

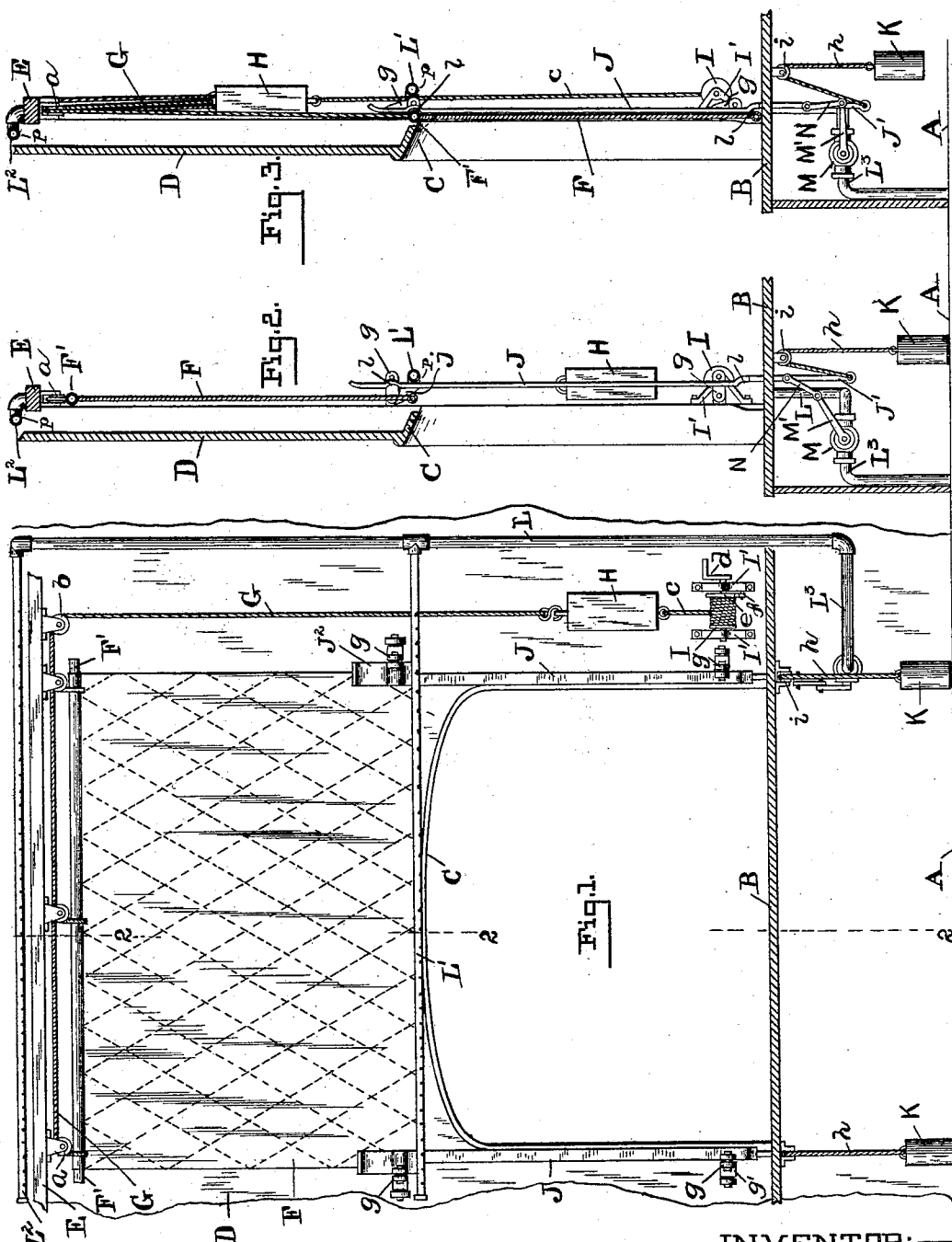
(No Model.)

2 Sheets—Sheet 1.

H. S. COCKRILL.
FIREPROOF STAGE CURTAIN.

No. 487,470.

Patented Dec. 6, 1892.



WITNESSES:

