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Patented Dec. 10, 1901.

L. J. CARTER.
STAGE APPLIANCE FOR THEATERS.

(Application filed Feb. 23, 1900.)

(No Model.)

2 Sheets—Sheet 2.

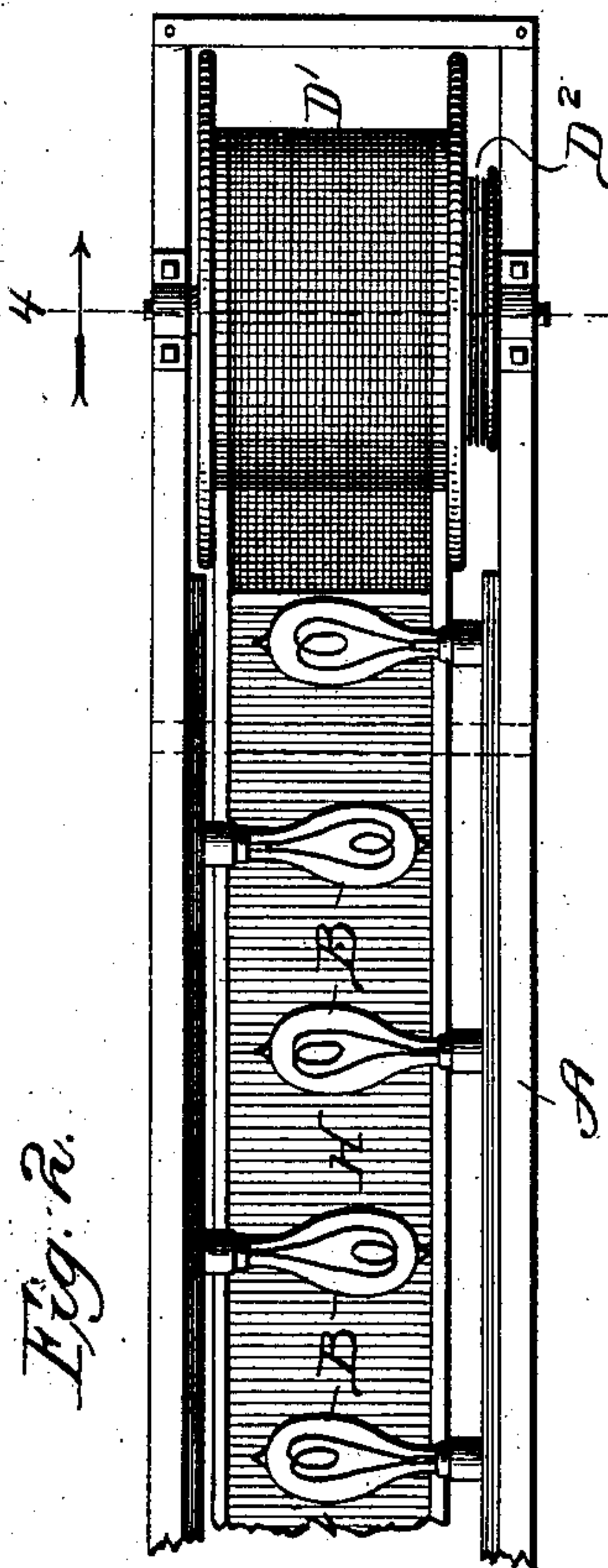


Fig. 2.

