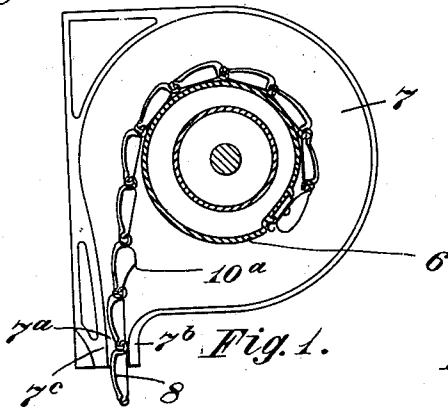
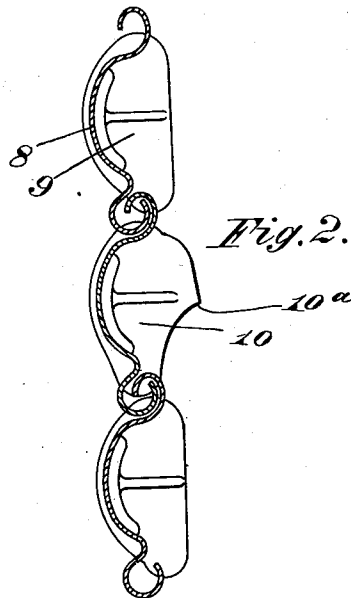
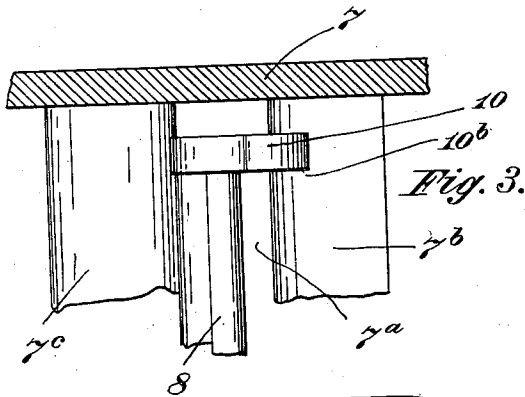
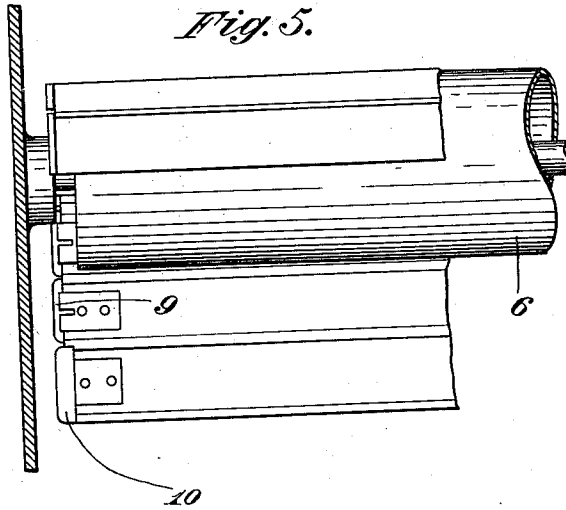
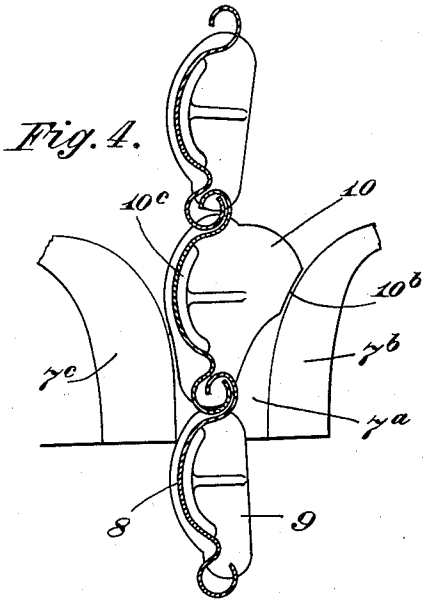


E. H. McCLOUD.
FIRE RESISTING CURTAIN.
APPLICATION FILED MAR. 4, 1908.

Patented Jan. 9, 1912.

1,014,315.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD H. McCLOUD, OF COLUMBUS, OHIO.

FIRE-RESISTING CURTAIN.

1,014,315.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed March 4, 1908. Serial No. 419,209.

To all whom it may concern:

Be it known that I, EDWARD H. McCLOUD, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Fire-Resisting Curtains, of which the following is a specification.

The object of this invention is to provide means supplemental to that of the roller adapted to suspend the shutter or curtain in its lowered position, so that if the temper of the spring in the roller is weakened or lost, or if the roller itself should sag, the shutter or curtain may still be held in substantially its proper protecting position.

