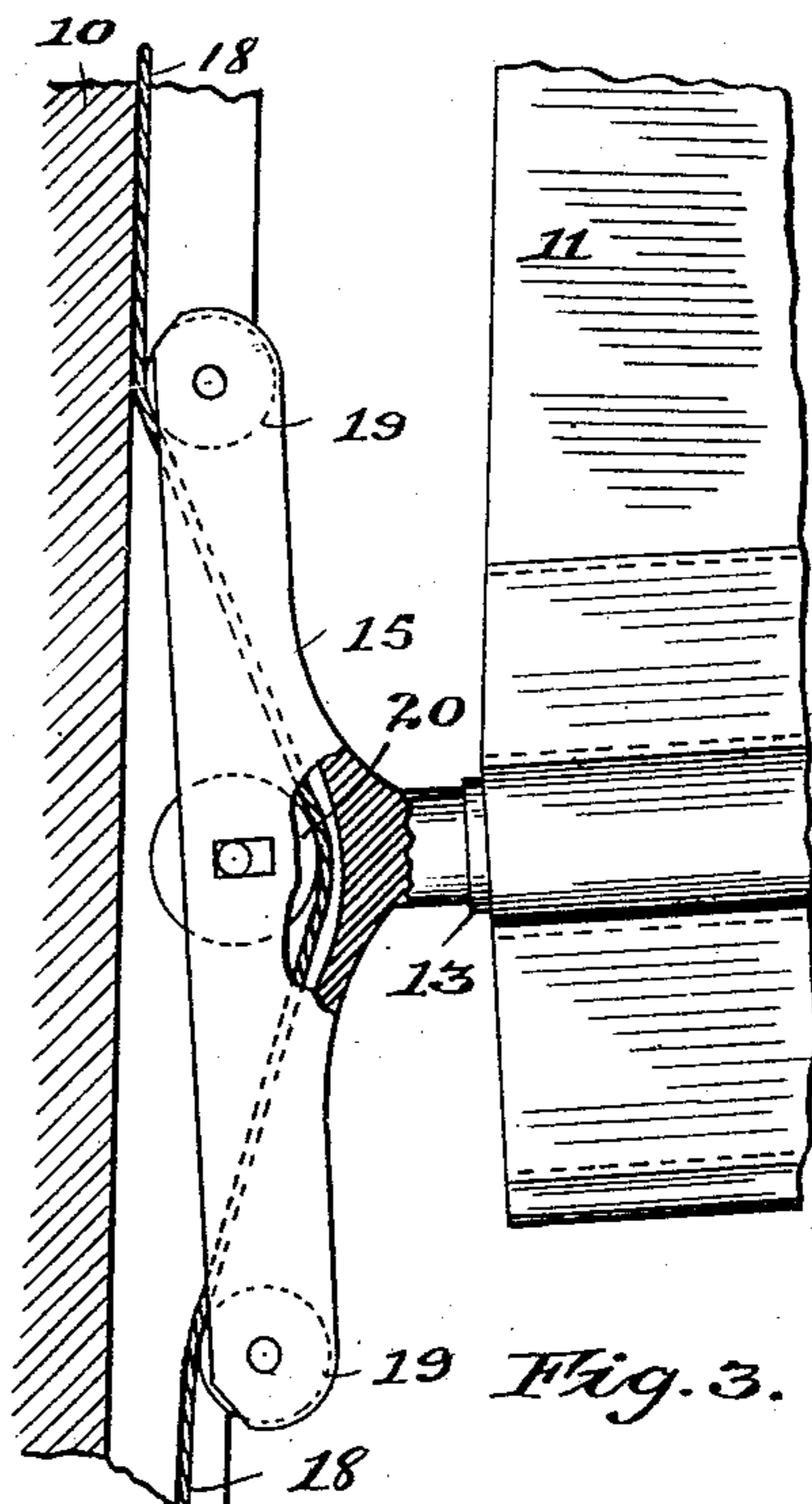
