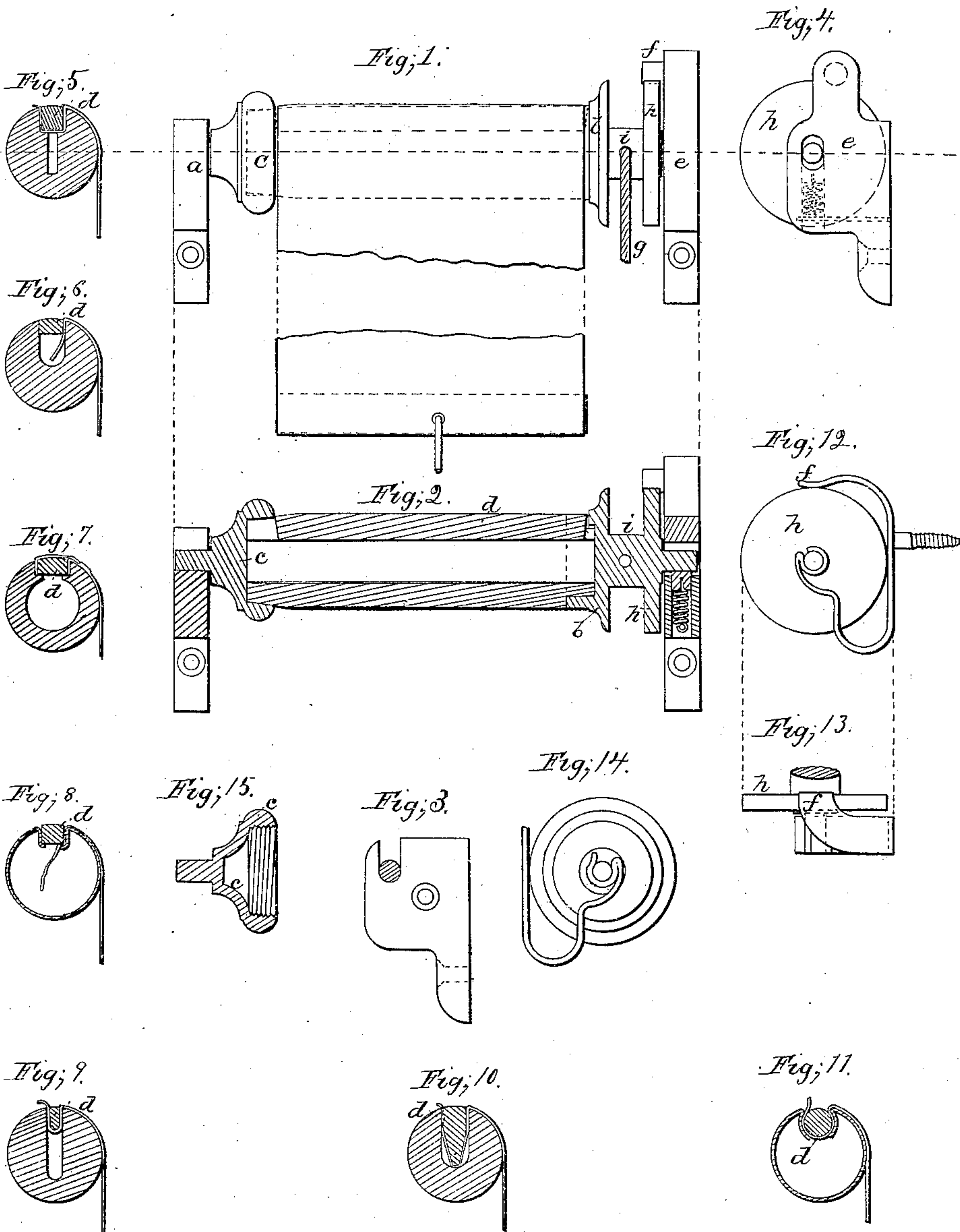


D. N. B. Coffin, Jr.,

Curtain Fixture.

N^o 18323.

Patented Oct. 6, 1857.



Witnesses;
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UNITED STATES PATENT OFFICE.

DAVID N. B. COFFIN, JR., OF NEWTON CENTER, MASSACHUSETTS.

CURTAIN-ROLLER.

