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PATENTED NOV. 19, 1907.

F. S. MADIGAN.

MEANS FOR TRIMMING AND CONTROLLING CURTAINS AND SCENIC DROPS.

APPLICATION FILED DEC. 17, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

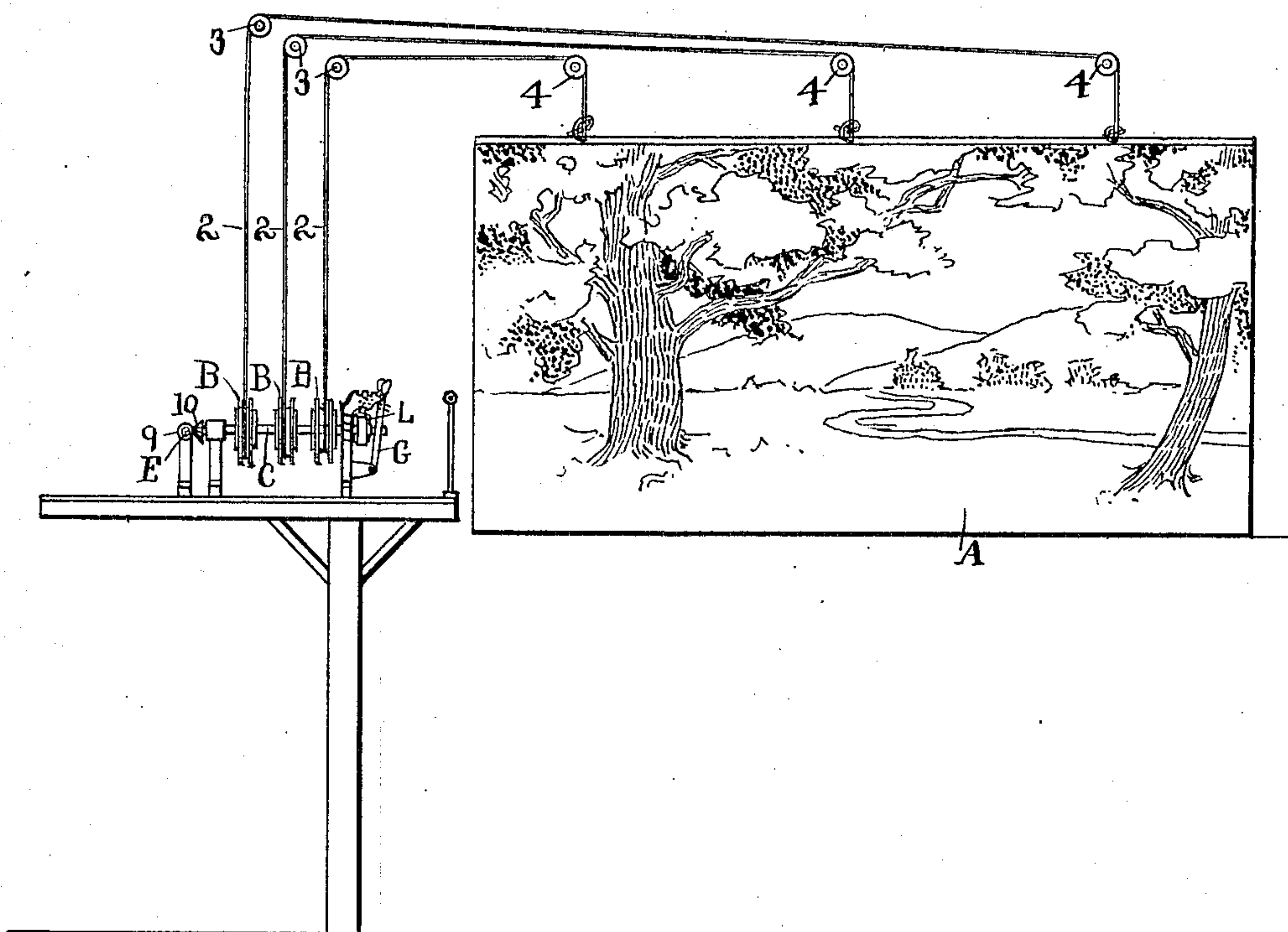
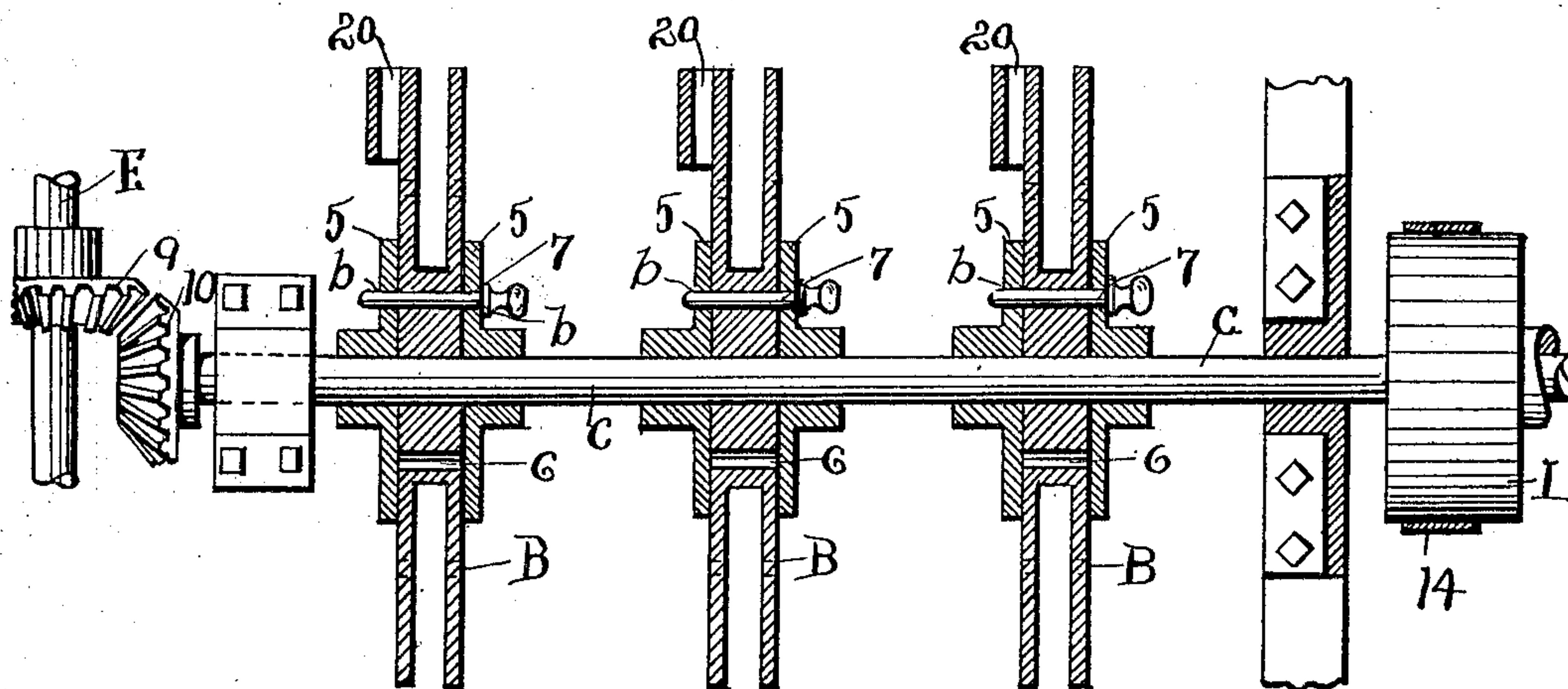


