H. ROBERTS.

SCENE SHIFTING MECHANISM.

APPLICATION FILED MAR. 19, 1908.

912,732.

Patented Feb. 16, 1909.

3 SHEETS—SHEET 1.

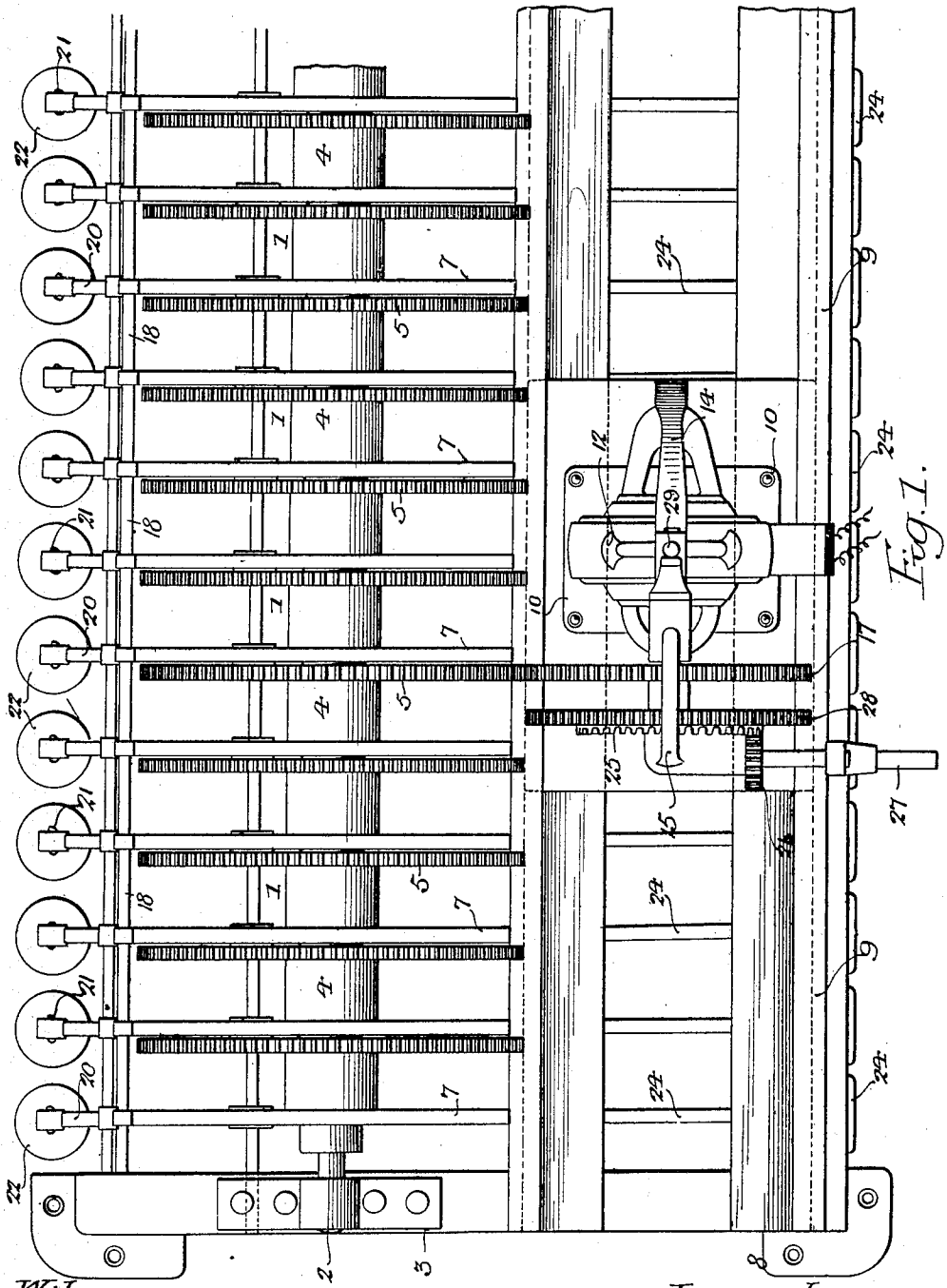


Fig. 1.

Witnesses:-
Arthur D. Collins
Regina H. Begley

Inventor:-
Harry Roberts
By his Attorney
Utley E. Crane

THE NORRIS PETERS CO., WASHINGTON, D. C.