A. C. Babendreier,
H. Parker Davis.

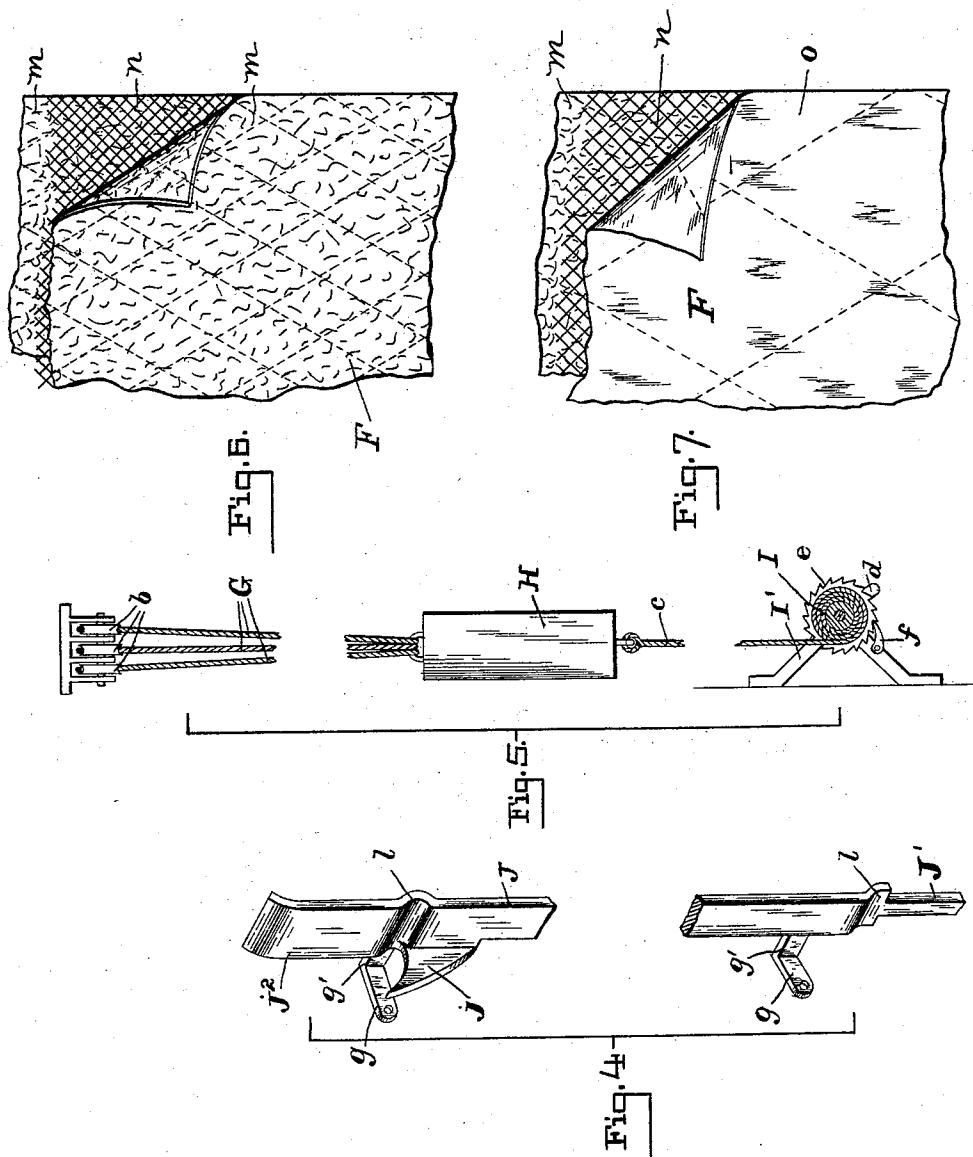
INVENTOR:

Henry S. Cockrill,
By Chas B. Mann
att'y

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UNITED STATES PATENT OFFICE.

HENRY S. COCKRILL, OF BALTIMORE, MARYLAND.

FIREPROOF STAGE-CURTAIN.

SPECIFICATION forming part of Letters Patent No. 487,470, dated December 6, 1892.

Application filed June 21, 1892. Serial No. 437,498. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. COCKRILL, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Fireproof Stage-Curtains, of which the following is a specification.

This invention relates to an improvement in fireproof stage-curtains for theaters and like places; and the object is to provide more efficient means for cutting off a fire from the auditorium of the building.

To this end the invention consists in the novel features of construction and combinations of parts hereinafter described.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a rear view from the back of the stage with the fireproof curtain elevated. Fig. 2 shows a vertical section on line 2 2 of Fig. 1. Fig. 3 shows a similar sectional view with the fireproof curtain lowered. Fig. 4 shows a perspective view of one of the guide-pieces for the curtain. Fig. 5 shows a detail of the mechanism for raising the curtain. Fig. 6 shows a piece of the curtain and illustrates the construction of the same. Fig. 7 is a similar view illustrating a different construction.

The letter A designates the floor of a building; B, the platform of a stage above said floor; C, the arch at the front of the stage; D, the vertical wall extending above and on each side of the arch, and E a joist behind said wall at the top. A drop-curtain F is supported behind the wall by ropes G, which run over pulleys *a*—one for each rope—on the joist E above the curtain, and thence over pulleys *b* at one side. Said ropes depend and are connected with a counterbalancing-weight H, which is in turn connected with a windlass I by a rope *c*, said windlass being mounted in bearings I', which project from the wall D, and having a crank-handle *d* and a ratchet-wheel *e*, which is engaged by a pawl *f*, pivoted underneath the ratchet-wheel to one of the bearings I'. A vertical guide-strip J for the curtain is located at each side of the stage and each of said guide-strips is connected with the front wall D by links *g*, jointed to the strip and to projections from said wall. Each strip is held up to a position where the links *g* extend horizontally and hold the strip out