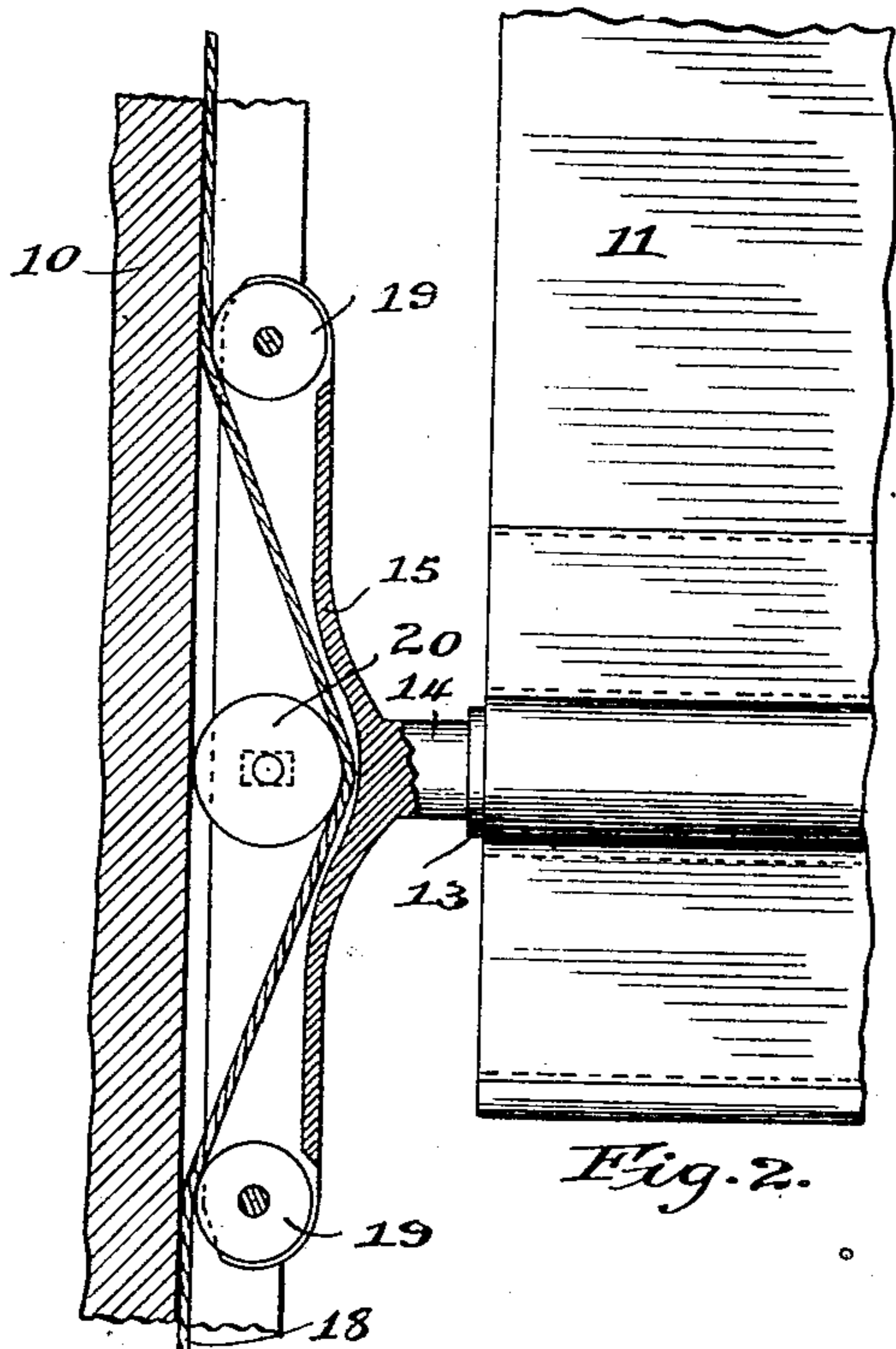