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

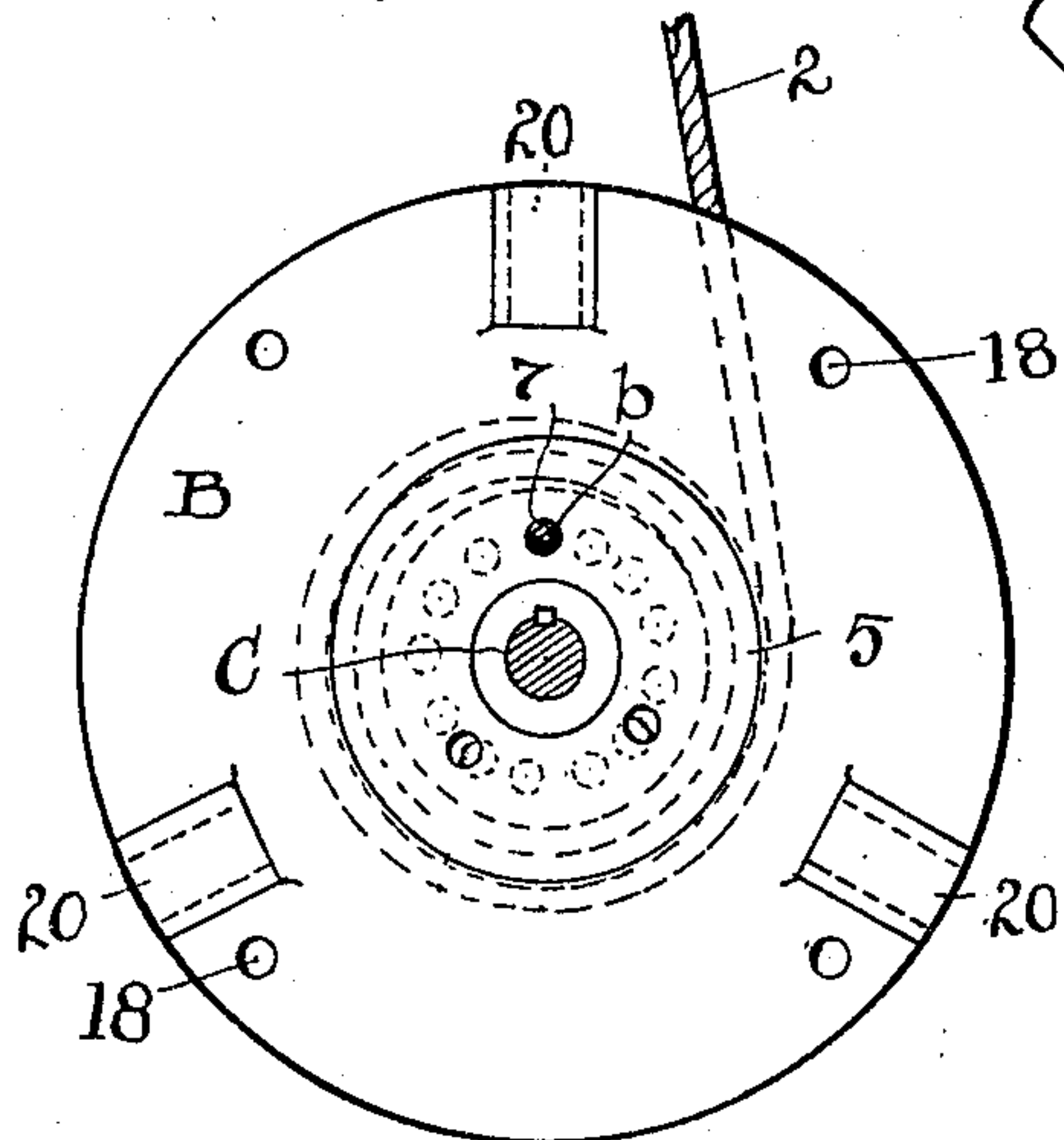


Fig. 4.

