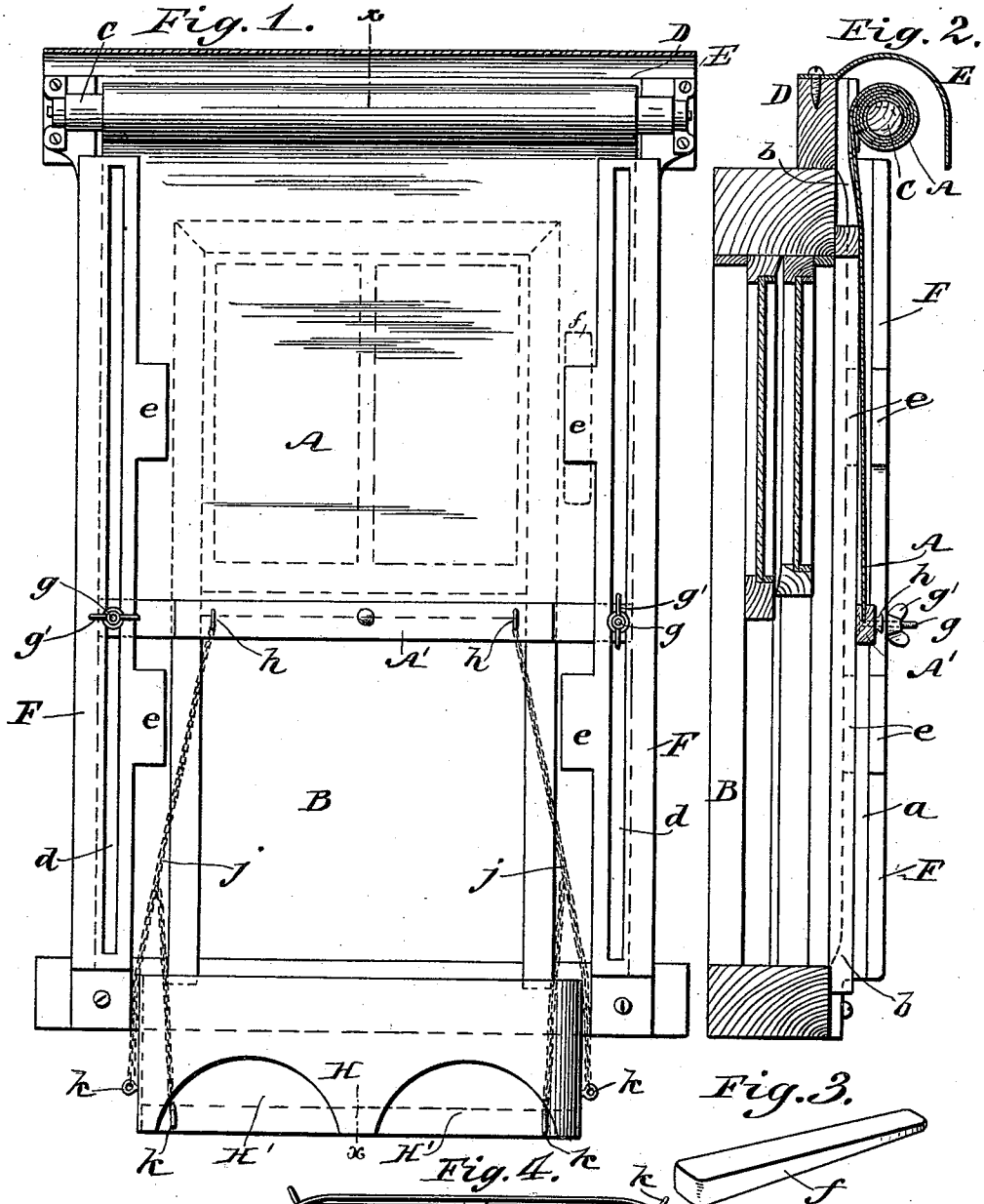
(No Model.)

W. F. BEAN, F. W. DUNNELL & G. B. NOYES.

FIRE PROTECTOR.

No. 450,595. Patented Apr. 14, 1891.



WITNESSES:
John W. Beemer
C. Sedgwick

INVENTORS,
W. F. Bean
F. W. Dunnell
G. B. Noyes
BY Munn & Co.
ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIE F. BEAN AND FREDERICK W. DUNNELL, OF SPRINGFIELD, AND GEORGE B. NOYES, OF LAWRENCE, MASSACHUSETTS.

FIRE-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 450,595, dated April 14, 1891.

Application filed March 29, 1890. Serial No. 344,627. (No model.)

To all whom it may concern:

Be it known that we, WILLIE F. BEAN and FREDERICK W. DUNNELL, of Springfield, in the county of Hampden and State of Massachusetts, and GEORGE B. NOYES, of Lawrence, in the county of Essex and State of Massachusetts, have invented a new and Improved Fire-Protector, of which the following is a full, clear, and exact description.

Our invention relates to improvements in that class of fire-protectors that are designed to prevent a fire from spreading.