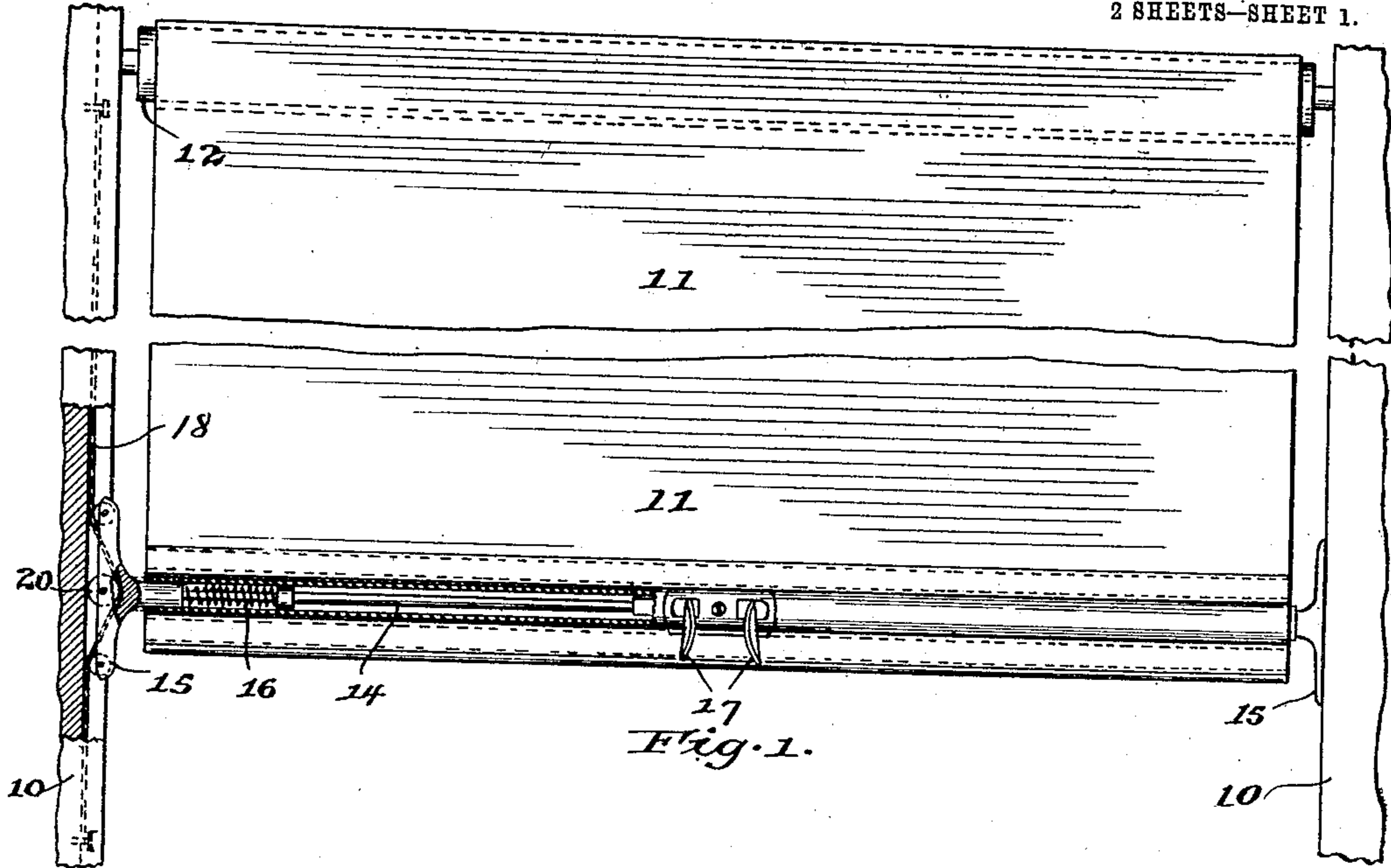