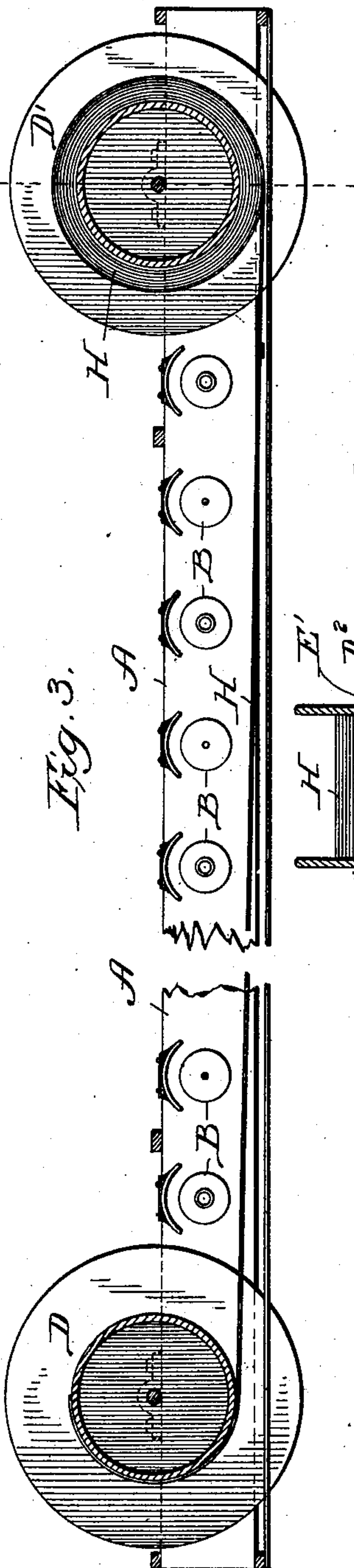
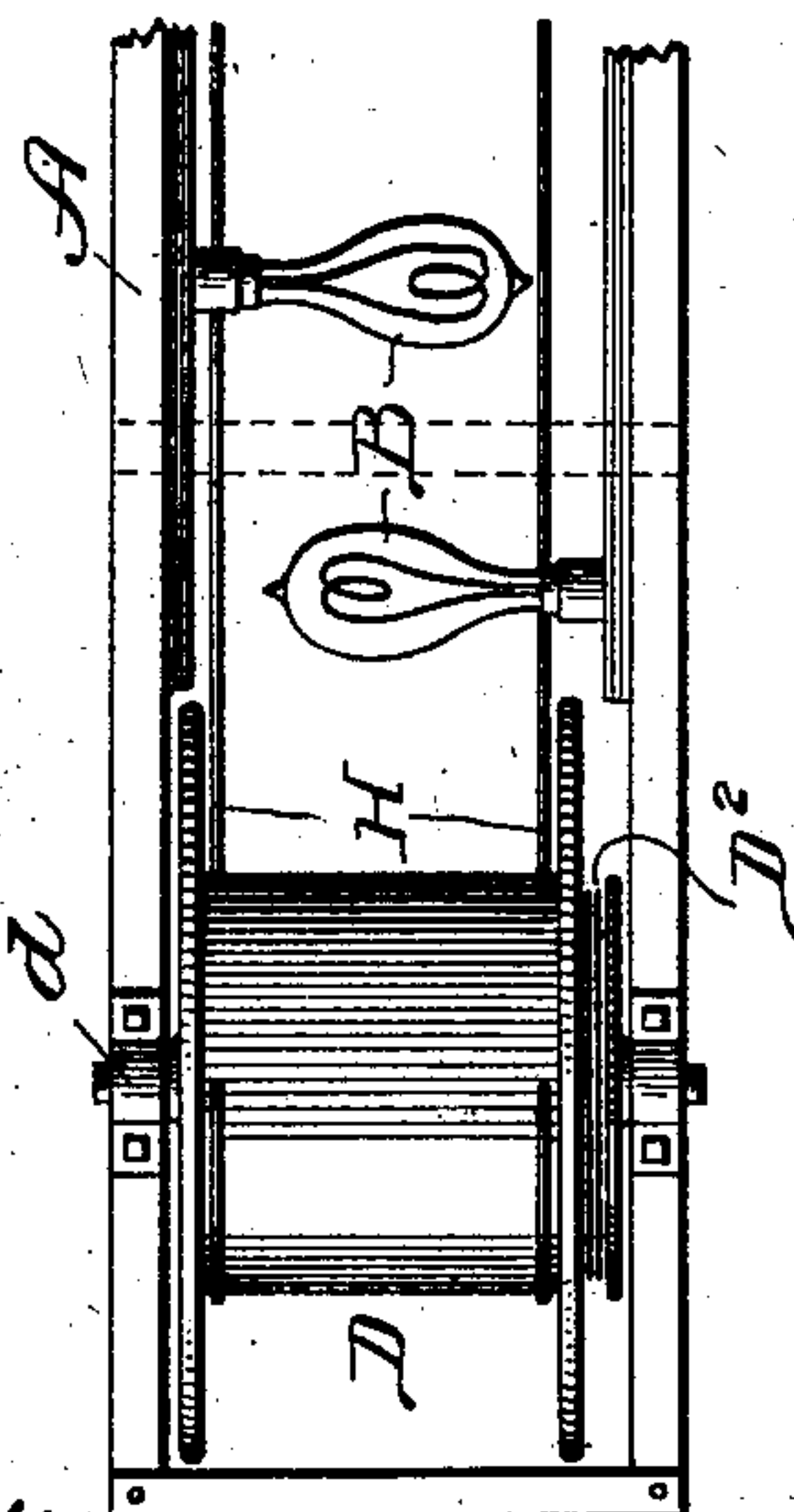


Fig. 3.