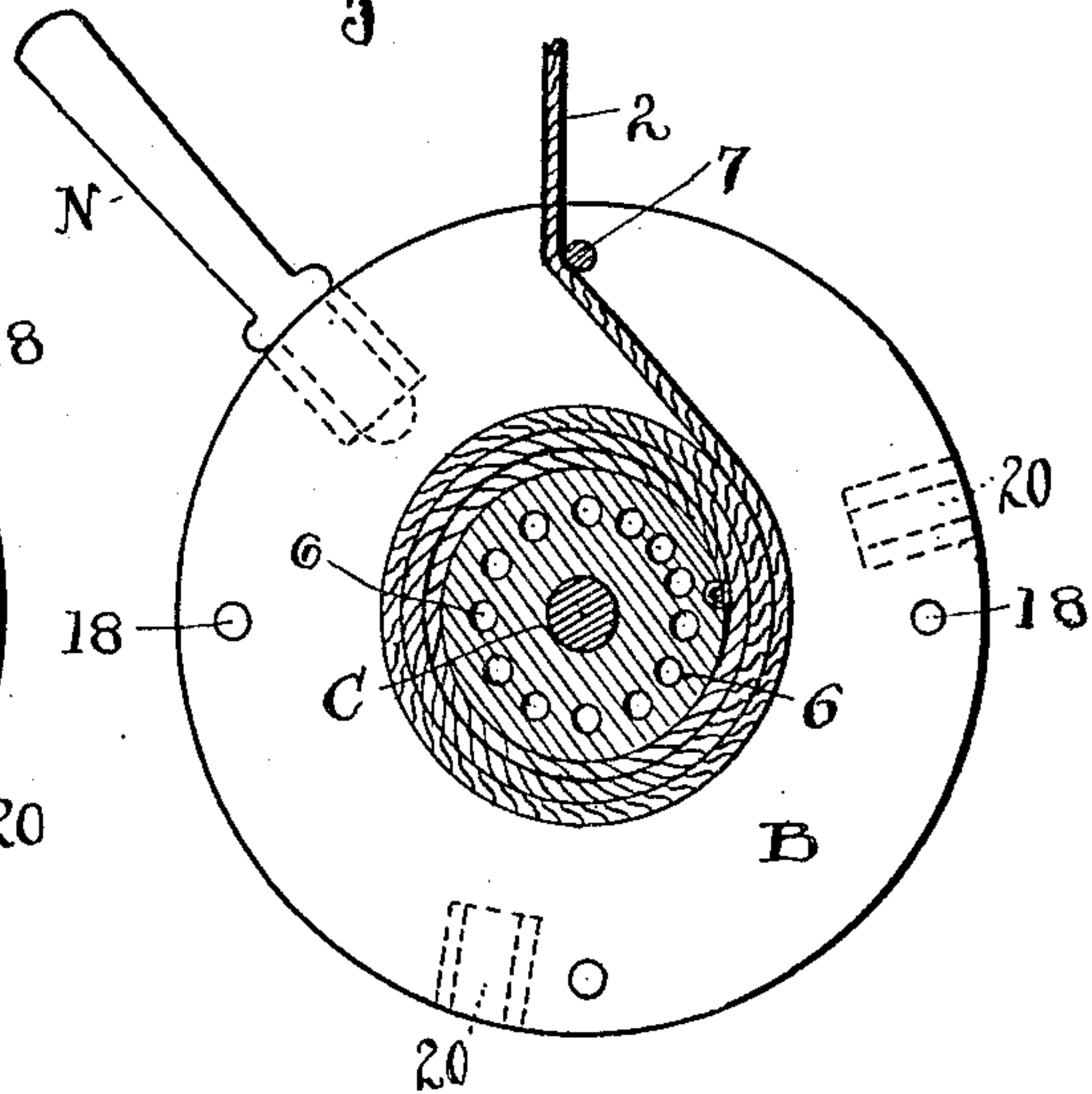


Fig. 5.