C. L. HOPKINS.
CURTAIN HOLDING DEVICE.
APPLICATION FILED OCT. 30, 1905.

911,982.

Patented Feb. 9, 1909.

2 SHEETS—SHEET 1.



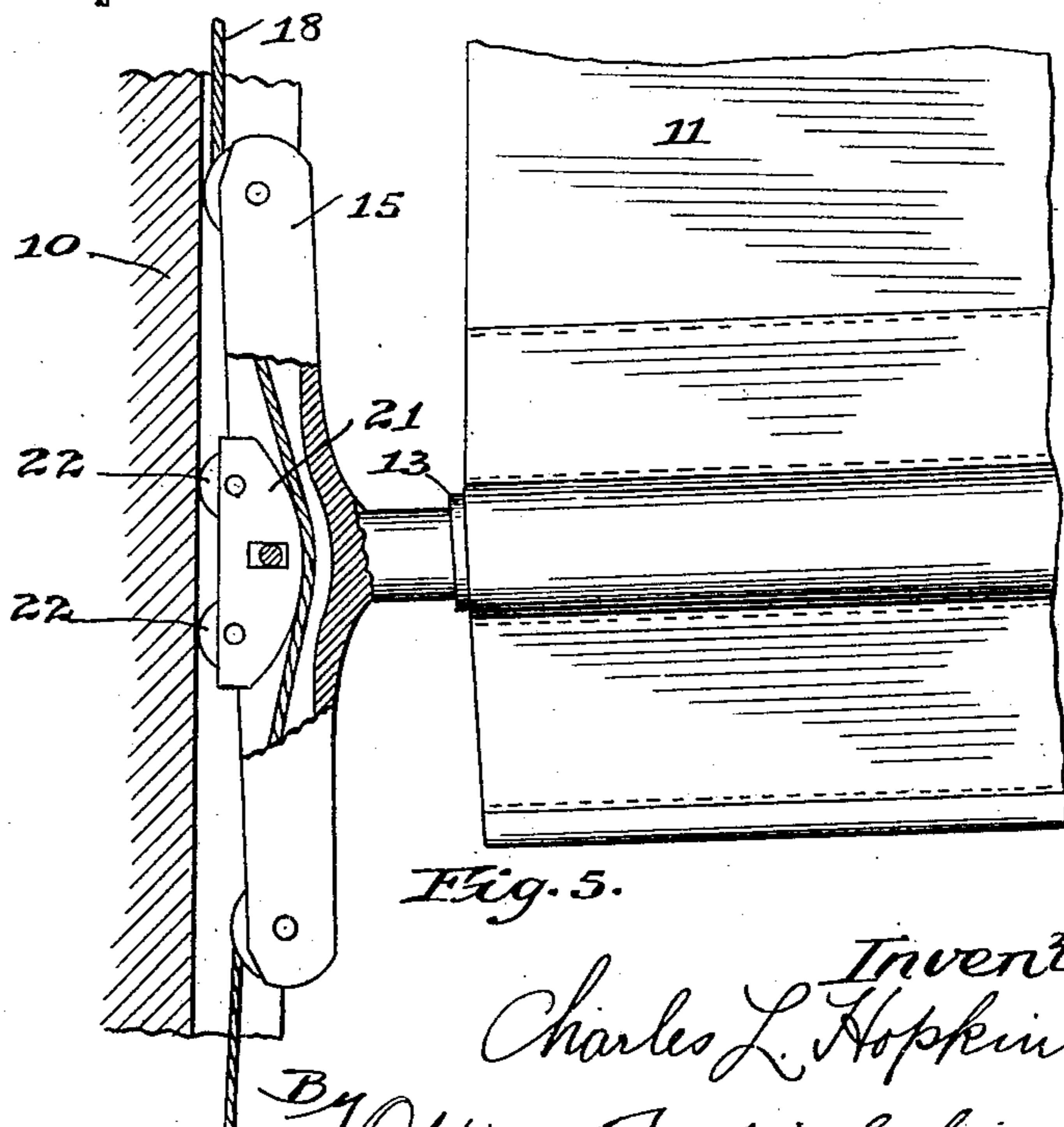
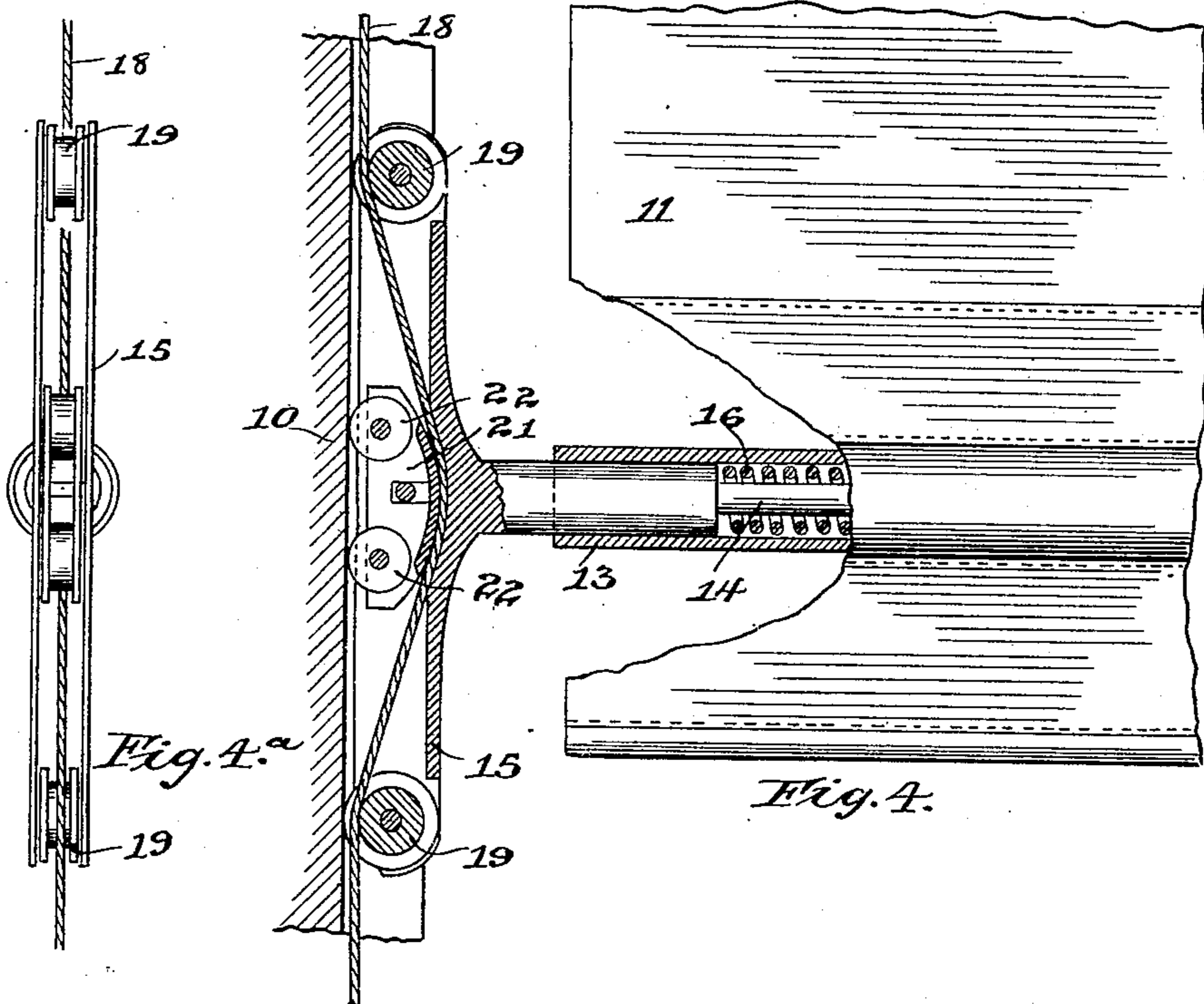
Witnesses,
J. E. Mann,
S. N. Pond