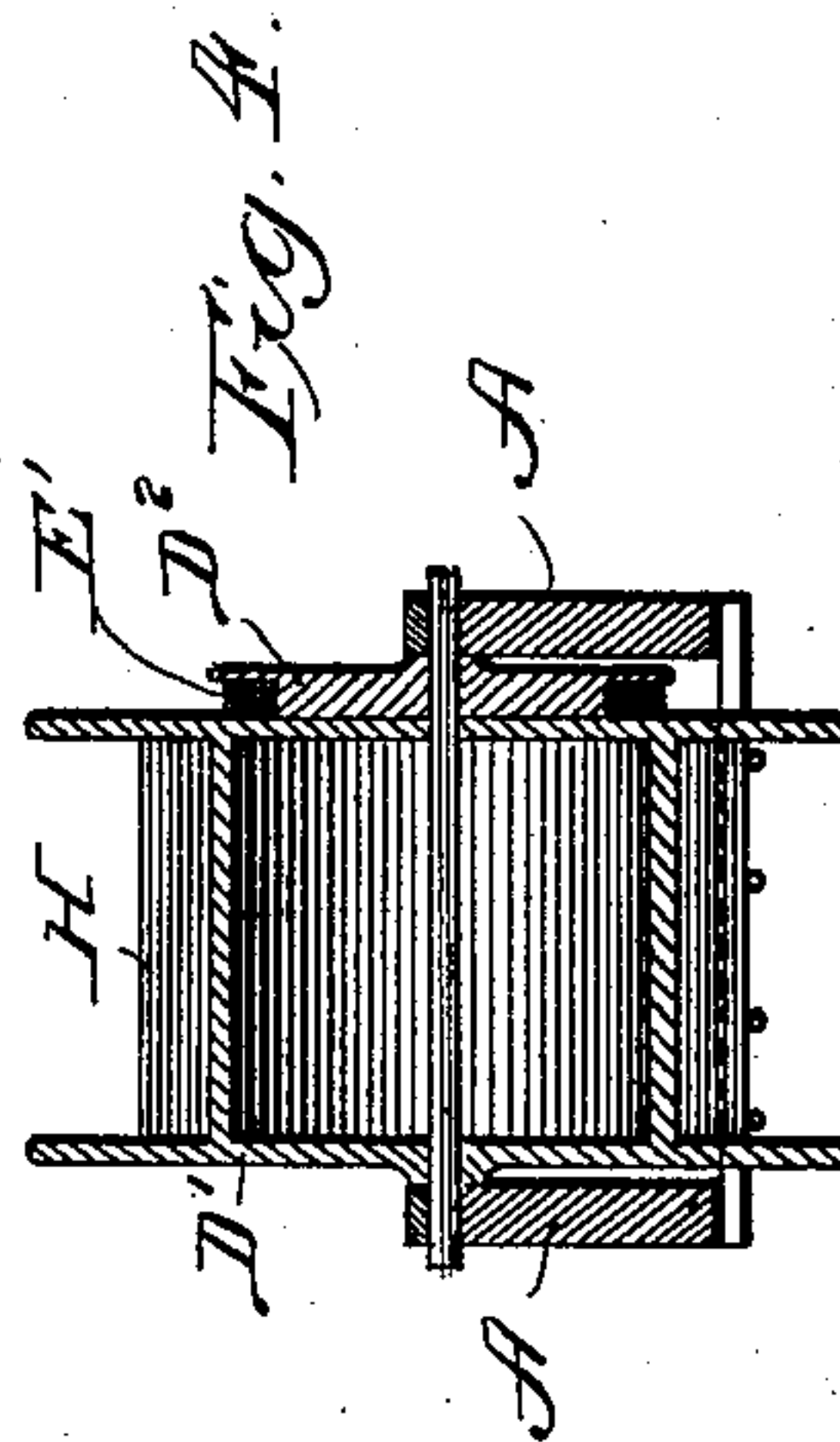


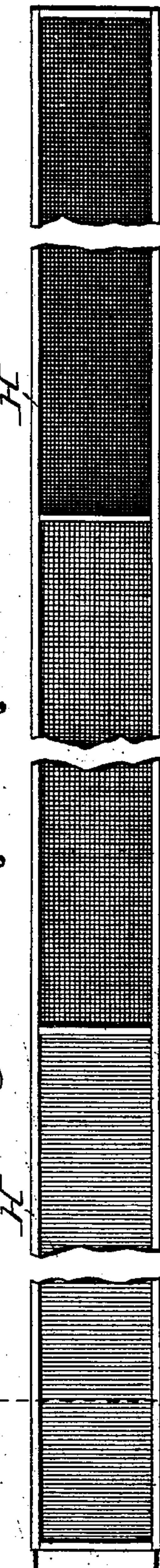
Fig. 4.