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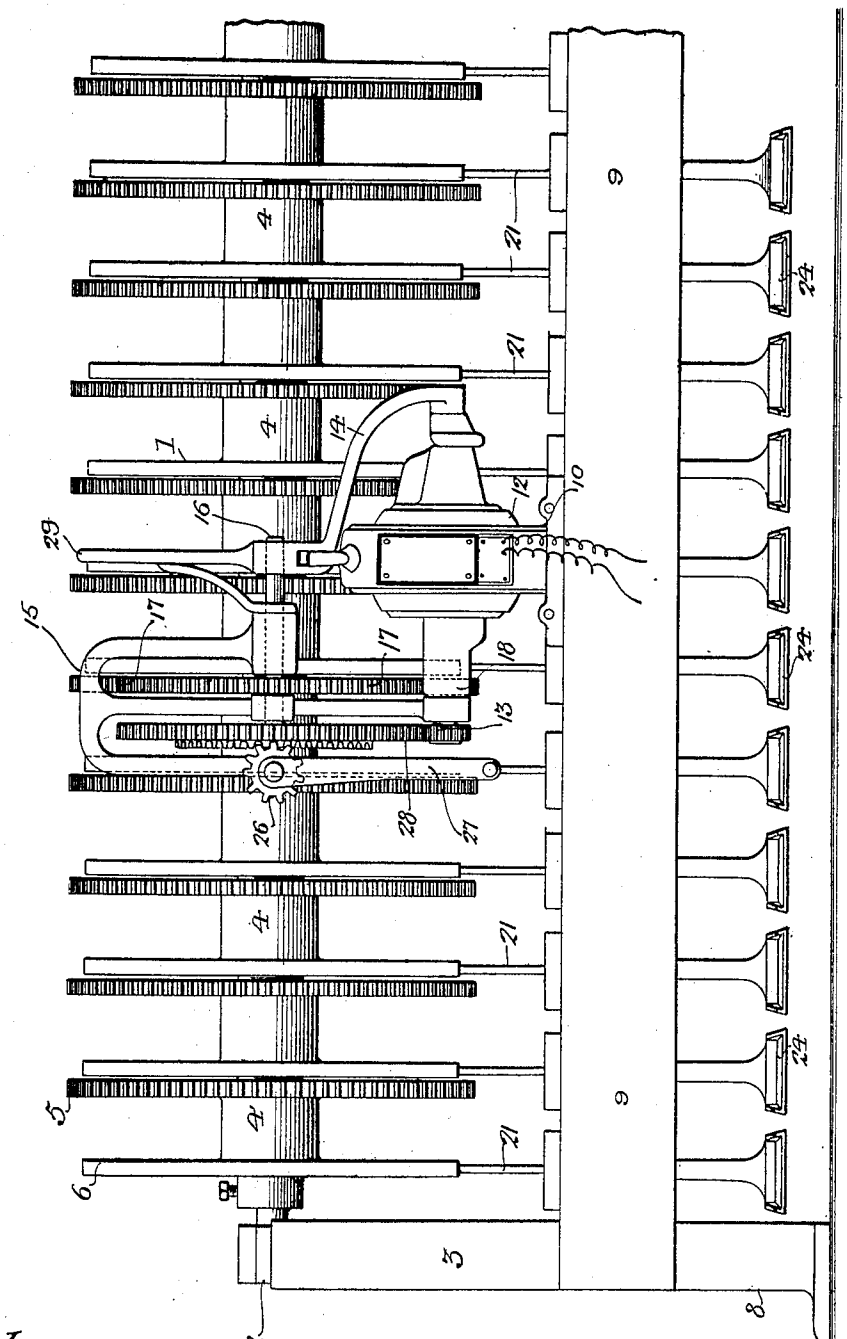


Fig. 2.

Witnesses:
Arthur G. Collins
Regina H. Begley

Inventor:
Harry Roberts
by his Attorney
Utley E. Crane

THE NORRIS PETERS CO., WASHINGTON, D. C.