Specification of Letters Patent No. 18,323, dated October 6, 1857.

To all whom it may concern:

Be it known that I, DAVID N. B. COFFIN, Jr., of Newton Center, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improved Curtain-Fixture; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification, and to the letters of reference marked thereon.

Explanation of drawings.—Figure 1, is a front elevation of a curtain and fixture. Fig. 2, is a vertical, longitudinal section through axis of roller, &c. Fig. 3, is a side elevation of a bracket viewed from inside. Fig. 4, is an elevation of the right hand end of the curtain fixture. Fig. 5, is a transverse section through the roller, curtain, and strip *d*. Fig. 6, is a transverse section through a roller showing one of a number of modifications of the shape of the space below the strip which may be made. Fig. 7, Fig. 8, and Fig. 9, show others. That in Fig. 8 being adapted in shape and proportions to be made of sheet metal. Fig. 10, shows another similar section showing a modification of the shape of the strip *d*. Fig. 11, shows another section of roll and strip adapted in form and proportions to be made of sheet metal. Fig. 12, shows an end view of the fixture in which the bracket is made of metal the lower part of the bracket being of suitable form and elasticity, to act as a spring as well as a support for the roll. Fig. 13, is a plan of the same bracket and the flange *h* of the pulley. Fig. 14, shows a bracket to match this and supporting the opposite end of the roll. Fig. 15, shows one of the caps in section with a screw formed on its inner surface.

Like letters indicate the same or similar parts in all the figures.

My improvement relates to the construction of the roller so as to secure a degree of elasticity by which the sides of the groove are made to act as a spring clamp or spring vise to hold the curtain with its strip and so obviating the inconvenience arising from the fact that the strips frequently vary in thickness so much as to make it difficult to force some of them into the groove as ordi-

narily constructed while others go in too easily. And so that the caps also may be made to compress the sides of the grooves upon the curtain and its strip thereby clamping the curtain doubly secure, and whereby I also avoid the necessity of fitting the caps over the ends of the strip as has heretofore been necessary to hold the strip in the groove. And so I am enabled more conveniently to fasten the curtain to the roll, and to use the entire length of the roll between the inner flanges of the caps, with the pulley cap permanently fast, which cannot be done when the strip is held in by fitting the caps over its ends.

It is usual in curtain fixtures where the grooved roll is used to fit the strip and groove to each other as near as practicable so that when the curtain with the strip is pressed into the roll they shall just fill the groove. But as the groove is made shallow so that the sides are rigid it must frequently occur that the strip with the curtain more than fills the groove, and from different causes sometimes imperfection in adapting the size of the strip to that of the groove and at other times variation in the thickness of the cloth, &c., so that it becomes quite difficult to force them into the groove, but what is still worse the strip is sometimes too small with the curtain to fill the groove (it is very liable to be so because with the rigid sides of the common groove it must not exceed a certain size else it could not be pressed in at all whereas it might readily be pressed in to the elastic roll) in which case there is no provision for effectually keeping it in for the caps fitted over the ends of the strip though they keep the ends of the strip in do not provide for the middle, the strip never being made nor can it be made except by the aid of my improvement stiff enough to hold its own middle in, and again as before intimated it is always desirable that the cap which is connected with the pulley should be permanently glued or otherwise fastened to the roll. Now the end of the strip which is to be held in by this cap in the usual manner has to be slipped under it before the strip with the curtain is pressed into the groove, but to do this it will be seen that the curtain cannot occupy the roll close

to the flange of the pulley or cap, by considerable, so that this space is lost, whereas with my improved method in which the strip does not extend under the caps at all
 5 and in which there is no need of its doing so, the curtain can occupy the entire length of roll between the flanges, can also be applied with facility, and be held with certainty as I will proceed to explain. And
 10 first, I make the roll, if of wood about the usual size, and the part of the groove which is near the surface of the roll of about the usual size. Then I remove enough of the central portion of the roll so as to avail
 15 myself of the natural elasticity of the wood, and so that thereby the sides of the groove near the surface where the strip will press against them may bear to be forced apart somewhat or clamped nearer together by
 20 forcing on the caps. See section of roll, curtain, and strip Figs. 5, 6, 7, 9, and 10.