Fig. 5.

Fig. 6.

Fig. 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

LINCOLN J. CARTER, OF CHICAGO, ILLINOIS.

STAGE APPLIANCE FOR THEATERS.

SPECIFICATION forming part of Letters Patent No. 688,387, dated December 10, 1901.

Application filed February 23, 1900. Serial No. 6,303. (No model.)

To all whom it may concern:

Be it known that I, LINCOLN J. CARTER, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Stage Appliances for Theaters, of which the following is a specification.

The object of my invention has more particular reference to the means by which the "border-lights," as they are called, of stages of theaters may be varied, dimmed, or entirely cut off at will, so that the most realistic effects may be obtained in those cases where it is desirable to change or vary the light from daylight to twilight or darkness, through the intermediate shades and colors attending the setting of the sun, the rising of the moon, the glare of a conflagration, or other cases where it is desirable to change or vary the color and light from daylight to darkness or to any intermediate character of light, or vice versa; and my invention consists in the combinations, details, and features of construction hereinafter described and claimed.

In the drawings, Figure 1 is a rear elevation of my improved appliance; Fig. 2, a broken plan view of the same; Fig. 3, a broken sectional longitudinal elevation; Fig. 4, a cross-section taken on line 4 of Fig. 2; Fig. 5, a broken plan view of the curtain or screen used in securing the varying effects, and Fig. 6 a cross-section taken on line 6 of Fig. 5.

In making my improved stage appliance for theaters I make a frame A of the desired length and width. In use I find it convenient to make it long enough to practically extend from one side of the stage to the other and make it of, say, eight or ten inches in width, so that while accommodating the lights mounted and carried upon it it will not occupy any greater room than necessary. The desirability of making it narrow arises from the fact that the scenery should be as close together as possible, as a greater number can be accommodated and the stage-settings the more readily made of any desired size. I mount on this frame a desired number of lights B. I have in my drawings illustrated incandescent electric lights, as I prefer them, and in most instances they will be found the most convenient to use. I do not, however, limit myself

to any particular kind of lights intended to be mounted upon and carried by the frame. These frames, with their lights, are intended to be supported in the loft of the theater by cords or cables C, so that they may be raised into position, maintained there, and lowered whenever it may be necessary to trim the lights or for other purposes. I arrange in the ends of the frames drums D of a desired size, supported on trunnions received in journal-boxes *d* on the side bars of the frame, so that the drums may be readily rotated at will, as may be desired, in the manipulation of the device. I arrange sheaves D² at the sides of the drums and rigidly secured thereto, as shown in Fig. 2, so that a cord E, wound around the sheave, may pass over rolls or pulley-wheels and down to a windlass F, by which the cord may be wound onto the windlass, and thus rotate the drum to which the sheave containing the cord is attached. Another cord E' extends from the sheave attached to the drum at the other end of the frame and passes over rolls or pulleys and sustains the counterweight G, which may be a bag of sand or other material of the desired weight. I then make a curtain or screen H of any desired material, preferably transparent celluloid, (though any other suitable material may be used,) of a width to be received into the drums and wound there-around. This screen or curtain is intended to be made in sections, each equal in length to the distance between the drums, or at least to the space occupied by the lights. Each section is of a desired appropriate color, preferably passing from one color to another without abrupt differences, as shown in Fig. 5, so that the color-changing effect will be a gradual one. One end of the curtain is attached to one of the drums and the other end to the other drum. The screen or curtain is then wound around one of the drums until it is stretched between the two. By reference to Figs. 2 and 3 it will be noticed that the screen is wound upon the drum D' while unwound from the drum D. If desired, one section of the curtain or screen, preferably the end one wound next to the drum D, may be entirely opaque, so as to cut off or shut off the light entirely. If now the lights be burning so as to represent a daylight scene on the stage

