July 8, 1924. 1,500,372

M. L. COSSITT

PHOTOGRAPHIC MACHINE

Filed Jan. 26, 1920

Fig. 1.

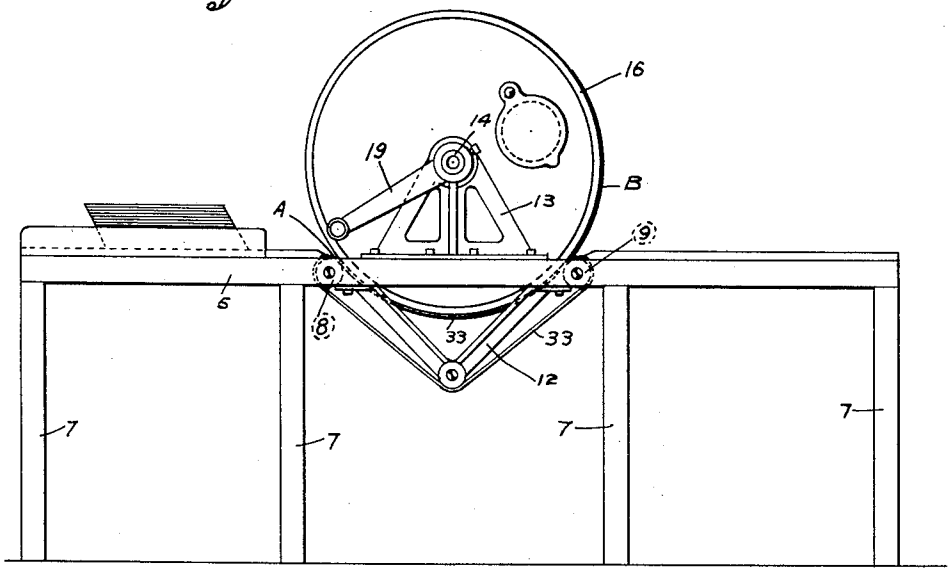


Fig. 2.

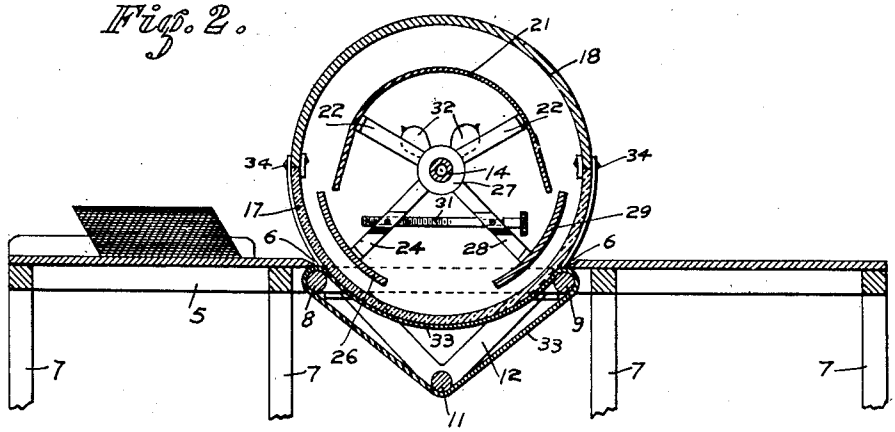
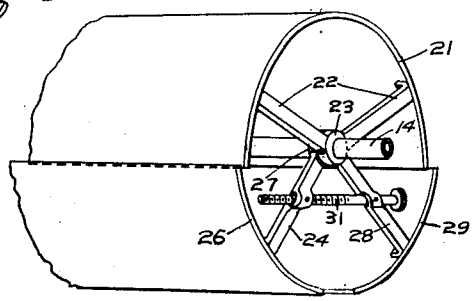


Fig. 3.



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UNITED STATES PATENT OFFICE.

MALCOLM L. COSSITT, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO MANIFOLD IMPRESSIONS CORPORATION, OF CARSON CITY, NEVADA, A CORPORATION OF NEVADA.

PHOTOGRAPHIC MACHINE.

Application filed January 26, 1920. Serial No. 354,211.

To all whom it may concern:

Be it known that I, MALCOLM L. COSSITT, a citizen of the United States, and a resident of the city and county of San Francisco, State of California, have made a new and useful invention, to wit, Photographic Machines; and I do hereby declare the following to be a full, clear, concise, and exact description of the same.

This invention relates to a new, novel and useful improvement in photographic machines.

The principal object of this invention is to produce a machine which may be employed in printing large quantities of prints from a single negative.

Another object of this invention is to produce a machine which can be operated by an unskilled person, and one which will produce uniform results.

Another object is to produce a machine which may be cheaply and economically manufactured and operated, and at the same time be within the purchasing limits of the ordinary commercial photographer.

Other objects and advantages will be seen as the description proceeds.

In this specification and the annexed drawings, the invention is illustrated in the form considered to be the best, but it is to be understood that the invention is not limited to such form, because it may be embodied in other forms, and it is also to be understood that in and by the claims following the description it is desired to cover the invention in whatsoever form it may be embodied.

