J. A. HOLMES.

BACKGROUND SUPPORT.

APPLICATION FILED DEC. 26, 1907.

916,316. Patented Mar. 23, 1909.

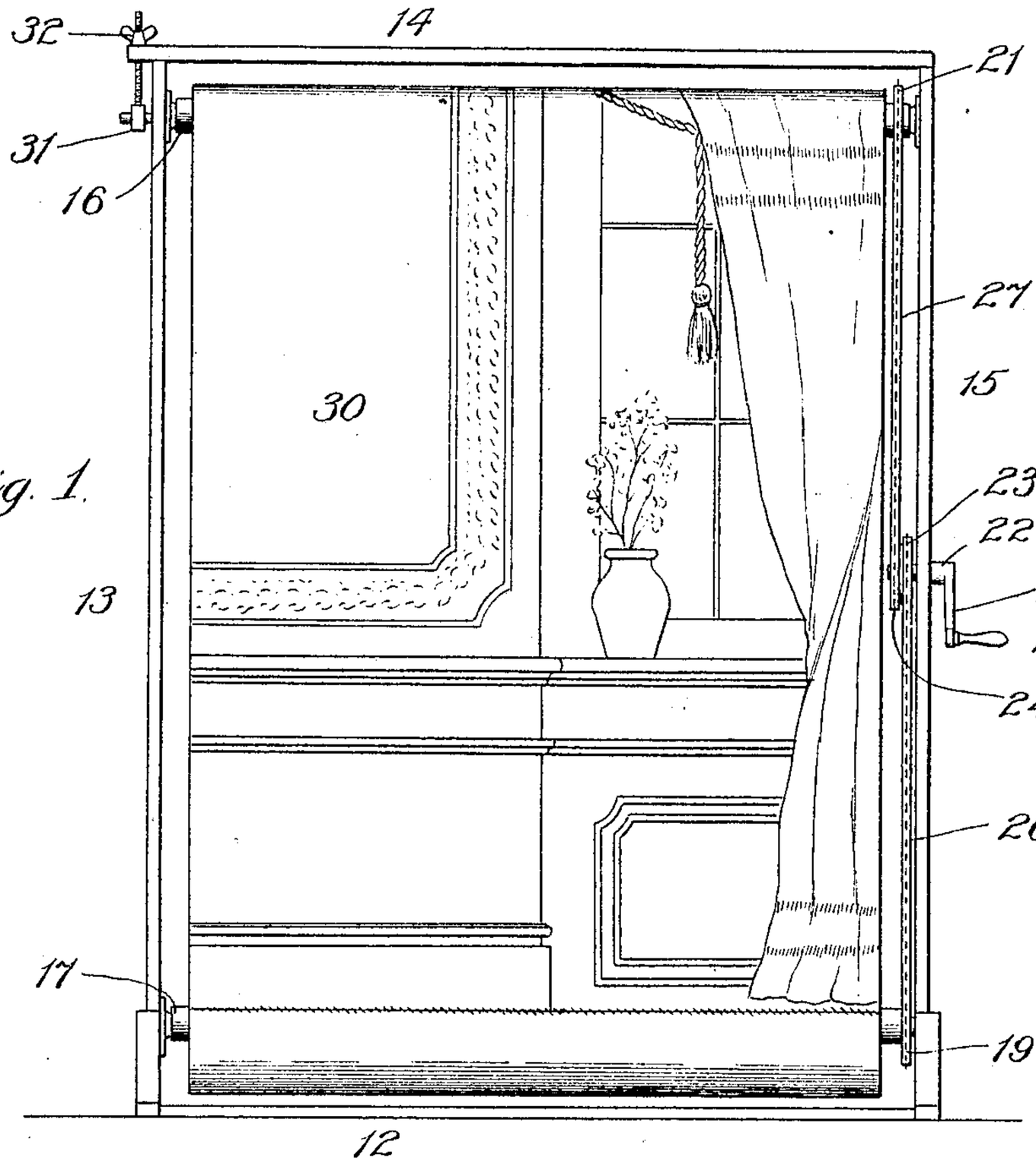

Fig. 1.