and it be desired to pass by gentle gradations to the darkness of night, all that is necessary is to turn the windlass F, which will cause the curtain or screen to be wound around the drum D and unwound from the drum D'. As the screen or curtain is then drawn between the lights and the stage and in close proximity to the lights such lights will be dimmed and the light admitted to the stage changed in color slowly and gradually as the curtain passes between the stage and one light after the other. When the first section of one color has been drawn entirely across, the light will gradually have been changed to that caused by the passage of the light through the interposed colored screen or curtain. By continuing the operation the second section will begin to pass between the lights and the stage, so that a gradual change in the color of the light admitted to the stage will be effected, until, when it has been drawn entirely across, the light on the stage will have been changed to that caused by the second screen. By continuing the operation the third and other screens will pass consecutively between the lights and the stage, cutting off, dimming, and changing the character of the light admitted to the stage until from daylight the light on the stage will have been changed to that of night, when if a very dark or opaque section of the screen or curtain be drawn across the effect of dark night will be produced. In like manner the effect can be reversed, so that from darkness the stage will gradually be illumined with daylight, representing the progressive changes that take place with the rising of the sun. In like manner the effect of the rising or fading of a conflagration can be secured by moving the curtain or screen in the one direction or the other.

By the simple and effective arrangements above described all the desired changes in the character of the light illuminating the stage of a theater may be secured without employing the costly, cumbersome, and intricate mechanism now required for the purpose.

What I regard as new, and desire to secure by Letters Patent, is—

1. The combination with a light for theatrical scenic effects, of an endwise-traveling curtain or screen arranged adjacent to the light and composed of sections or divisions of different transparency for presenting different characteristics to the produced effect, a frame carrying the curtain or screen, suspending-cords for raising and lowering the frame, revoluble spools or spindles one at each end of the frame, carrying the curtain or screen, a draw-cord for one of the spools or spindles operating to revolve the spools or spindles and advance the curtain or screen, and a cord and weight for the other spool or spindle operating to revolve the spools or spindles in the opposite direction and withdraw the curtain or screen, and have the rotation in either direction travel the curtain or screen

endwise across the projection of light, substantially as described.

2. The combination in an appliance for producing theatrical scenic effects, of a frame composed of side rails and connecting end rails, means for suspending and vertically moving the frame to have the interior thereof above the to-be-illuminated portion of the stage, lights within the frame mounted on the inner faces of the rails, an endwise-traveling curtain or screen having sections of different transparency movable from one end of the frame to the other between the lights arranged therein and that portion of the stage to be illuminated, and means for effecting the travel of the screen endwise and at will, substantially as described.

3. The combination in an appliance for producing theatrical scenic effects of a rectangular frame composed of side rails and connecting end rails, means for suspending and vertically moving the frame to have the interior thereof in line with the to-be-illuminated portion of the stage, lights within the frame mounted on the inner faces of the rails, two drums, one on each end of the frame mounted on the upper edges of the side rails and revoluble between the side rails, an endwise-traveling curtain or screen composed of sections or divisions of different transparency for giving different characteristics to the produced effect, carried on the drums and revoluble from one drum to the other in front of the lights and along the lower edge of the frame when the drums are rotated, thereby traveling from one end of the frame to the other between the lights therein and that portion of the stage to be illuminated, and means for giving rotation to the drums, substantially as described.

4. The combination in an appliance for producing theatrical scenic effects of a frame movable up and down, composed of side rails and connecting end rails, means for suspending and vertically moving the frame so that the interior thereof will be in line with the to-be-illuminated portion of the stage, lights within the frame mounted on the inner faces of the rails, two drums, one at each end of the frame, mounted on the upper edges of the side rails an endwise-traveling curtain or screen arranged adjacent to the lights and composed of sections or divisions of different transparency for giving different characteristics to the produced effect, mounted on the drums and arranged to move, when the drums are rotated from one end of the frame to the other between the lights therein and that portion of the stage to be illuminated, and means for giving rotation to the drums, substantially as described.

5. The combination in an appliance for producing theatrical effects of a frame, means for suspending and vertically moving the frame so that the interior thereof will be directly above the to-be-illuminated portion of

5 the stage, lights mounted within the frame,
an endwise-traveling curtain or screen hav-
ing sections of different transparency mov-
able along the edge of the frame nearest the
stage from one end of the frame to the other
between the lights arranged therein and that
portion of the stage to be illuminated, and

means for effecting the travel of the screen
endwise at will, substantially as described.

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