

E. H. DUCHEMIN.
CURTAIN.

APPLICATION FILED OCT. 22, 1902.

NO. MODEL.

Fig. 1.

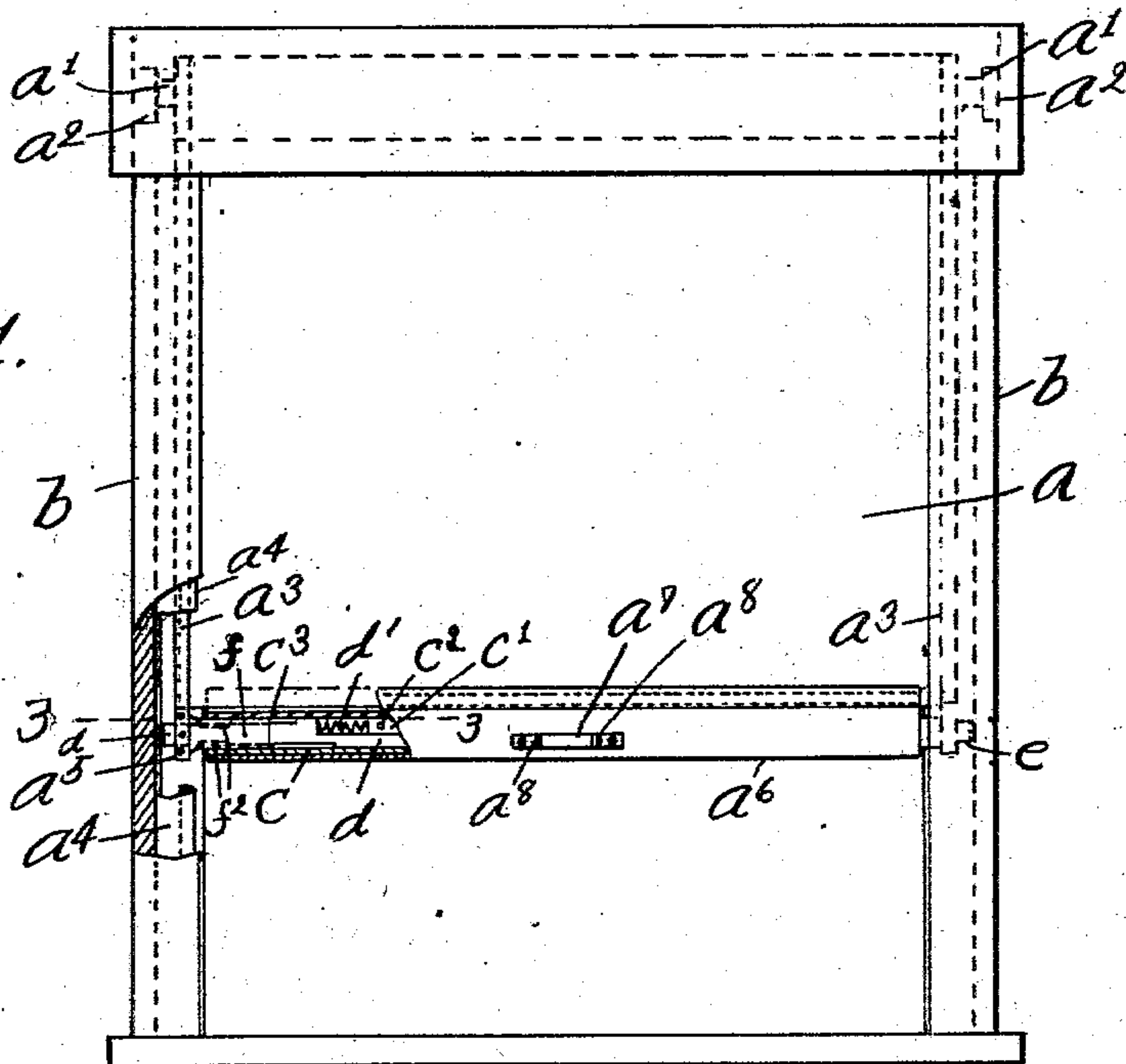
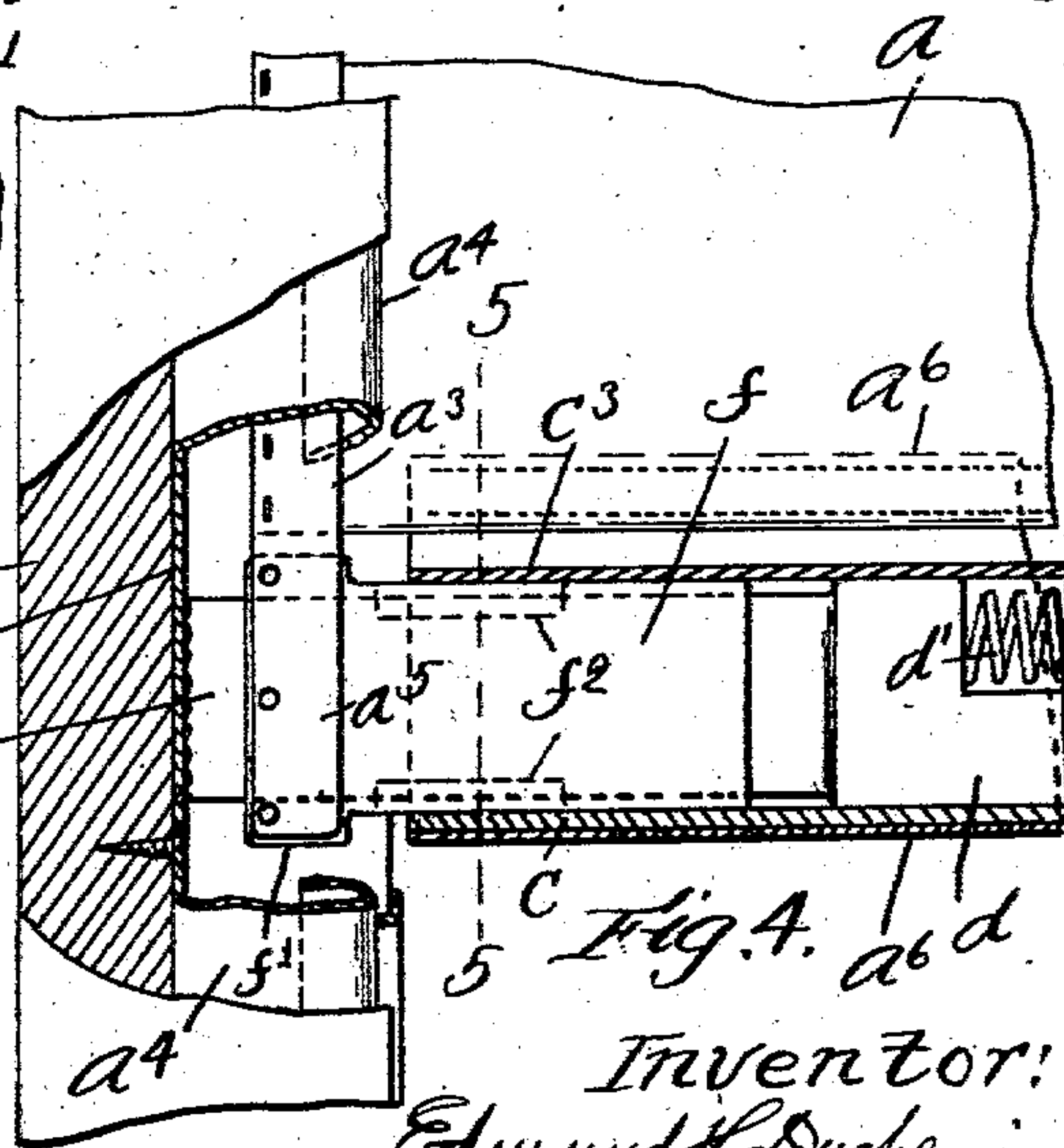
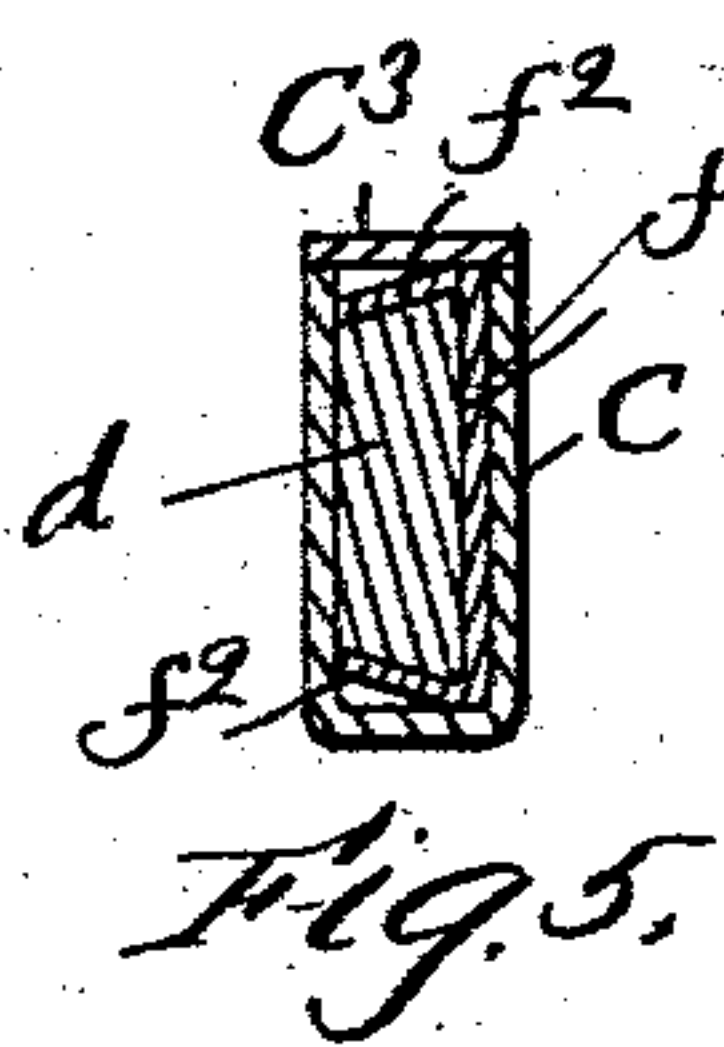