Inventor
Charles L. Hopkins
By Offield, Towle & Lutherman
Attys.

911,982.

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

Patented Feb. 9, 1909.
2 SHEETS—SHEET 2.



Witnesses,
J. D. Mann,
D. N. Ford

Inventor,
Charles L. Hopkins
By J. Offield, Towle & Lathrop
Attys.

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.

No. 911,982.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed October 30, 1905. Serial No. 285,025.

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 improvements in that class of devices which are adapted to be secured to a spring-actuated curtain or shade at or near the lower margin of the latter, to guide the latter in its adjustment to positions of varying elevation and to hold the same at any elevation at which it may be left.

More particularly this invention relates to that class of curtain guiding and holding mechanisms, wherein a curtain stick, carried by the curtain, is provided with tips or heads adapted to travel along grooves formed in or on the window frame as the curtain is raised or lowered. Such devices are of many types, but those that have come into practical use, are generally speaking, of two types. In one of these types the tips or heads are moved into holding engagement with the bottoms of the grooves by springs located within the stick, which is made hollow. Such devices are commonly provided with means, consisting of pinch handles, whereby the heads may be manually withdrawn from engagement with the bottoms of the grooves when it is desired to raise or lower the curtain. In the other of these types a flexible band, consisting usually of a cord or tape, extending vertically along the window casing, is relied upon to keep the device in its proper position and to hold the curtain against the upward pull of its spring roller. In the form of device of this type most commonly used the flexible bands pass through the tubular stick, being crossed therein, and the opposite ends of a band are secured at diametrically opposite corners of the window frame. These flexible bands, consisting of cords, tapes, or the like, are known as "squaring bands" and maintain the curtain stick in a horizontal position at all times. For use under certain conditions no other form of device has proven as satisfactory as this device using "squaring bands", but it is open to the objection that the bands are short-lived, owing to the fact that the friction of the band upon the tip or head is relied upon to furnish the

necessary holding power to prevent the curtain from running up under the influence of its spring roller. Furthermore, when it is desired to move the curtain up or down, it must be moved against the restraining force of the holding device, as there is no method whereby the device may be manually released, as by the manipulation of pinch handles.

Devices have been made in which the bands do not cross, each band extending wholly along one side of the window casing, means being provided that are adapted to grip the band to hold the curtain and to be disengaged from the band when it is desired to move the curtain up or down. All devices of this kind heretofore produced, so far as I am aware, are unsuited for practical use because of the fact that they are not capable of maintaining themselves in a horizontal position when improperly handled, or of returning to a proper horizontal position after being left in a canted or inclined position. These devices have, however, in common with the device employing squaring bands, a desirable feature—the heads or tips cannot be removed from the grooves.

The object of the present invention is the production of a curtain holding device employing flexible bands for retaining the heads in the grooves in which friction upon the bands is not excessive or destructive, which is self-aligning and self-righting, and which may be manually released for adjustment to positions of differing elevation. To this end I provide a tubular curtain stick secured to the curtain in any approved manner, near the lower edge of the latter. At each end of the stick I provide an elongated head, said head being adapted to have movement in a line parallel with the axis of the stick, and to be normally thrust outwardly by springs located within the stick. In each end of the head I journal an anti-friction wheel or roller, upon which the head may rock when the fixture is canted. I also provide a pair of flexible bands which lie in the grooves of the window casing. These bands may consist of round cords or cables or flat metal tapes. Each band is secured at one end to the upper part of the window casing, passes downwardly through a head and is secured at its opposite end to the lower part of the window casing. This band is adapted to be gripped when the device is in its normal horizontal position and

to be released when the device is canted and the head is rocked upon one of the anti-friction rollers.

In the accompanying drawings, I have shown some of the constructions and arrangements of parts which may be used in carrying out my invention.

In these drawings,—Figure 1 is a broken elevational face view of a window frame having fitted therein a curtain provided with my improved curtain holding device. The stop is broken away at one side of the window frame to expose to view the end of the device. Parts of the device are in section; Fig. 2 is an enlarged sectional view of one of the heads, with a fragment of the corner of the curtain, showing the parts in their normal positions; Fig. 3 is a broken view of the head in an abnormal position, showing the band released; Fig. 4 shows a modified form of the head; Fig. 4^a is an edge view of the same; and Fig. 5 shows the same form in the abnormal position.

In these drawings 10 is the side post of the window frame. The curtain 11 is mounted upon the spring roller 12, which is of the ordinary continuously acting type usually employed upon street and railway cars. The curtain stick 13 is carried in a pocket formed in the material of the curtain, and is tubular. Within the stick, and having lengthwise movement therein, is a rod 14 having at its outer end the head 15. Within the tube, and surrounding the rod 14 is a spring 16 adapted to thrust the rod and head outwardly. At the inner end of the rod I may use a pinch handle 17, by means of which the rod and head may be retracted when it is desired to move the curtain up or down. Extending vertically along the window frame, and normally lying against the bottom of the groove is a flexible band 18, the ends of which are secured to the window frame in any approved manner. In Figs. 2 and 3 this band is shown as a flat tape. In Figs. 4, 4^a and 5 the band is a round cord or cable. At each end of the head is an anti-friction roller 19. When the flexible band consists of a flat tape, as shown in Figs. 2 and 3, these anti-friction rollers will run on the tape, but when a round cable is used, as shown in Figs. 4, 4^a and 5 the rollers will be grooved, so that the roller may straddle the cable and engage the window frame. While I have shown a flat band in combination with one form of the device and a round band in combination with a slightly different form, it is to be understood that either form of band may be used with either form of the device by employing the proper anti-friction roller. Midway between the anti-friction rollers is a member adapted to have a limited movement in a direction parallel to the axis of the stick, and normally in contact with the bottom of the groove in the window