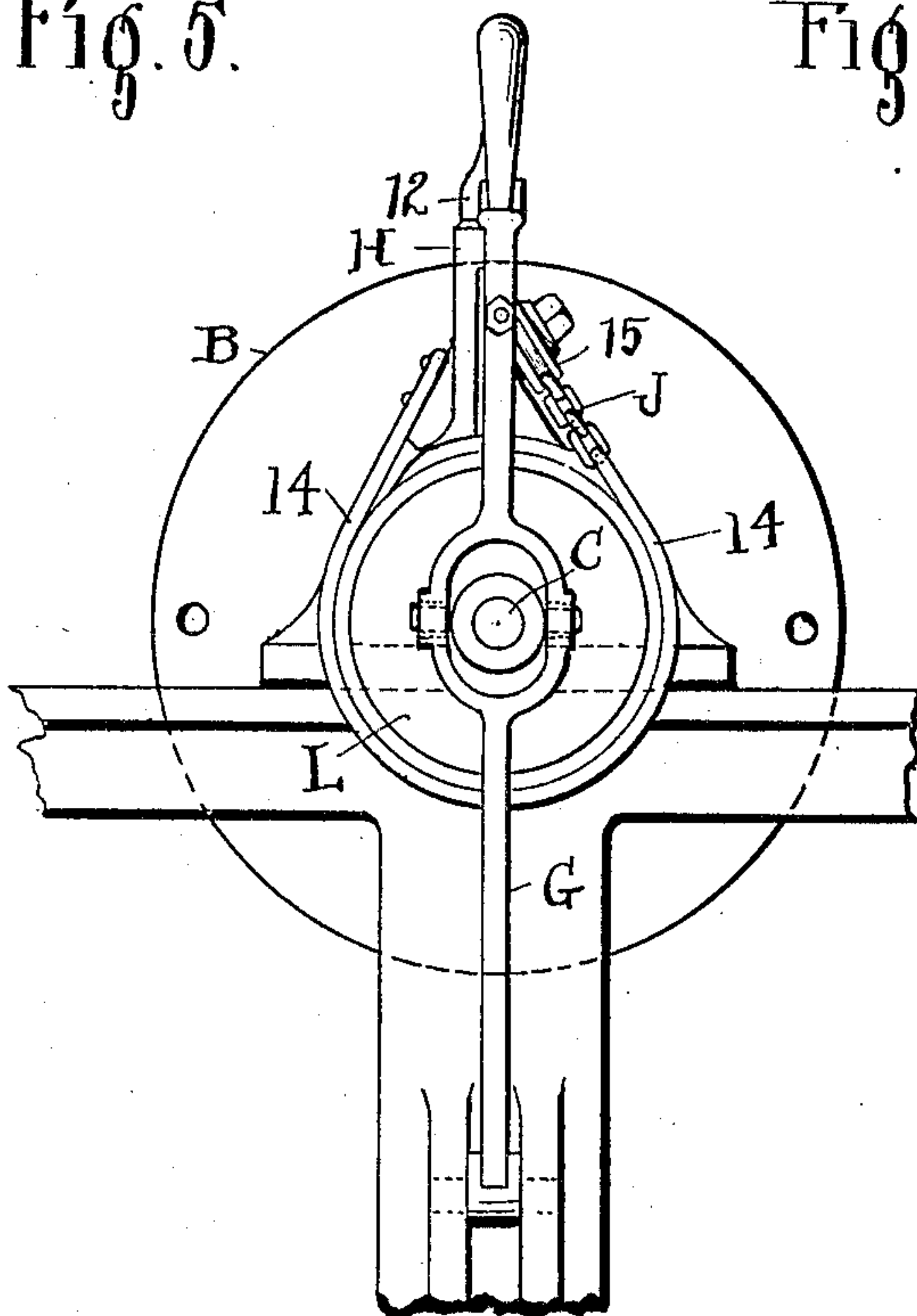
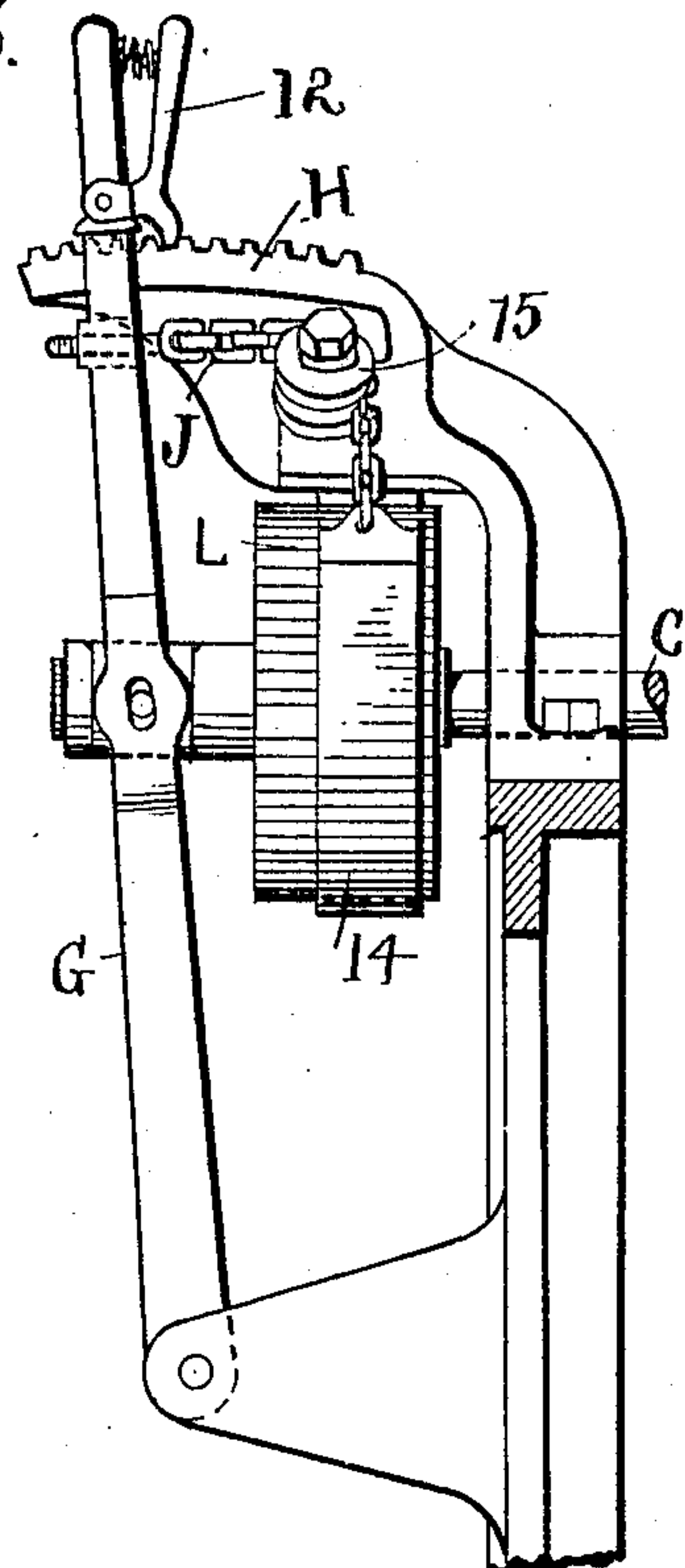


