Oct. 4, 1927. 1,644,646

R. H. GREEGOR

FIRE RESISTING CURTAIN

Filed Jan. 9, 1923 2 Sheets-Sheet 1

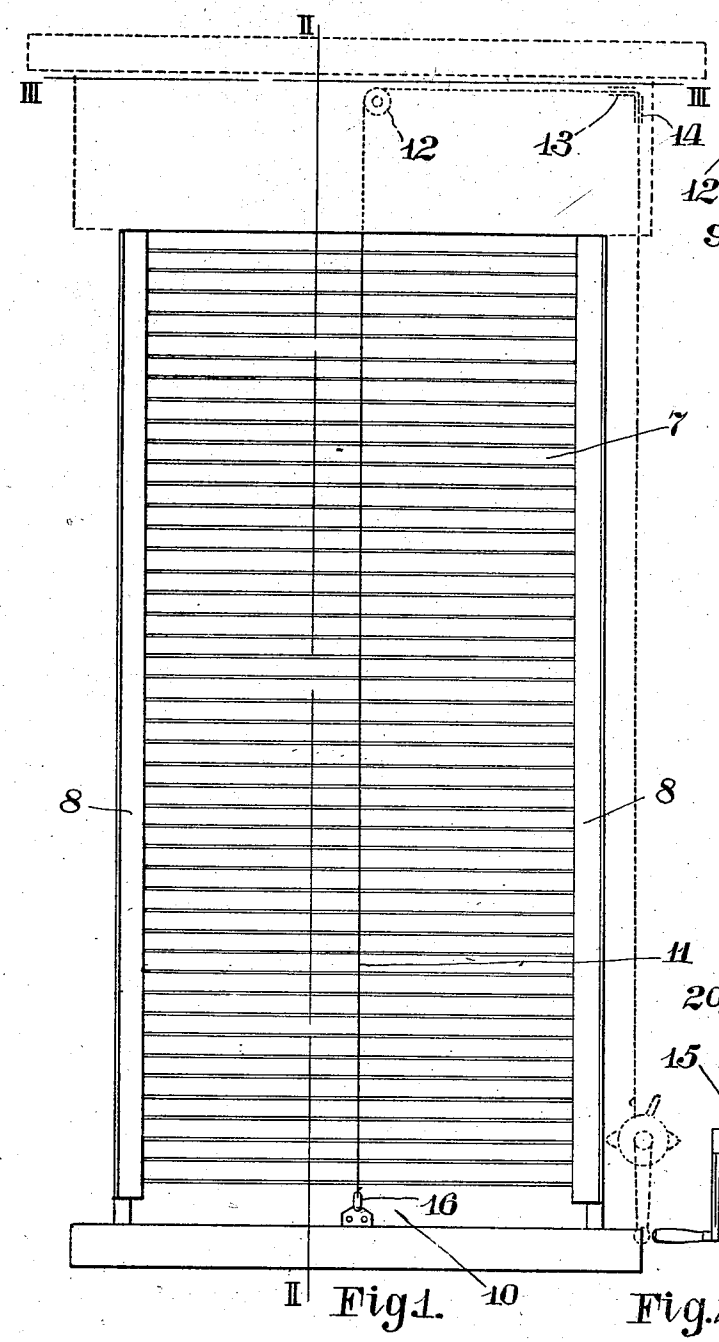

Fig. 1.