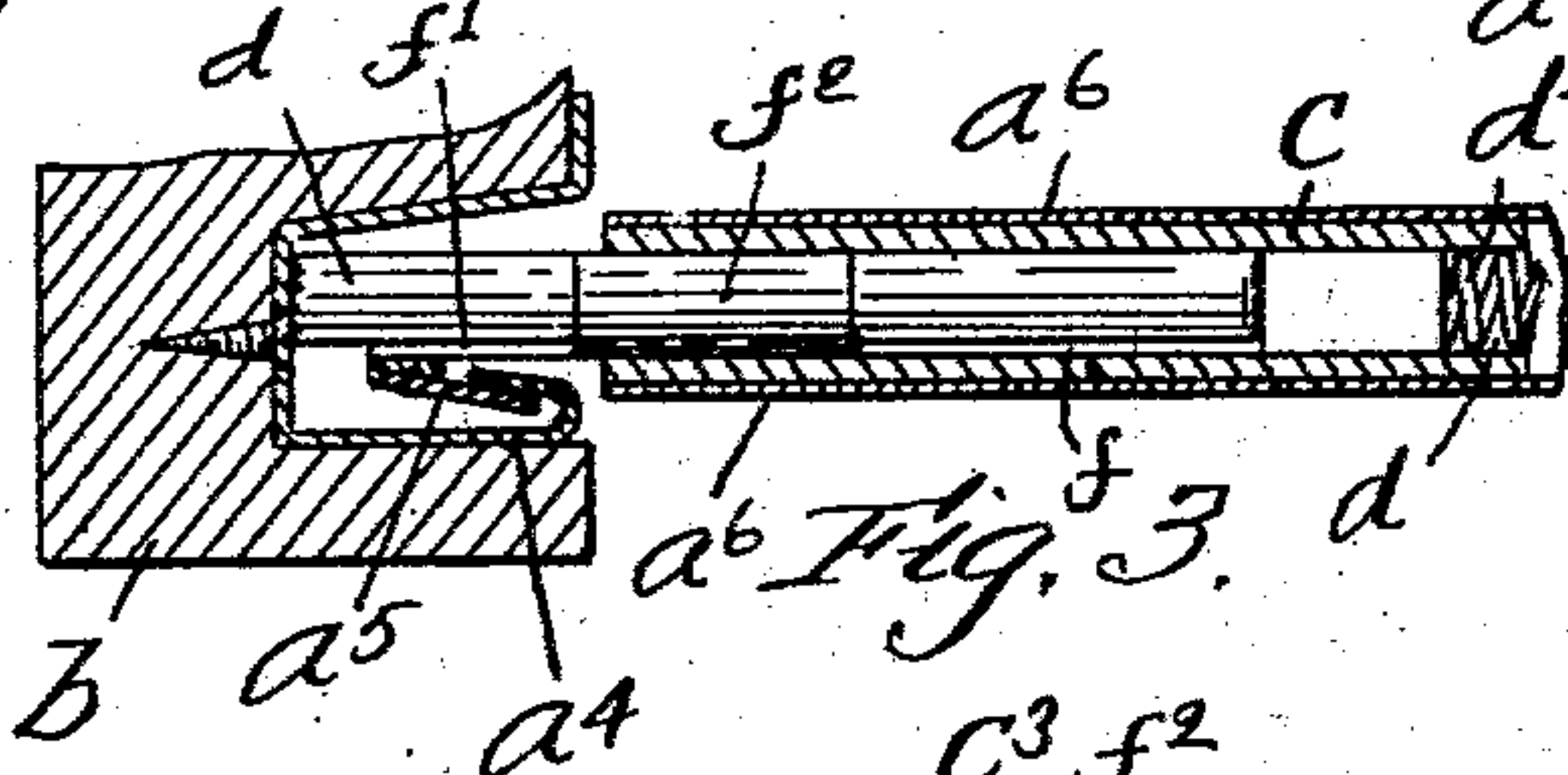
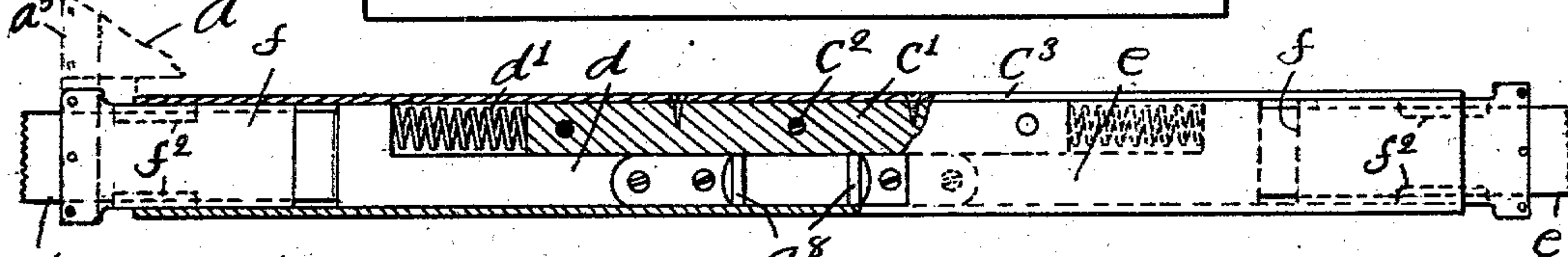