from the wall by a weight K, joined by a flexible connection *h* with an end J' of said strip, which projects below the stage, said flexible connection passing over a pulley *i* on the underside of the stage. The weight rests on the floor A, which prevents the guide-strip moving farther upward. Each guide-strip has an outward lateral extension J² at the top and a lug *j* formed on said extension and projecting toward the front wall D into the path of the upper curtain-pole F', which projects from the curtain at each end. A water-pipe L extends vertically at one side of the stage and has two horizontal branches L¹ L², one of which L¹ is just above the arch C and behind the guide-strips J, and the other above the joist E and in front of the same. Each of said branch pipes is perforated, the lower one so as to throw water outward against the curtain when it is down and the upper one so as to throw water backward against the joist E. The main pipe L has a horizontal part L³ at its lower end, in which is a rotary valve or cock M for controlling the flow of water. This valve is normally closed and has a handle or stem M', which is connected by a link N with the end J' of the guide-strip J, which is at that side of the stage.

The operation is as follows: In case a fire breaks out on the stage or behind it the handle of the windlass I is turned forward sufficiently to release the pawl *f* and allow it to drop out of engagement with the ratchet-wheel, and then the operator lets go said handle. The curtain F drops and the projecting ends of its top pole F' strike the lugs *j* and push down the strips J, which are at the same time drawn in toward the wall D by the links *g*, so that they hold the curtain close against the rear side of the arch C, as illustrated in Fig. 3. The upper ends of the guide-strips J are curved outward to insure that the curtain-pole will be guided between them and the arch, and the stop-lugs *g* have sockets in their upper sides to receive the curtain-pole. The strips also have crosswise grooves *l* to receive the top and bottom poles of the curtain, whereby the strips may hold the curtain closely against the back of the arch. The links *g* have offsets *g'* to take them out of the path of the curtain. Simultaneously with the dropping of the curtain the valve M is opened

by the downward movement of the guide-strips through the medium of the link N, which connects one of the said strips and the handle of the valve. Water flows into the branches L' L² and sprinkles through the perforations *p* therein, the lower pipe throwing the water against the rear side of the curtain and the upper pipe throwing the water against the joist E, whence it drops upon the arch C and then flows against the outer side of the curtain.

In the construction illustrated in Fig. 6 the curtain is made of two layers of asbestos *m* with an interposed sheet of wire-gauze *n*. In Fig. 7 a sheet of wire-gauze *n* is shown interposed between a layer of asbestos *m* and a layer of cloth *o*. The cloth is to be on the outer side of the curtain toward the auditorium and may be ornamented as desired, while the asbestos is on the inner side. In both constructions the three layers of material are secured together by stitching or other suitable fastening means extending through all of them.

The asbestos being of a very porous nature, it will absorb a large amount of the water thrown against it and by capillary attraction draw water into the interstices of the wire-gauze *n*. The curtain is thus capable of holding a large quantity of water, which renders it doubly fireproof. It will be seen that with my arrangement a fire breaking out behind the stage is effectually blocked by the curtain and prevented from spreading into the auditorium of the building.

The constructions illustrated in Figs. 6 and 7 may also be employed for flies and other stage-curtains to guard against fire.

It is evident the construction and arrangements of parts herein shown may be varied without departing from the invention.

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

1. In stage apparatus, the combination of a drop-curtain, vertical guide-strips having lugs projecting in the path of a projecting part of the curtain, and links connecting the guide-

strips with a stationary part of the stage, whereby the curtain in lowering draws the guide-strips against it.

2. The combination of the front wall of a stage, a drop-curtain behind said wall, vertical guide-strips, one at each side of the stage and each having a lug in the path of a projecting part of the curtain, links connecting said strips with the front wall of the stage, and a weight for holding the guide-strips up with the said connecting-links substantially horizontal.

3. The combination of the front wall of a stage, a drop-curtain behind said wall, vertical guide-strips, one at each side of the stage and each having a lug in the path of a projecting part of the curtain and an end extending below the stage-platform, links connecting said strips with the front wall of the stage, weights below the stage-platform, and flexible connections between said weights and the strips, respectively, and passing over pulleys, substantially in the manner and for the purpose described.

4. In stage apparatus, the combination of a drop-curtain, movable guide-pieces for said curtain and actuated thereby, a water-pipe for sprinkling the curtain, a valve in said pipe, and suitable connections between said valve and one of the movable guide-pieces, substantially as and for the purpose described.

5. In stage apparatus, the combination of a drop-curtain, movable guide-pieces for said curtain and actuated thereby to hold the curtain against the front part of the stage, one of said guide-pieces having an end extending below the stage-platform, a water-pipe for sprinkling the curtain, a rotary valve in said pipe and having a handle, and a link connecting said handle and the downward-extending end of the guide-pieces.

In testimony whereof I affix my signature in the presence of two witnesses.

HENRY S. COCKRILL.

Witnesses:

JNO. T. MADDOX,
F. PARKER DAVIS.