its proper horizontal position. The rollers or wheels are thus made to serve as friction holding means to restrain the device and its curtain against their tendency to move upward under the influence of the spring-roller, it being understood that the latter is of the continuously acting type, as is usual where a holding device is employed at the lower part of the curtain. When the device is canted into an inclined position, so that one of the rollers upon each of the heads is caused to bear less firmly upon the window-frame, the roller at the opposite end of each head is permitted to rotate so that the device may maintain itself in a horizontal position, it being of the essence of my invention that both wheels of a head are braked against rotation by the action of each wheel upon the other, while both are firmly in contact with the window-frame, but when one of these wheels is tilted out of contact with the window-frame the wheels are released and permitted to rotate.

In the accompanying drawings, Figure 1 is a side elevational view of one end of my improved curtain-fixture, and a corner of a curtain, the device being in the normal or horizontal position. Fig. 2 shows a longitudinal section of the same. Fig. 3 shows the head in section, the device being tilted up so that the upper roller only is in engagement with the window-frame. Fig. 4 shows, partly in section and partly in elevation, this end of the device, but, as shown in this view, the device is tilted so that the lower roller only is in engagement with the window-casing. Fig. 5 shows, in side and edge elevation, the form of roller or wheel used in my curtain fixture.

In the several figures of the drawings, 6 is the curtain, carrying the tubular stick, 7, the latter being contained in a pocket 8 formed in the material of the curtain. 9 designates the head having the stem 10 fitting within the end of the stick 7 and adapted to move longitudinally therein. A spring 11, within the stick 7, is adapted to exert an outward thrust upon the stem 10 of the head 9. In each end of the head 9 is mounted a roller or wheel 12 having trunnions 13. The head is provided, near each of its ends, with inclined slots 14 which serve as elongated bearings for the trunnions 13 of the rollers 12.



The outward thrust of the spring 11 upon the stem 10 of the head 9 tends to cause the rollers 12 to move backwardly in their bearings 14 when the rollers are in contact with an opposing surface, and by reason of the fact that these bearings or slots converge toward the back of the head the wheels or rollers 12 tend to move not only inward but at the same time toward each other.

Slidably arranged within the head is an elongated member 15. This member is confined within the head by the pin 16, and is of such a length that when one of the rollers 12 is in engagement with each of its ends the trunnions 13 upon these rollers are nearly at the inner limit of their movement in the slots 14. By reference to Figs. 1 and 2, in which the device is shown in the normal or holding condition, it will be seen that when the heads are pressed squarely toward the window-frame 17 the wheels 12 are jammed inward and toward each other and are held in engagement with the ends of the sliding member 15. These wheels are thus prevented from rotating while the stick 7 is in its normal horizontal position, and act as friction-holding members to prevent the curtain from being drawn up by its spring rollers.

When the device is slightly canted the roller at one end of the head moves inward, while the roller at the opposite end thereof moves outward. A slight movement of the inwardly-moving roller carries the trunnions of that roller to the inner ends of the slots 14 in which the trunnions are supported. Any further tilting of the device must now result in the releasing of the wheels, as no braking pressure can be exerted by the loosely-mounted member 15 of itself, the braking pressure which is present when the device is level being a consequence of the fact that the member 15 is confined between two wheels that are being pressed toward each other. Obviously, when one of these wheels is at the limit of its movement toward the other and the pressure upon that other is relieved by tilting it out of contact with the window-frame, both wheels must be released.

If the device be grasped near one end of the stick and moved upward a very slight canting of the fixture will suffice to permit the upper roller in the head at the opposite end of the fixture to move to the inner limit of its movement, as shown in Fig. 3. Any further tilting relieves the pressure upon the wheel at the lower end of the head, and, consequently, also, the braking pressure communicated therefrom through the member 15 to the upper wheel. The upper wheel is therefore permitted to rotate and the spring roller draws up this end of the device as fast as the opposite end moves upward under the influence of the upward thrust of the hand of the operator, so that the device ascends

practically level. The degree of inclination shown in Fig. 3, wherein the lower wheel is wholly out of contact with the window-frame, occurs only when the device is forced into such a position by pushing one end of the fixture up and at the same time pulling the other end down. In this case, the device quickly rights itself when released.

Fig. 4 shows the head at one end of the device when the opposite end is pulled down. In this case the braking pressure of the member 15 is removed from the lower wheel and this end of the fixture moves down under the influence of gravity, as fast as the opposite end is drawn down by the hand of the operator. Of course, in this case the member 15 will continue to rest upon the top of the lower wheel by reason of its weight, but so far as interfering with the rotation of the wheel is concerned, this may be disregarded.

I claim as my invention:—

1. The combination with a stick, of outwardly spring-pressed heads at the ends of said stick, a roller mounted to have rotary movement in the upper end of a head, another roller mounted to have both rotary and bodily movement in and obliquely of the lower end of said head, and longitudinally movable means interposed between said rollers and adapted to be normally gripped therebetween and thereby to brake said rollers, for the purpose set forth.

2. The combination with a stick, of heads carried thereby, means for thrusting said heads outward, a pair of rollers in each of the heads, bearings for said rollers, said bearings being adapted to cause the rollers to move toward each other when both of said rollers are pressed against an opposing surface, and means interposed between said rollers and adapted to be gripped therebetween and to normally prevent rotation of said rollers.

3. The combination of a stick, a head at the end of said stick, means for pressing said head outward, a pair of rollers mounted in said head, said rollers being spaced apart and arranged to approach each other when moved inward in said head, and an elongated member interposed between said rollers and adapted to be normally pressed upon by both of said rollers, one at each end thereof, whereby the rotation of said rollers is prevented.

4. The combination of a stick, elongated heads at the ends thereof, elongated bearings in the ends of said heads, said bearings being inclined with relation to the direction of movement of the head along a window-frame, rollers supported in said bearings, and means in each of said heads having movement lengthwise of said head and normally engaging a roller at each of its ends, for the purpose set forth.

5. The combination of a stick, heads at

the ends thereof, a pair of rollers mounted in each of said heads, elongated bearings for said rollers, said bearings being inclined relatively to each other, and means interposed  
5 between said rollers and adapted to engage both of said rollers when the latter are pressed toward the inner ends of their bear-

ings, whereby said rollers are braked against rotation.

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Witnesses:

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