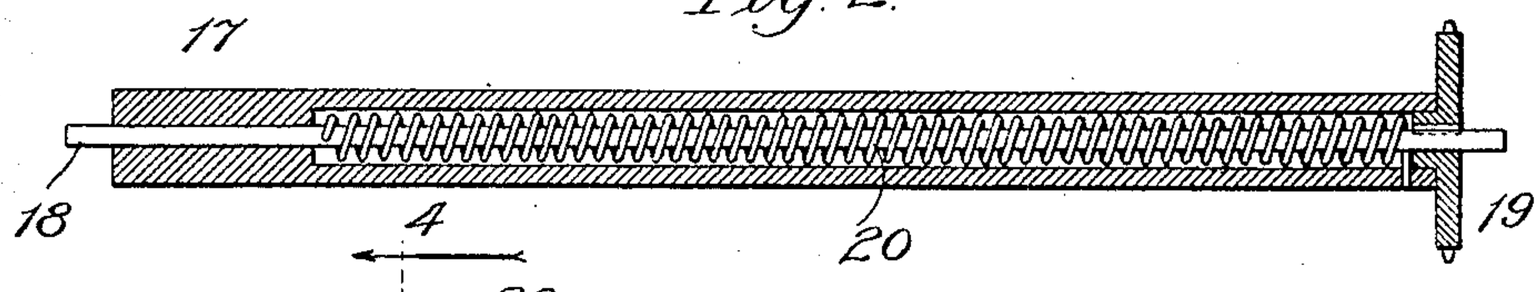

Fig. 2.

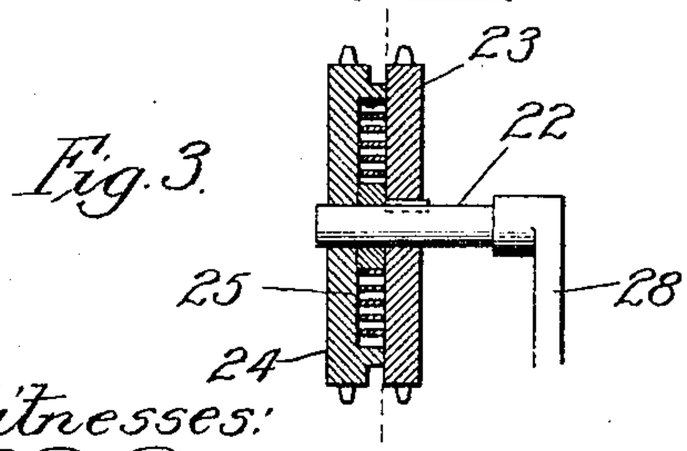

Fig. 3.

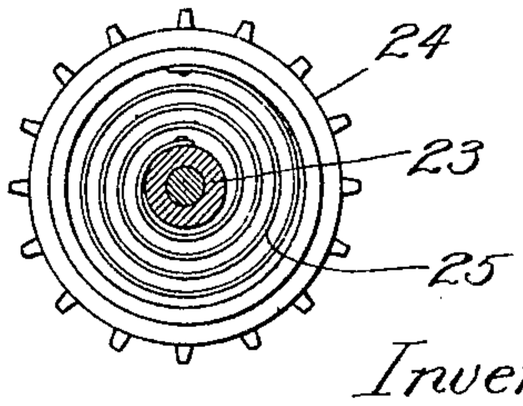

Fig. 4.

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UNITED STATES PATENT OFFICE.

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BACKGROUND-SUPPORT.

No. 916,316. Specification of Letters Patent. Patented March 23, 1909.

Application filed December 26, 1907. Serial No. 408,051.

To all whom it may concern:

Be it known that I, JOHANNES ALEXIUS HOLMES, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Background-Supports, of which the following is a specification.

My invention relates to improvements in holders for interchangeable backgrounds, and consists of a frame adapted to compactly hold a number of screens or aprons.

More particularly the object of my invention is to provide a frame with two rollers mounted therein and a long strip of flexible sheeting wound upon said rollers, and with various decorations or finishes along its length. These are to be used as backgrounds or scenes in photographic work. However, my invention is not limited to this purpose, but provides a suitable support for the plurality of interchangeable curtains, and may be used in a variety of ways, of which that mentioned is only an example.

Referring to the drawings—Figure 1 is a front view; Fig. 2 a longitudinal section of the roller shown at the bottom of Fig. 1; Fig. 3 an axial section of the sprocket wheels shown at the right of Fig. 1; and Fig. 4 a transverse section, taken on line 4 of Fig. 3 looking in the direction of the arrow.

The members 12, 13, 14 and 15 constitute a rectangular frame, the member 12 being the base, and the frame standing vertically on this base. At the top and bottom of this frame are the respective rollers 16 and 17, with their bearings in the side members 13 and 15. The bottom roller 17 is loosely mounted on the shaft 18, and to this shaft there is keyed a sprocket wheel 19. The coil spring 20 wrapped about the shaft 18 has one end attached to said shaft and the other end attached to the roller 17. On the upper roller 16 there is fixed a sprocket wheel 21.