The invention consists in the details of construction substantially as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings showing embodiments of the invention—Figure 1 is a vertical section of a roller with a piece of shutter rolled partially thereon, in connection with an end bracket in which one end of the roller is supported; Fig. 2 is a vertical sectional view on a larger scale of a piece of metallic shutter of the species that is made up of slats and provided with end locks to keep the slats from slipping longitudinally on each other, said view showing one of said end locks according to my invention; Fig. 3 illustrates in horizontal section and plan how an end lock engages the mouth of the curtain passage of an end bracket; Fig. 4 illustrates the same thing in elevation; Fig. 5 is a detail in side view illustrating the edge of a shutter of the kind referred to, containing a special end lock.

In the views 6 designates the roller, which may or may not be of the spring counter-balanced kind, as may be desired.

7 designates the end bracket, two of which,—rights and lefts—are affixed to the wall, and between which the roller is horizontally supported to turn. The end brackets are each provided with a contracted mouth 7^a, formed by suitable fixed inward projections, as at 7^b and 7^c, through which the edge of the shutter or curtain 8 travels vertically and is guided as it is wound up on and unwound from the roller.

9 designates the ordinary end locks, which are secured to the ends of slats for the purpose before indicated. These ordinary end

locks are of a width permitting them to pass freely through the mouth 7^a of the end bracket as the shutter is raised and lowered.

10 designates my special end lock, which has a width greater than that of the ordinary end lock and so as to afford a lug or stop, as best illustrated at 10^a Figs. 1 and 2 and at 10^b Figs. 3 and 4, to engage the mouth or guide of the end bracket and preclude it from passing down through the mouth of the end bracket. The special end lock is secured to the outer edges of the slat in the same manner as the ordinary end lock, that is to say, it has a shank 10^c by which it may be riveted to the end of the slat. A special end lock is secured to the opposite ends of the same slat in the shutter and at a point in the shutter near its top, and in the path of the projecting guides 7^b and 7^c so that the shutter will be supported by said enlarged end locks when the shutter is lowered to window or door closing position, and especially should there be a subsequent slight sagging of the shutter when subjected to the softening heat of fire.

The special end locks, it will be observed, are in the nature of projections from the edge of the shutter, and they may be made in a variety of forms. I have shown two forms, which are best depicted in Figs. 2 and 4. In Fig. 2 the right-hand or inner side of the special lock is shown as sharp pointed, as seen at 10^a, and in Fig. 4 the corresponding side of the special lock is shown as blunt. In either case the enlargement precludes the further passage of the shutter downward, as best suggested by Fig. 4. In the form shown by this view the liability of the special locks to become wedged in the mouth is lessened.

The special end locks, herein so called, may or may not, as desired, subserve the function of preventing longitudinal slipping of the slats on each other.

In order to avoid an offset in the coil by reason of the projection of the special end lock, the length of the roller on which the shutter or curtain is wrapped can be made shorter than the slats, thus permitting the special end lock to overlap the end of the roller and project in toward the center line of the roller.

What I claim and desire to secure by Letters Patent is:

1. In a fire resisting curtain, the combina-

tion with end brackets, a roller mounted therein, and a vertically movable shutter mounted upon said roller, of rigid inward projections on said brackets embracing the edges of said shutter and serving to guide said shutter in its movements, and enlargements on the edges of said shutter arranged in the path of said rigid inward projections and normally carried by the shutter in line with said projections and adapted to engage said projections to support the shutter when in its lowered or closed position.

2. In a fire resisting curtain, the combination with end brackets, a roller mounted therein, and a vertically movable slatted shutter mounted upon said roller and provided with end locks upon its opposite vertical edges, of rigid inward projections on said brackets embracing and guiding the edges of said shutter and permitting the free passage of the end locks therebetween, one of said end locks upon each edge of the shutter being of greater width than the others and arranged upon the opposite ends of the same slat, and in the path of said inward projections and adapted to engage

said projections to support the shutter in its lowered or closed position.

3. In a fire resisting shutter, the combination with end brackets, a roller mounted therein, and a vertically movable slatted shutter of slightly greater width than the length of the roller and provided with end locks upon its vertical edges, of rigid inward projections on said brackets embracing and guiding the edges of said shutter and permitting the free passage of the end locks therebetween, one of said end locks upon each edge of the shutter being of greater width than the others and arranged upon the opposite ends of the same slat and in the path of said inward projections, and adapted to engage said projections to support the shutter in its lowered or closed position, the said end locks of greater width adapted to overlap the ends of the roller when the shutter is rolled thereon.

EDWARD H. McCLOUD.

Witnesses:

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