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDMUND H. DUCHEMIN, OF NEWARK, NEW JERSEY.

CURTAIN.

SPECIFICATION forming part of Letters Patent No. 730,442, dated June 9, 1903.

Application filed October 22, 1902. Serial No. 128,335. (No model.)

To all whom it may concern:

Be it known that I, EDMUND H. DUCHEMIN, of Newark, county of Essex, State of New Jersey, have invented an Improvement in Curtains, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to curtains specially adapted for use on open street-cars, and has for its object to provide a curtain with an improved and simplified form of locking device for holding the curtain in whatever position it may be set, locking devices of this general type being ordinarily known as "pinch-bars;" and my invention also has for its object to construct said improved locking device or pinch-bar in such a manner that it may be applied to a curtain—such, for instance, as is shown in my application for Letters Patent Serial No. 84,354—said curtain having flexible holding-strips laid upon the lateral margins thereof, which are secured thereto at their outer edges and which are free or unattached at their inner edges and which hook over stationary means—as, for instance, slideways, which are provided for slidably engaging them.

Figure 1 shows in front elevation a curtain provided with a locking device or pinch-bar embodying this invention. Fig. 2 is a longitudinal vertical section of the locking device or pinch-bar shown in Fig. 1, the parts thereof being in their normal positions in engagement with the upright side walls of the slideway to thereby lock the curtain. Fig. 3 is a horizontal section of a portion of the locking device, taken on the dotted line 3 3, Fig. 1. Fig. 4 is an enlarged view of a portion of the curtain and its support broken away to show in elevation one end of one of the wall-engaging bars of the locking device or pinch-bar. Fig. 5 is a vertical sectional detail of one of the wall-engaging bars, taken on the dotted line 5 5, Fig. 4.

Referring to the drawings, *a* represents the curtain, which is suspended from an ordinary spring-roller, the journals *a'* of said roller having their bearings in suitable supports *a''*, provided for them, and *b b* represent the upright side walls of the casing.

The curtain *a* has flexible holding-strips *a³*

laid upon its lateral margins, which are secured thereto at their outer edges and left free or unattached at their inner edges.

a⁴ represent stationary slideways attached to the casing at each side thereof, each slideway having a hook which hooks over or engages the free or unattached edge of the flexible holding-strip.

At the lower edge of the curtain each flexible holding-strip *a³* is extended, as at *a⁵*, and said extension serves as an end support for the locking device or pinch-bar.