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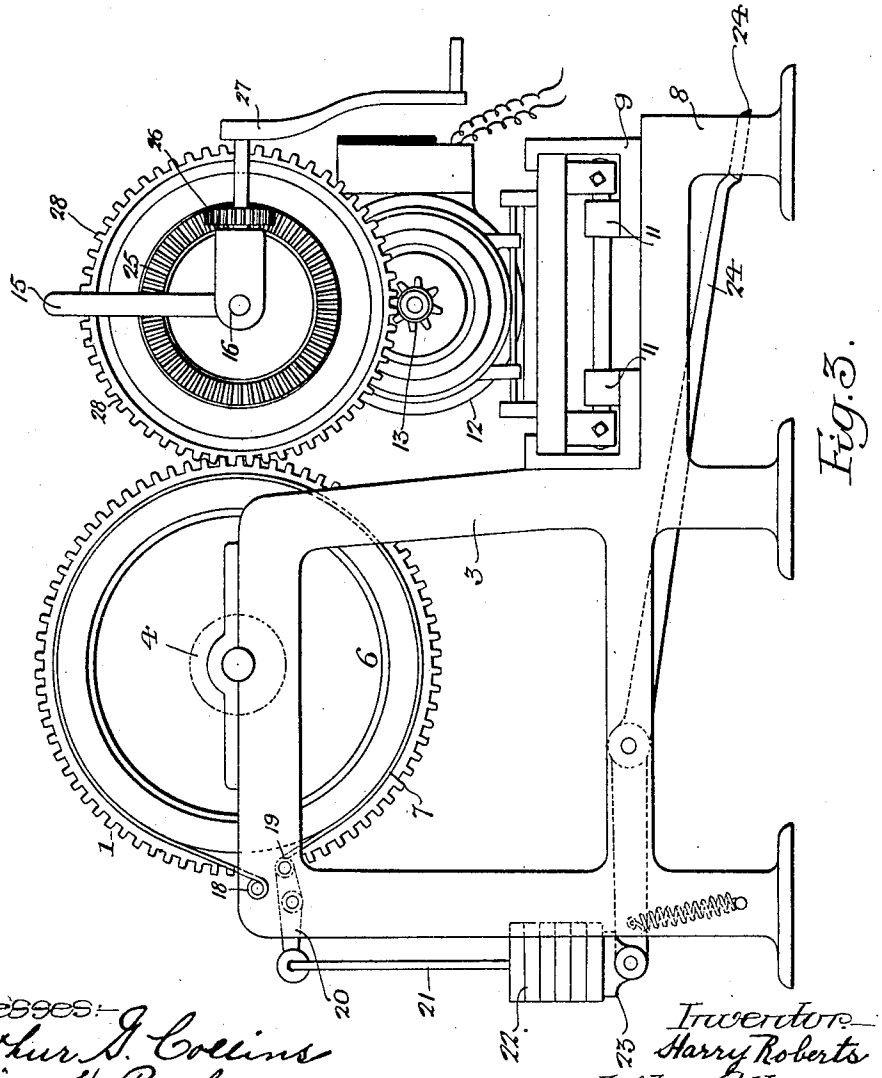


Fig. 3.

Witnesses:
Arthur D. Collins
Regina H. Bigley

Inventor:
Harry Roberts
By his Attorney
Utley E. Crane

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HARRY ROBERTS, OF MILWAUKEE, WISCONSIN.

SCENE-SHIFTING MECHANISM.

No. 912,732. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed March 19, 1908. Serial No. 421,983.

To all whom it may concern:

Be it known that I, HARRY ROBERTS, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Scene-Shifting Mechanism, of which the following is a specification.

This invention relates to improvements in mechanism for shifting scenic curtains and the like upon the stage of a theater or similar place and one object of the present invention is to provide simple mechanism arranged in a comparatively small space whereby a plurality of curtains or stage settings may be automatically raised and lowered from one and the same stand-point by one operator, one independently of another to produce effects of illusion or to display suitable backgrounds.

Another object is to provide suitable and compact apparatus for shifting such scenery, the motive power for operating which may be shifted longitudinally of the entire length of the same, by the operator in charge.

Other objects will appear hereinafter.

The invention consists of the improvements hereinafter described and finally claimed.

The nature, characteristic features and scope of the invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof and in which:—

Figure 1, is a top or plan view of one end of the apparatus embodying the invention. Fig. 2, is a view in front elevation of the same, and Fig. 3, is a view in end elevation of the parts shown in Figs. 1 and 2.

In the drawings there is shown a series of raising and lowering or winding spools 1, loosely mounted upon a fixed shaft 2, supported in suitable bearings carried by the end pieces 3, of the frame of the apparatus, of which only one is shown in the drawings. As shown in Fig. 2, each winding spool 1, comprises a pulley part 4, of comparatively small diameter arranged concentrically with which and upon either side thereof is a gear wheel 5, and a brake member 6, adapted to accommodate a band brake 7, see Fig. 3. Each of the parts 5 and 6, are of considerably larger diameter than the pulley part 4. On each pulley part 4, there is adapted to be coiled ropes (not shown in the drawings) which are adapted to pass up to the top of the flies from whence they are suitably arranged and connected for attachment to pieces of scenery or curtains in a well understood manner and which is not part of this invention.