Fig. 6.



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FRANK S. MADIGAN, OF CLEVELAND, OHIO.

MEANS FOR TRIMMING AND CONTROLLING CURTAINS AND SCENIC DROPS.

No. 871,173.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed December 17, 1906. Serial No. 348,261.

To all whom it may concern:

Be it known that I, FRANK S. MADIGAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Means for Trimming and Controlling Curtains and Scenic Drops; and do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to means for trimming and controlling curtains and scenic drops on theater and other stages, all substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plain elevation of a drop or curtain and of the trimming appliances connected therewith, as hereinafter more fully described. Fig. 2 is an enlarged cross sectional view of a series of reels seen also in Fig. 1 and a full line view of a shaft on which said reels are mounted. Fig. 3 is a side elevation of one of said reels and a cross section of its supporting shaft looking in from the left in Fig. 2, and Fig. 4 represents a central sectional elevation of a reel. Fig. 5 is an enlarged side elevation of the brake and controlling mechanism for the reel shaft, and Fig. 6 is an elevation thereof at right angles to Fig. 5.

As thus shown A represents a scenic drop or curtain of any of the usual kinds employed upon a public stage and which are swung from the top of the stage loft and adapted to be bodily raised and lowered. Frequently these curtains or drops are both large and heavy, according to the size of the stage, and it also occurs that one side of a curtain may be considerably heavier than another, according to the scenery displayed thereon, so that there will be a natural tendency in the heavier side to pull down and make an uneven trim on the floor. These and other difficulties met with in handling stage scenery and drapery have led to the present invention and in which I provide for trimming any curtain or drop with comparative ease, accuracy and speed, and so that it will hang evenly across its entire width and length from top to bottom and without wrinkles or any such thing. In order to accomplish these results in a satisfactory manner it is necessary to have a trimming line running at least to the center and each of the

sides of an average size of curtain, but if the curtain has greater than ordinary width there may be four or more of such individual or separate trimming lines or cables to each curtain or drop, distributed so as to reach different portions thereof and cause each to bear a practically even share of the load. To these ends the curtain or drop is provided with a series of ropes or cables 2, referred to also as lines, and running over sheaves 3 and 4 respectively in the stage loft, and each rope or line is connected at its other end with a reel or wheel B. Said reels are each mounted loosely on counter shaft C, and have flanges or disks 5 at their sides which are keyed on shaft C and provided with opposite holes *b* adapted to register with a circle of holes 6 in each reel for adjusting and locking the parts together by pins 7, Figs. 3 and 4. Said reels B are free to be rotated between said side flanges or disks 5, and each line therefrom can be separately taken up or let out thereby according as one part or another of the curtain requires raising or lowering to get a floor trim thereof and to cause it to hang properly from its supports. The trimming is done when the curtains and scenery for an exhibition are first placed in position, and there usually is no need of further attentions of this kind while the play continues except in cases of heavy curtains in which greater weight on one rope than another may stretch a rope unduly, causing sagging. In such case the slack can be taken up by adjusting the corresponding reel accordingly and then locking it again by pin 7.