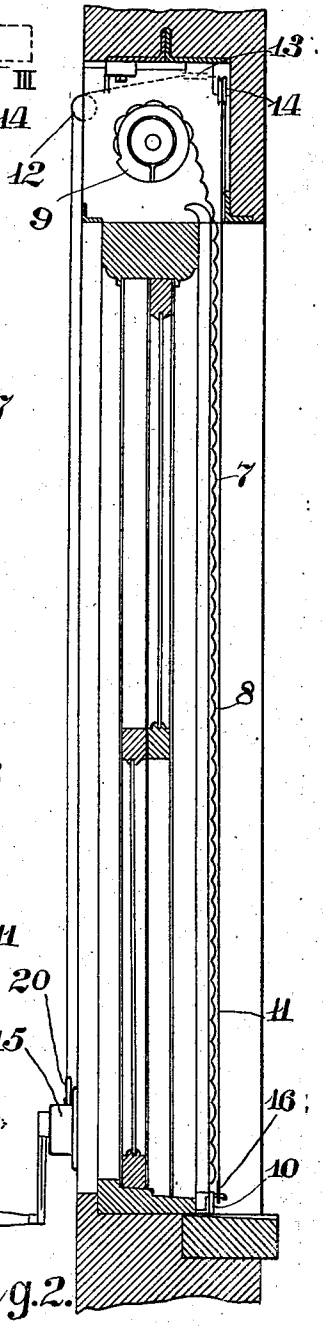

Fig. 2.

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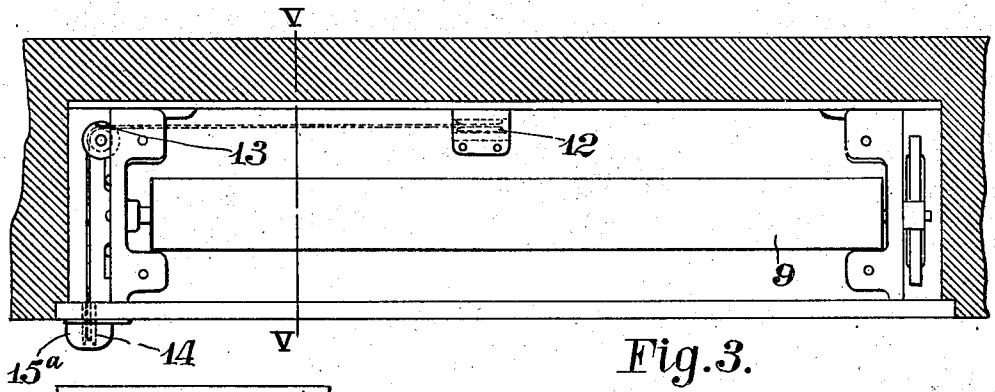

Fig.3.

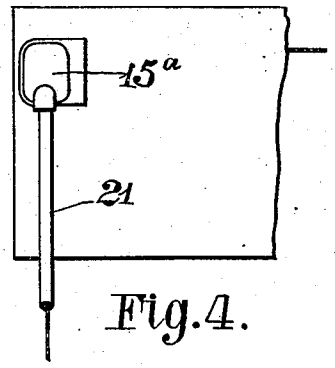

Fig.4.

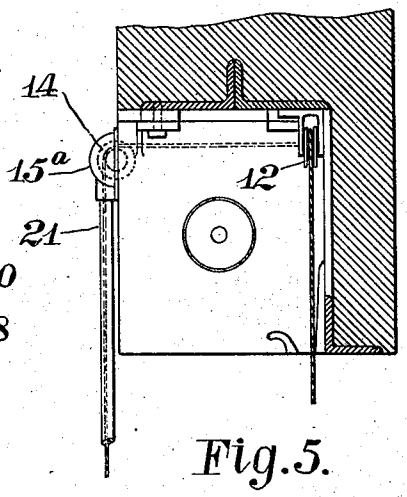

Fig.5.

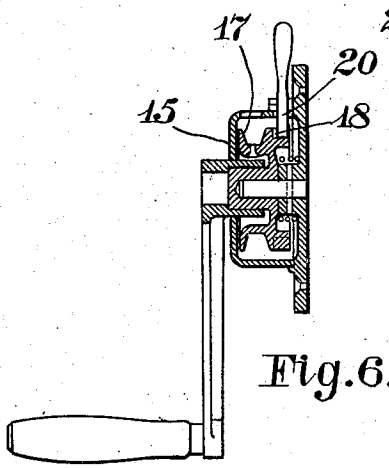

Fig.6.