frame. In Figs. 1, 2 and 3 this is shown as a roller or wheel 20 having trunnions working in slots in the head. In Figs. 4, 4^a and 5 this member consists of a shell or box-like structure 21, carrying a pair of rollers 22, adapted to engage the window frame. In either case the band passes behind this movable member and is adapted to be gripped between the latter and the back of the head. By reference to Figs. 1, 2 and 4 it will be seen that as the head is thrust outwardly or toward the window frame, the movable member 20 or 21, will, under the resistance of the window frame, be pushed back against the band and will grip the latter between itself and the back of the head. Now if the device be canted into an abnormal position the head will assume the position shown in Figs. 3 and 5, the pressure upon the movable member 20 or 21, normally causing it to grip the band will be relieved, and the device will right itself.

It has been found in practice that if the device be grasped at or near one end of the stick and moved up or down the device will ascend or descend practically level, a very slight canting of the fixture being sufficient to cause the cable to be released. If one end of the device be forced up and the opposite end be pulled down the fixture will, when released, instantly assume a horizontal position.

While this device may be operated successfully without pinch handles I prefer to use them, as in most cases the persons using such a device will operate it by grasping the handles if they are provided. It is evident that if the handles be pressed together the pressure upon the bands will be relieved and the device released, when it may be moved up or down to adjust the curtain to any desired elevation. When the curtain is thus manipulated the friction is, of course, wholly removed, and any wear upon the bands that might result from forcing the device up or down without releasing the grip upon the bands is obviated.

By this invention a self-righting and self-aligning device is produced employing bands for retaining the heads in their grooves, in which excessive friction or wear upon the bands is removed. In this device the bands do not pass around sharp curves, consequently the bands are not inclined to crystallize in a short time, as is the case in the devices employing squaring bands. This device is more easily applied than those in which the bands are passed through the tubular stick.

I claim:

1. In a curtain-holding device, the combination with a window frame, of a stick, an elongated head at the end of the stick, spring means for thrusting the head outwardly, a flexible band extending along the window frame and passing through the head, means

within the head normally engaging the window frame and adapted to grip the band under the resistance of the window frame opposing the action of said spring means, and anti-friction means at each end of the head upon which the latter may rock when the stick is moved into a canted or inclined position.

2. In a curtain holding device, the combination of a stick, a head at the end of the stick, a band passing through the head, means in the head having movement in a line parallel with the axis of the stick, said means adapted to be thrust back under the resistance of the window frame and to clamp the band against the head, for the purpose set forth.

3. In a curtain-holding device, the combination with a stick, of a head at the end thereof, a member in the head movable transversely thereof and adapted to engage the window frame, and a band passing through the head and adapted to be normally gripped between the movable member and the back of the head, for the purpose set forth.

4. The combination of a stick, a head at the end of the stick, a spring for moving the head toward the window frame, a band passing through the head and means located in the head and movable therein adapted to engage the window frame and to be thrust

back into the head under the resistance of the window frame and to clamp the band against the head, for the purpose set forth.

5. The combination of a spring-actuated stick, an elongated head at the end of the stick, a band passing through the head, anti-friction members at the ends of the head, holding means in the stick between the anti-friction members, said means adapted to grip the band under the resistance offered by the window frame when the stick is in a horizontal position and to release the band when the stick is canted into an angular position and the head is riding on one of the anti-friction members.

6. The combination with a window frame of a stick, a head at the end of the stick, a flexible band extending along the window frame and passing through the head, and a wheel or roller carried by the head and engaging the window frame over which wheel or roller the flexible band runs, said wheel or roller adapted to act as an anti-friction member when the stick is inclined, and adapted to force the band against the head when the stick is in a normal horizontal position.

CHARLES L. HOPKINS.

Witnesses:

SAMUEL N. POND,

FREDERICK C. GOODWIN.