Each drop of whatever kind is provided with its own counter shaft C and reels or wheels B, and said shafts and reels can be arranged side by side with room between reels for a person to work, and in rows one above the other if desired, thereby making provision for any number of drops a stage may require. However, only a single drop operating equipment is shown in this instance.

Miter gears 9 and 10 couple up counter shaft C operatively with line or drive shaft E, which is designed to be in constant operation when a play is on and enables any one drop or curtain to engage therewith to raise or lower the same as may be required. A friction clutch locking mechanism is employed for shaft C, so that said shaft can be both axially moved to engage or disengage

gears 9 and 10 and at the same time be frictionally locked or unlocked for rotation. This mechanism comprises a hand controlled lever G for each counter shaft C, one or
 5 more, and said lever engages loosely at about its middle, in this instance, with one end of shaft C and is adapted to be locked in any position by rack H and pawl 12. A chain J is connected to lever G with friction
 10 band 14 which is arranged to engage on pulley or band wheel L on shaft C. Said chain runs over a roller or sheave 15 having a fixed support, so that when lever G is moved inward it will release the friction band and
 15 simultaneously throw shaft C into power connection, and when the lever is moved outward it will disengage power connections and tighten the friction band and thereby lock the shaft and hold the curtain or drop
 20 having its connection with this line or mechanism in raised or lowered position or at any other point desired.

It will be observed that this entire mechanism is of the knock-down kind, which enables it to be separated into its original parts
 25 and packed for convenient transportation. As shown the drive mechanism is supported upon a floor or platform in the loft at one side thereof, but it may be placed in any
 30 available working position. After having trimmed a curtain or scenic drop the mechanism is operated exclusively by hand-lever G. The curtain or drop descends by gravity. Asbestos curtains are heavy, weighing up to
 35 1800 pounds or more on large stages.

In Fig. 4 I show pin 7 removed from holes 6 to one of a series of holes 18 in the flanges of the reels, which serves to hold the rope in a given position when the reel has been indi-
 40 vidually adjusted. This adjustment is effected by means of a lever N adapted to engage in any one of the sockets 20 in the side of the reels, and which are convenient for special trimming here and there.

45 What I claim is:

1. In theatrical curtains, a curtain and a series of independently mounted reels rotatable for adjustment and connected with said curtain to trim the same.
- 50 2. Mechanism for trimming and operating stage curtains and the like comprising a plurality of rotary devices and separate cables leading therefrom to the curtain, said devices having independent rotation for trim-
 55 ming the curtain and provided with mechan-

ism adapted to lock them together for joint rotation in raising and lowering the curtain, and means for rotating said devices when locked together.

3. A curtain or the like for a stage and means to trim the same comprising a shaft
 60 and a series of reels independently rotatable thereon, a cable from each reel to said curtain and a separate lock for each reel and means to rotate the said shaft and reels to-
 65 gether.

4. A curtain or like device for stage use, a rotatable shaft, a series of independently mounted trimming devices on said shaft and separately adjustable, and means to fix the
 70 said devices rigidly with the shaft.

5. Trimming mechanism for stage curtains and the like comprising a main shaft and a counter shaft adapted to be thrown
 75 into and out of operating connection therewith, and a series of independently mounted reels on said counter shaft having separate rotary adjustments.

6. Trimming mechanism for stage curtains and the like, comprising a counter
 80 shaft and means to drive the same, a series of trimming devices mounted on said counter shaft and mechanism for shifting said counter shaft into and out of power connections and to lock said shaft against rotation
 85 when disconnected.

7. In curtain and like trimming mechanism, a counter shaft and trimming devices mounted thereon, in combination with a shifting lever for said shaft and a brake for
 90 the shaft controlled by said lever.

8. The combination of the counter shaft and the trimming devices thereon, with a lever operatively engaged with said shaft, a brake wheel on said shaft and a locking
 95 brake for said wheel controlled by said lever.

9. Trimming mechanism for stage drapery comprising a rotatable shaft and a curtain to be trimmed, in combination with trimming
 100 mechanism on said shaft and cables therefrom to different portions on the top edge of the curtain, said mechanism adapted to take up and let out any one of said cables separately.

In testimony whereof I sign this specification in the presence of two witnesses.

FRANK S. MADIGAN.

Witnesses:

R. B. MOSER,
 E. M. FISHER.