The curtain *a* has at its lower edge a loop *a⁶*, which extends from side to side thereof, the ends of said loop terminating just inside the extension of the flexible holding-strips, and said loop serves as the receptacle and support for the locking device or pinch-bar, to be described, and said loop has a front opening *a⁷*, through which project the finger-pieces *a⁸ a⁹*, which are employed to operate the two wall-engaging bars of the locking device.

c represents a metallic U-shaped shell, which is made long enough to extend from side to side of the curtain *a*, terminating just inside the extensions of the flexible holding-strips or substantially flush with the ends of the loop *a⁶*. At the upper part of but within the shell *c* a strip or bar *c'* is secured, which is located about midway the length of the shell, (see Fig. 2,) but which does not extend from end to end thereof, and said strip or bar is attached to the shell by rivets *c²* or otherwise, being thereby stationarily supported.

A narrow flat strip *c³* is attached to the top of the strip or bar *c'*, which extends from end to end of the U-shaped shell, being thereby held securely in place and inclosing the moving parts which are contained within the shell. Two oppositely-sliding wall-engaging bars *d e* are contained in the shell *c*, which are formed alike, or substantially so, and end supports are provided for said sliding wall-engaging bars, which are also formed alike, or substantially so. The sliding wall-engaging bar *d* for a portion of its length is made of suitable width to slide freely in the shell *c* and for a portion of its length to slide feely in the shell *c* beneath the strip *c'*, being cut away for the purpose of thus passing beneath said strip *c'*. By cutting away the bar *d* in order that it

may pass freely beneath the strip c' a shoulder is formed, against which one end of a spring d' bears, the opposite end of said spring bearing against one end of the stationarily-supported strip or bar c' . The action of the spring d' is to thrust outwardly the sliding wall-engaging bar d . The bar d projects out of and beyond the end of the shell c and through a suitable end support connected with the extension of the flexible holding-strip and is serrated at its end to better engage the wall of the slideway.

As an end support for the sliding wall-engaging bar d a sheet-metal plate f is provided, the outer end of which, as f' , is attached to the extension of the flexible holding-strip, and said end supporting-plate is made of suitable size and shape to enter the shell c for a short distance, being disposed alongside of the sliding wall-engaging bar d , and said end supporting-plate has two lips f^2 bent over or disposed to present a dovetailed slideway for the end of the sliding bar d , which latter is properly formed or shaped to enter and slide freely in the end supporting-plate thus provided for it. The end supporting-plate being thus attached to the extension of the flexible holding-strip and entering the shell c , it will be seen that it is stationarily supported.

By the construction herein shown and described it will be seen that the finger-pieces a^8 project forward instead of downward, and consequently the curtain can be lowered to the bottom of the window-frame, and, further, that the pinch-bar can be applied to a curtain having flexible holding-strips at the sides.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a curtain having flexible holding-strips at the sides, stationary means which hook over and slidably engage said strips, extensions on the lower ends of said strips, end supporting-plates attached to said extensions, and oppositely-sliding wall-engaging bars supported at the lower edge of the curtain, which slidably engage said end supporting-plates, substantially as described.

2. The combination of a curtain having flexible holding-strips at the sides, stationary means which hook over and slidably engage said strips, extensions on the lower ends of said strips, a supporting-frame at the lower edge of the curtain, oppositely-sliding wall-engaging bars contained in said frame, and end supporting-plates attached to said extensions, which enter the supporting-frame alongside of the sliding wall-engaging bars which slidably engage said bars, substantially as described.

3. The combination with a curtain having flexible holding-strips at the sides, stationary means which hook over and slidably engage said strips and supporting-plates attached to said flexible strips and oppositely-sliding wall-engaging bars supported at the lower edge of the curtain which slidably engage said end supporting-plates, substantially as described.

4. A locking device for a curtain consisting of a U-shaped shell connected to the lower edge of the curtain, a strip contained therein and fixed thereto, a pair of oppositely-sliding wall-engaging bars also contained in said shell, each having a wall-engaging end portion, a spring acting upon each bar and a finger-piece attached to the inner end of each bar which projects through a hole in the shell, substantially as described.

5. The combination with a curtain provided at its lower edge with a loop, a U-shaped shell contained in said loop, a strip contained in said shell and fixed thereto, a pair of oppositely-sliding wall-engaging bars also contained in said shell, each formed to provide a wall-engaging end portion, a spring acting upon each bar located between the bar and fixed strip, and a finger-piece attached to the inner end of each bar which projects through a hole in the shell and also through a hole in the loop, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDMUND H. DUCHEMIN.

Witnesses:

B. J. NOYES,
MAUD M. PIPER.