In the drawings:—

Figure 1 is a side elevation of my complete machine.

Figure 2 is a cross section in elevation of Figure 1.

Figure 3 is a perspective view of the shutter and reflector.

Referring to the drawings in detail, the numeral 5 designates a table having a cut away portion 6. This table may be supported by suitable legs 7. Rollers 8 and 9 are positioned in the cut away portion 6 of the table and spaced apart from each other. A third roller 11 is provided at a point below the table, and is suitably supported by a bracket 12. A support 13 is attached to the top of the table near its edge for the purpose of supporting a shaft 14, which shaft supports a drum 16. This drum is formed in two halves, one half being formed of frosted glass as at 17 and the other half being made of any suitable material which is impervious to light and is indicated at 18.

A handle 19 is attached to the shaft 14 for the purpose of rotating the same, and as the drum 16 is attached to said shaft 14 rotation of the handle 19 will rotate the drum 16.

Referring now to Figure 3, it will be noted that the shaft 14 supports a parabolic reflector 21 which is attached through rods 22 to a collar 23. This collar 23 is free to rotate upon the shaft 14. A collar 23 also carries a rod 24 projecting downwardly and attached to one side of a shutter 26. This shutter is curved on its upper edge overlapping the lower edge of the parabolic reflector. A second collar 27 is provided upon the shaft 14 adjacent the collar 23 and carries a rod 28 attached to a shutter 29. This shutter 29 is similar in construction to the shutter 26. A screw 31 is provided which passes through lugs extending outwardly from the rods 24 and 28 for the purpose of moving the shutters 26 and 29 toward or away from each other.

It is to be understood that the parabolic reflector and shutters are supported at their opposite ends in a similar manner. The parts forming the shutters are of sufficient weight to hold the parabolic reflector above the shaft. In other words they serve as a counter weight for the reflector, and thereby prevent its rotation when the shaft 14 is rotated.

Illuminating means, such as electric lights 32, are supported along the shaft 14 in any convenient manner for the purpose of illuminating the interior and causing light to be reflected from the reflector downwardly through the opening between the shutters 26 and 29.

A web belt 33 is provided which passes over the roller 8 under the drum 16 over the roller 9 and roller 11. This forms a rolling contact with the drum 16, and is adapted to travel at the same rate as that of the periphery of the drum.

Suitable fastening means 34 are provided for attaching a film or negative to the glass half of the drum.

In operation, a film or negative is attached to the drum and photographic paper is either automatically or manually fed to the

machine at the point A, and at a time when the point B of the cylinder is adjacent the point A. The result will be that the paper and film will be carried from one side of the table to the other, and the light passing from the reflector between the shutters will act to give a photographic impression upon the sensitized paper. By adjusting the screw 31, the shutte nay be moved toward or away from eacl ner to vary the light area.

It will thus be seen that I have constructed a very simple and effective means for rapidly producing photographs or prints from a negative, and it is to be understood that the same may be operated either manually or automatically without departing from the spirit of the invention.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is as follows:—

1. In a photographic machine, the combination of a support, a drum rotatable on said support, said drum having a transparent portion, a light within the drum, a shaft within said drum, means for rotating said drum, a traveling web approximating said drum, a reflector supported on said shaft, shutters mounted on said shaft and serving to limit the area of illumination of said drum, and further to prevent rotation of said reflector on said shaft.

2. In a photographic machine, the combination of a support, a drum rotatable on said support, said drum having a transparent portion, a light within the drum, means for rotating said drum, a traveling web approximating the drum, a reflector within the drum, and a shutter within the drum arranged relatively to said reflector to cooperate therewith to limit the area of illumination of said drum.

3. In a photographic machine, the combination of a support, a drum rotatable on said support, said drum having a transparent portion, a light within the drum, means for rotating said drum, a traveling web approximating the drum, a reflector within the drum, swinging shutter members to limit the area of illumination of the drum, and adjusting means for said shutter members.

4. In a photographic machine, the combination of a support, a drum rotatable on said support, said drum having a transparent portion, a light within the drum, means for rotating the drum, a traveling web approximating the drum, a reflector within the drum, a plurality of movable shutter members to limit the area of illumination of the drum, and means adjustably connecting the shutter members together.

5. In a photographic machine, the combination of a support, a drum rotatable on the support, said drum having a transparent portion, a light within the drum, means for rotating the drum, a traveling web approximating the drum, a pair of shutter members to limit the area of illumination of the drum, and adjusting means for the shutters comprising a rod adjustably connecting the shutters together.

6. In a photographic machine, the combination of a support, a drum rotatable on the support, said drum having a transparent portion, a light within the drum, means for rotating the drum, a traveling web approximating the drum, and a plurality of swinging shutter members to limit the area of illumination of the drum, and adjusting means for said shutter members.

In testimony whereof, I have hereunto set my hand at San Francisco, California, this 12th day of July 1919.

MALCOLM L. COSSITT.