To one end of the roll I fit a cap *b*, connected to which is the pulley *i*, for the cord. This cap is fitted on to the end of the roll,
 25 or a tenon thereon reduced somewhat from the full size as see Fig. 2. This cap I prefer to glue on permanently as then it will always run true, the other end of the roll is cut off to the proper length when it is being
 30 fitted to the window, and a cap *c*, with a socket slightly smaller than the diameter of the roll so as to be sure the roll shall fill is fitted on, but this socket or the end of the roll or both are made a little tapering so that
 35 when the cap is pressed on it shall clamp or spring the sides of the groove toward each other so clamping the curtain and its strips. The strips should be made sufficiently wide to fill with the curtain and groove, because if
 40 a strip should be a little too large the sides of the groove will yield and let it in. In putting in the strip and curtain the cap *c* should be removed and then the end of the curtain laid upon or in the groove, after
 45 which the end of the strip should be placed against the flange on cap *b*, to bring it in the proper position lengthwise; then the opposite end should first be pressed in with, or by the side of, the curtain as the sides of
 50 the groove yield more easily at that end, after which it will enter and press in readily all along to the extreme end next to the fast pulley after which the cap *c*, being pressed on to the end of the roll the whole is securely
 55 clamped. The pulley cap *b*, may be left off till the curtain and strip are put in if so preferred, in which case it will make no difference which end of the strip is pressed in first. It is well where the roller is very long to
 60 make the strip *d*, a little wider or thicker in the middle so as to spread the groove a little more in the middle than at the ends which may render more perfect the clamping of it and the curtain in the mid length
 65 of the roll.

When the end of the curtain has a hem the strip may be put through it as shown in Fig. 7. Without the hem it may be clamped on both sides of the strip as shown in Figs. 5, 9, 10, and 11. But a neater way is to drop
 70 the end of the curtain right into the space in the roll and clamp it only on one side of the strip as shown in Figs. 6, and 8. With my elastic roll it will be held securely either
 75 way and may be done as conveniently one way as the other. The way last named in which the end of the curtain is out of sight is the neatest and cannot conveniently be adopted except with my improvement for
 80 two reasons, the want of the central space, and the clamping device to render it sufficiently secure and which will allow of one thickness of cloth as well as two or more at pleasure.

Fig. 10, shows the inner corners of the strip chamfered which some might prefer as it could be pressed in when the pulley cap *b*, is permanently fast to the roll without regard to which of the ends were pressed in first.
 85 90

Figs. 8 and 11, represent the sections of two rolls of different forms both of which are made of sheet metal such as tin, zinc, etc. Fig. 8, shows a wood strip such as those in the wood rolls. In Fig. 11, the
 95 sides of the groove are concave and a round strip is used. In either of these cases the rolls being of metal would have sufficient strength and elasticity so that the curtain and its strip would be clamped sufficiently
 100 secure though the caps were dispensed with and the pulley and journals attached in the most simple manner.

Fig. 15, shows a cap of metal having an internal screw, so that it may be screwed
 105 on to the wooden roll forming its corresponding screw as it is turned thereon to clamp the roll. The pulley cap *b*, may well be provided with a screw like this when made of metal.
 110

Fig. 3 shows the bracket *a*, in which is an additional screw hole by which it may be attached to the jamb casing of the window if desired, the other bracket *e* being provided with a similar one and attached in
 115 the same manner. The usual way of applying the brackets however is to the face casing or architrave as indicated by the screwholes shown in Figs. 1 and 2. Each of the caps *c*, and *b*, have small journals
 120 or pivots which form the axles of the roller.

Being aware that the grooved roll and strip as ordinarily constructed have long been known and used and are therefore public property I of course do not claim either of
 125 them, and being also aware that the holding of the strip in the groove by means of caps fitted over its ends, is covered by Letters Patent, I do not claim, nor shall I use that as I have invented, described, and shall
 130

claim a much superior method; but having
given such illustration, description and ex-
planation of my improvements as I deem
sufficient to enable the Office, and others
5 skilled in such matters to understand the
nature, construction and operation thereof,
I will proceed to state what I claim as my
invention and desire to secure by Letters
Patent as follows:

I claim—

The grooved roll made elastic substan-
tially as described, and so clamping the cur-
tain and its strip with or without the caps.

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Witnesses:

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