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Patented Oct. 4, 1927. 1,644,646

UNITED STATES PATENT OFFICE.

RALPH H. GREEGOR, OF COLUMBUS, OHIO, ASSIGNOR TO THE KINNEAR MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

FIRE-RESISTING CURTAIN.

Application filed January 9, 1923. Serial No. 611,595.

This invention relates to the type of fire resisting rolling curtain that can be raised and lowered at will and also automatically released for closing by gravity upon an undue rise of temperature such as occasioned by near-by fire.

The object of the invention is to provide improved means for raising and lowering the curtain, such means including thermally released means in very simple form whereby the thermally released means is constantly exposed for action in case of fire.

The invention is embodied in the example herein shown and described, the features of novelty being finally claimed.

In the accompanying drawings—

Figure 1 is a view in front elevation of a curtain equipped with the invention.

Fig. 2 is a vertical sectional view on the line II—II Fig. 1.

Fig. 3 is a horizontal section on a larger scale on the line III—III Fig. 1.

Fig. 4 is an interior view of the left hand end of Fig. 3.

Fig. 5 is a vertical section on the line V—V Fig. 3 on a larger scale of the housing at the top of the opening showing a modification.

Fig. 6 is a vertical sectional view of the cable winding device on a larger scale.

In the views 7 designates the curtain which is constructed of slats traveling at its vertical edges in channels 8 and attached at its upper end to a suitable winding roller 9 journaled in suitable bearings in the upper part of the opening to be closed. Attached to the middle of the bottom bar 10 of the curtain is a cable 11 that extends upward across the front or exposed side of the curtain, around pulleys 12, 13 and 14 and thence downward at the side of the window frame in interior of the building to a suitable drum at 15 for winding and unwinding the cable. The cable is provided with a fusible link 16 where it is hooked to the bottom bar of the curtain so that when said link is fused the connection of the cable with the bar is severed. Where the cable emerges into the interior of the building it can be enclosed in a tube 21 terminating in a hood 21ª that also incloses the pulley 14 at the point of emergence. The cable winding drum includes a cable receiving portion 17 and to which the cable is attached and ratchet portion 18 in a suitable housing the drum and ratchet being operated by means of a suitable crank 19. A latch or dog 20 engages the ratchet portion 18 for holding the drum in the position to which turned. The curtain is raised only to a position where the fusible link is left exposed and the curtain is held in that position by the dog 20 engaged with a tooth of the cable winding drum. The curtain can be, for testing purposes or otherwise, lowered by the action of gravity by simply releasing the dog 20 or the curtain will automatically close from the raised position upon the melting of the fusible link 16 which action releases the curtain sustaining cable and permits the action of gravity on the curtain to lower it.

While I have shown the curtain as installed in connection with a window opening, obviously it can be used in connection with an opening of other name where my invention would be useful.

The forms of the parts can be changed without departing from the gist of the invention as claimed.

What I claim is:

1. In combination with a rolling fire resisting curtain for a building, a curtain operating cable attached to the lower portion of the curtain and extended over the front thereof, said cable containing thermally controlled means for releasing its connection with the curtain in case of fire, and means whereby said cable may be secured to hold the curtain in raised position.

2. In combination with a rolling fire resisting curtain for a building, a curtain operating cable attached to the lower portion of the curtain and extended over the front thereof to the interior of the building, said cable containing thermally controlled means near its point of attachment with the curtain for releasing its connection with the curtain in case of fire, means for operating

said cable to raise and lower it, and means whereby said cable may be secured to hold the curtain in raised position.

3. In combination with a rolling fire resisting curtain, an operating cable attached to the lower portion of the curtain and extended upward across the face of the same and thence to a point of attachment within reach of an operator, said cable containing a fusible member near its point of attachment with the curtain whereby in case of fire the cable may be released to permit the closing of the opening in which the curtain is installed.

RALPH H. GREEGOR.