It is well known that when a building takes fire from an adjoining building it is very frequently, and, in fact, usually, by the flames passing through the windows. This is caused by the fact that the glass breaks quickly under the excessive heat and a draft is created through the open windows, and the flames following the draft quickly ignite the building.

The object of our invention is to obviate this difficulty by providing the windows of a building with a curtain that will be a non-conductor of heat, and that may be quickly drawn, so as to protect the window.

To this end our invention consists in a curtain attached to the outer wall of the building, so as to shield a window thereof.

This construction will be hereinafter fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the device applied to a window. Fig. 2 is a vertical section of the same, with the car removed, on the line *x x* of Fig. 1. Fig. 3 is a detailed view of the wedge by which the curtain is tightened and retained in a desired position from the inside of the building. Fig. 4 is a plan view of the safety-car.

The curtain A is made preferably of asbestus cloth, that being a poor conductor of heat and being nearly indestructible; but it may be made of metal or of any suitable material. It should be wide enough to overlap the sides of the window B and long enough to extend well above and below the same. It is suspended from an ordinary spring-actuated roller C, which is like the usual curtain-roller, except that it is larger and stronger. The roller C is attached at the cornice D of the window and is protected from the weather by a guard E, which is attached to the cornice D above the roller C, and which is curved in such a manner that it will completely shield the roller. The lower end of the curtain A has a curtain-stick A′ attached thereto, the ends of which project into the grooves *a* of the frames F, as also do the edges of the curtain.

The frames F, which should be made of metal, are attached to the building or window-frame on each side of the window B, and extend a little above and below the same, are curved outwardly at the points *b* near the upper and lower ends thereof, so as to bring them well outside the window-frame, and carry at their upper ends the bearings for the roller C. The frames are each provided with a groove *a* on the inner edge, which grooves extend the entire length thereof, and in which moves the curtain A and curtain-stick A′, and with a vertical slot *d* on its front face, which extends the entire length thereof and which opens into the groove *a*. The frames F are also provided upon the inner side—that is, the side next the window—with laterally-projecting lugs *e*, arranged in pairs at intervals upon the frames. The lugs *e* are upon each side of the groove *a*, arranged opposite each other, as shown.

A wedge *f* is used in connection with the lugs *e* to fasten the curtain from the inside of the building, as described below.

Attached to each end of the curtain-stick is a bolt *g*, which projects through the corresponding slot *d*, and is provided upon its outer end with a thumb-nut *g′*, which, when tightened upon the bolt, will draw the end of the curtain-stick A′ against the frame F and hold the curtain-stick and curtain A in position. The curtain-stick A′ has also upon its outer side hooks *h*, which are firmly attached thereto, and from which the car H may be suspended by means of the chains *j*. The car H is preferably of an oblong form with a flat bottom; but it may be made in any desired shape and of any suitable material. The car is provided near the ends with eyes *k*, to which the chains *j* are attached, and with openings H′ in the

sides near the bottom, so that the people in the car may, if they choose, sit upon the floor of the car and allow their limbs to hang through the opening H'. The car when not in use is kept in a convenient place inside the building, and should be large enough to hold several persons at one time.

The spring of the curtain-roller should be adjusted in such a manner that it will roll up the curtain unless the same is fastened below.

The device is operated as follows: When the fire is in an adjoining building, the curtains upon the side of the building next the fire are pulled down from the inside and are fastened by forcing wedges *f* between the lugs *e* and the curtain A. When the building to which the curtain is attached is on fire, the curtains may be drawn from the inside if the fire has not obtained much headway; otherwise they may be drawn by firemen on the outside of the building and fastened by the bolts *g* and nuts *g'*. When the building is on fire and the inmates find other means of escape cut off, the car H is attached to the curtain, the people in the building step into car H, and the weight of the car and its occupants will hold the curtain down. They will thus be able to wait in safety until assistance arrives.

It will be seen that by means of our attachment the progress of the fire may be retarded, and that by means of the safety-car the inmates of a burning building may escape, so that there will be little danger of loss of life.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In a fire-protector, the combination, with a curtain, of a frame provided with longitudinal grooves and slots in its side pieces, and bolts secured to the stick of the curtain, projecting through the slots of the frame and provided with thumb-nuts, substantially as described.

2. In a fire-protector, the combination, with a curtain, of a frame provided with longitudinal grooves in its side pieces and with laterally-projecting lugs, and wedges fitting between the lugs and curtains, substantially as described.

3. A fire-protector consisting, essentially, of a curtain, of asbestus, metal, or other suitable material, attached to a spring-actuated roller above a window of a building, so that it may be drawn over the same, a frame attached to the building on each side of the window, having a vertical groove in which the curtain and curtain-stick run, a vertical slot opening into said groove, and lateral lugs projecting in pairs on each side of the curtain, bolts attached to the curtain-stick and projecting through the slots of said frames, having suitable nuts by which the curtain may be fastened from the outside, and wedges to fit between the curtain and the lugs of the frame and fasten the curtain from the inside, substantially as described.

WILLIE F. BEAN.
FREDERICK W. DUNNELL.
GEORGE B. NOYES.

Witnesses:
GEORGE LEONARD,
WILBUR B. STONE.