Arranged at the front of the apparatus and preferably formed integral with the end supports 3, is a frame 8, upon which are arranged angle pieces 9, forming a track, see Fig. 3. Located between the angle pieces 9, and adapted for longitudinal travel in respect thereto is a motor frame 10, mounted upon rollers or wheels 11. Having fixed relation with the motor frame is a motor 12, adapted to receive current from any suitable source and shown as being provided with a driving shaft 13.

The frame 14, of the motor which is shown as extending above the same and terminating in a yoke 15, is provided with a shaft 16, upon which is journaled a gear wheel 17, meshing with a pinion 18, carried by the motor shaft 13. The gear 17, is adapted to mesh separately with the gear wheels 5, of the spools 1, when the motor is shifted longitudinally of the apparatus so that the pulley part 4, when rotated in one direction will wind up the scenery ropes and lift the scene being shifted, from the stage.

Adapted to fit around each of the brake members 6, as before stated, are the band brakes 7, the ends 18, of which are fixed to the rear of the frame of the apparatus as shown in Fig. 3, and the other ends 19, of which are connected to pivotally arranged levers 20. The free ends of these levers 20, have pivotal relation with depending rods 21, carrying weights 22, which rest upon platforms 23, carried at the outer ends of pivotally arranged foot pedals 24, supported by the frame of the apparatus. As shown in Fig. 3, of the drawings these band brakes 7, normally serve to bind upon the brake members 6, to prevent retrograde movement of the spools 1, after the cessation of rotation of the spools when scenery is lifted and the weights 22, act in the capacity of counterbalancing mediums with respect to the scenery.

When it is desired to drop scenery the proper foot pedal 24, is depressed which in turn raises the weights 22, and the respective rod 21, which in turn causes the lever 20, to be shifted so that the brake 7, no longer binds the member 6, and thus permits the spool to unwind and cause the

piece of scenery in question to gravitate to the stage, it of course being understood that the motor 12, has been shifted so that its gear 17, no longer meshes with the gear 5, of the spool in question. Should for any reason the motor fail to operate provision is made for manually operating the respective spools. This mechanism is carried by the motor 12, and is shown to comprise a miter gear 25, carried by the shaft 16, within the yoke 15, meshing with which is a pinion 26, having a crank 27. By turning the crank 27, the pinion 26, causes to revolve the miter gear 25, which in turn revolves the gear 28, which may be caused to mesh with any of the gears 5, by longitudinally shifting the motor 12, and throwing the gears into mesh by the lever 29.

What I claim is:—

1. Mechanism of the class described comprising a plurality of rotatably mounted winding spools being equipped with gear wheels and an operating medium arranged for longitudinal travel with respect to the entire set of spools adapted to mesh one at a time with the aforesaid gears.

2. Mechanism of the class described comprising a plurality of rotatably mounted winding spools said spools being equipped with band brake receiving members, band brakes for normally locking said spools against retrograde movement and means connected with respect to each of said spools for releasing the band brakes.

3. Mechanism of the class described comprising a plurality of rotatably mounted winding spools and an operating medium arranged for longitudinal travel with respect to the entire set of spools adapted to be operatively connected separately with each of said spools.

4. In mechanism of the class described the combination of a plurality of rotatably mounted winding spools, said spools being provided with gear wheels, a motor adapted for longitudinal travel with respect to the entire set of spools, said motor having a gear wheel adapted to mesh separately with each of the aforesaid gears, brake devices for normally preventing retrograde movement of the said spools and means for releasing the said brake devices.

5. In mechanism of the class described the combination of a plurality of rotatably mounted winding spools, a track arranged in parallelism with the set of spools, and a motor capable of longitudinal movement with respect to the track and adapted to be operatively connected separately with each of said spools.

6. In mechanism of the class described the combination of a plurality of rotatably winding spools a motor capable of longitudinal movement throughout the entire length of the spools and adapted to be operatively connected separately to each of said spools and manually operable emergency apparatus carried by the motor for operating the spools at one time.

In testimony whereof I have hereunto signed my name.

HARRY ROBERTS.

Witnesses:
ED. C. MACK,
B. HAWTHORNE.