At the middle of the height of the vertical member 15 is mounted a crank 22, having fixed thereon a sprocket wheel 23 and loosely mounted thereon another sprocket wheel 24. Between these two sprocket wheels 23 and 24 is a spiral spring 25, having its inner end attached to the small central collar which forms a part of wheel 23, and having its outer end attached to the flange on wheel 24. A chain 26 unites the sprocket wheels 19 and 23, and another chain 27 unites the sprocket wheels 21 and 24. The shaft 22 carries a crank 28 with its handle 29. With its ends wrapped about the rollers 16 and 17 the strip of fabric or other flexible sheet material extends tightly between said rollers. This sheet 30 has various scenes and ornamental matter distributed along its length.

By turning the handle 29, the various backgrounds distributed along the flexible sheet 30 may be successively brought in position for use. The springs 20 and 25 permit compensation for the varying and unequal effective size of the rollers 16 and 17. Both of these springs are so adjusted at the outset that the tendency of either or both of them is to keep the sheet 30 on a tension. A little consideration will show that their tension is a minimum when the sheet 30 is equally distributed on the two rollers 16 and 17, and that as the handle 29 is rotated in either direction from this median position, the tension of the springs is somewhat increased. Of course they are so designed as to permit extreme movement of the sheet 30 from one roller to the other. The function of the two springs 20 and 25 is the same, and either one alone may be used, provided it has sufficient capacity. The use of both springs increases the capacity. It will be noted that the handle 29 is placed at about the middle of the height of the apparatus, thus being in a more convenient position than it would be at either end. It may be desirable to make the bearing adjustable for one end of the roller 16. For this purpose I have shown the shaft at one end of roller 16 as being carried by the bearing 31. This can be adjusted up and down by means of the wing nut 32.

It will be seen that I have provided a frame capable of holding compactly a long strip of flexible sheet material, and which permits the presentation of any part thereof and the rapid change from one part to another. The unequal speed of rotation of the rollers 16 and 17 is compensated by the means disclosed.

I claim:—

1. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, and mechanism connecting the rollers, said mechanism comprising means to keep said sheet tightly stretched.

2. In combination, a frame, two rollers mounted therein, a flexible sheet having its

ends respectively attached to said rollers, and mechanism connecting the rollers, said mechanism comprising a yielding elastic member.

3. In combination, a rectangular frame, two parallel rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, and mechanism connecting the rollers, said mechanism comprising a yielding elastic member.

4. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, a driving wheel loosely mounted on one of said rollers with an elastic connection thereto, and mechanism connecting said driving wheel with the other roller.

5. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, a crank mounted on the frame with sprocket wheels on the shaft thereof, other sprocket wheels on the respective rollers, and chains connecting them to the first-mentioned sprocket wheels.

6. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, a crank mounted in the frame, a fixed and a loose sprocket wheel on said crank, and driving connections therefrom to the respective rollers.

7. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, a crank mounted in the frame, a fixed and a loose sprocket wheel having a yielding elastic connection between them, and driving connections therefrom to the respective rollers.

8. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers; a fixed sprocket wheel on one roller, and a spring-connected sprocket wheel on the other roller, a crank shaft having a fixed sprocket wheel and a spring-connected sprocket wheel thereon, a chain connecting the fixed sprocket wheel of the crank shaft to the spring-connected sprocket wheel of the roller, and another chain connecting the spring-connected sprocket wheel of the crank shaft to the fixed sprocket wheel of the roller.

9. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, a crank, and driving connections therefrom to the rollers, said connections being independent of the flexible sheet.

10. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, a crank, and driving connections therefrom to the rollers, said connections being independent of the flexible sheet and the connection to one of said rollers comprising a yielding elastic member.

11. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, one of said rollers being loosely mounted on a shaft, a coil spring within said roller and having its ends respectively attached to the roller and the shaft, and driving mechanism connecting the shaft to the other roller independently of the flexible sheet.

12. In combination, a frame, two rollers mounted therein, a flexible sheet having its ends respectively attached to said rollers, a crank shaft having a sprocket wheel fixed thereon, a loose sprocket wheel also mounted on said shaft, a spiral spring between the two said sprocket wheels and having its ends connected respectively thereto, and driving connections from said sprocket wheels to the respective rollers.

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