

No. 861,907.

PATENTED JULY 30, 1907.

H. V. SIIM-JENSEN.
PHOTOGRAPHIC PRINTING APPARATUS.
APPLICATION FILED JAN. 30, 1905.

Fig. 1.

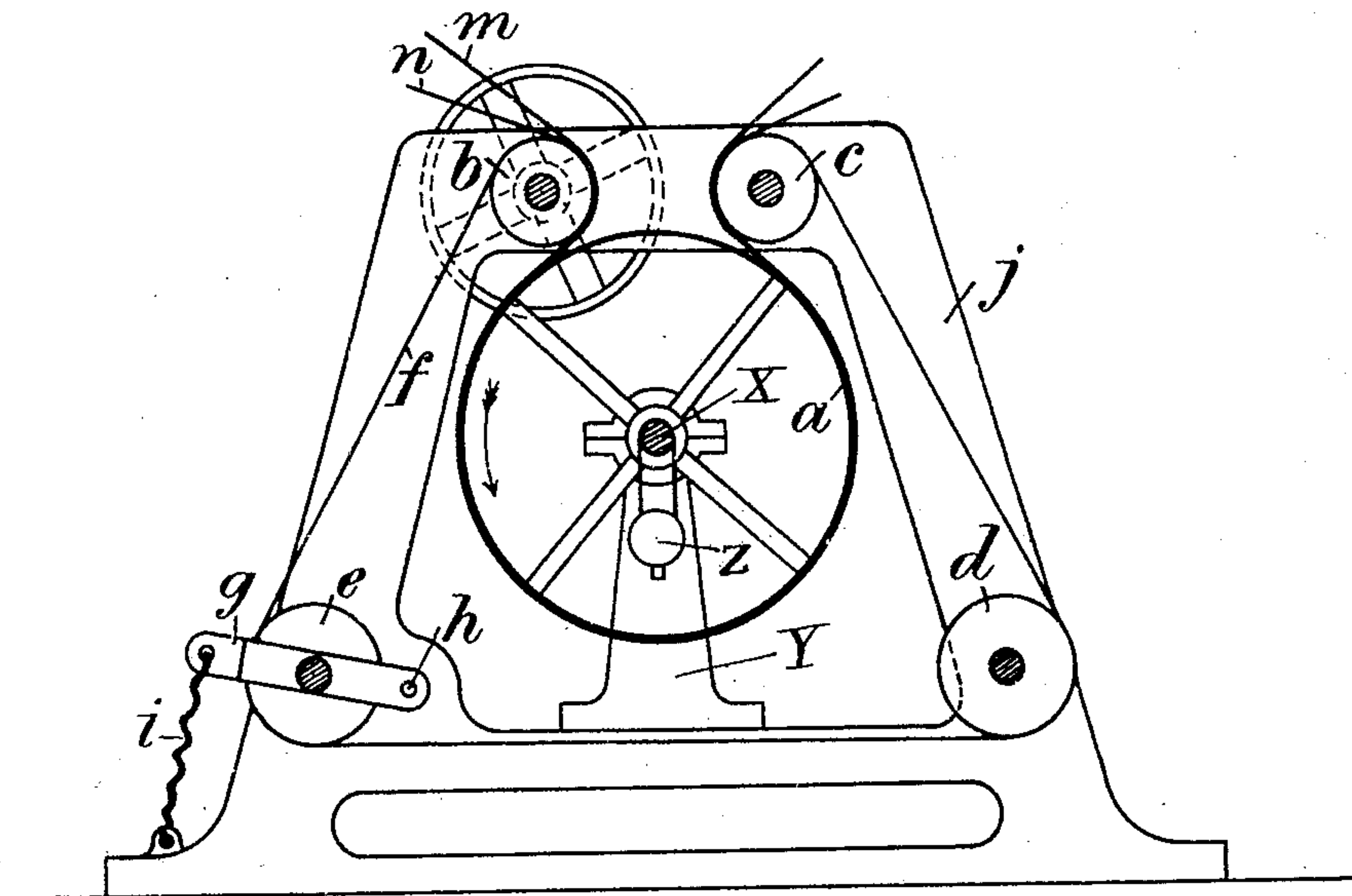
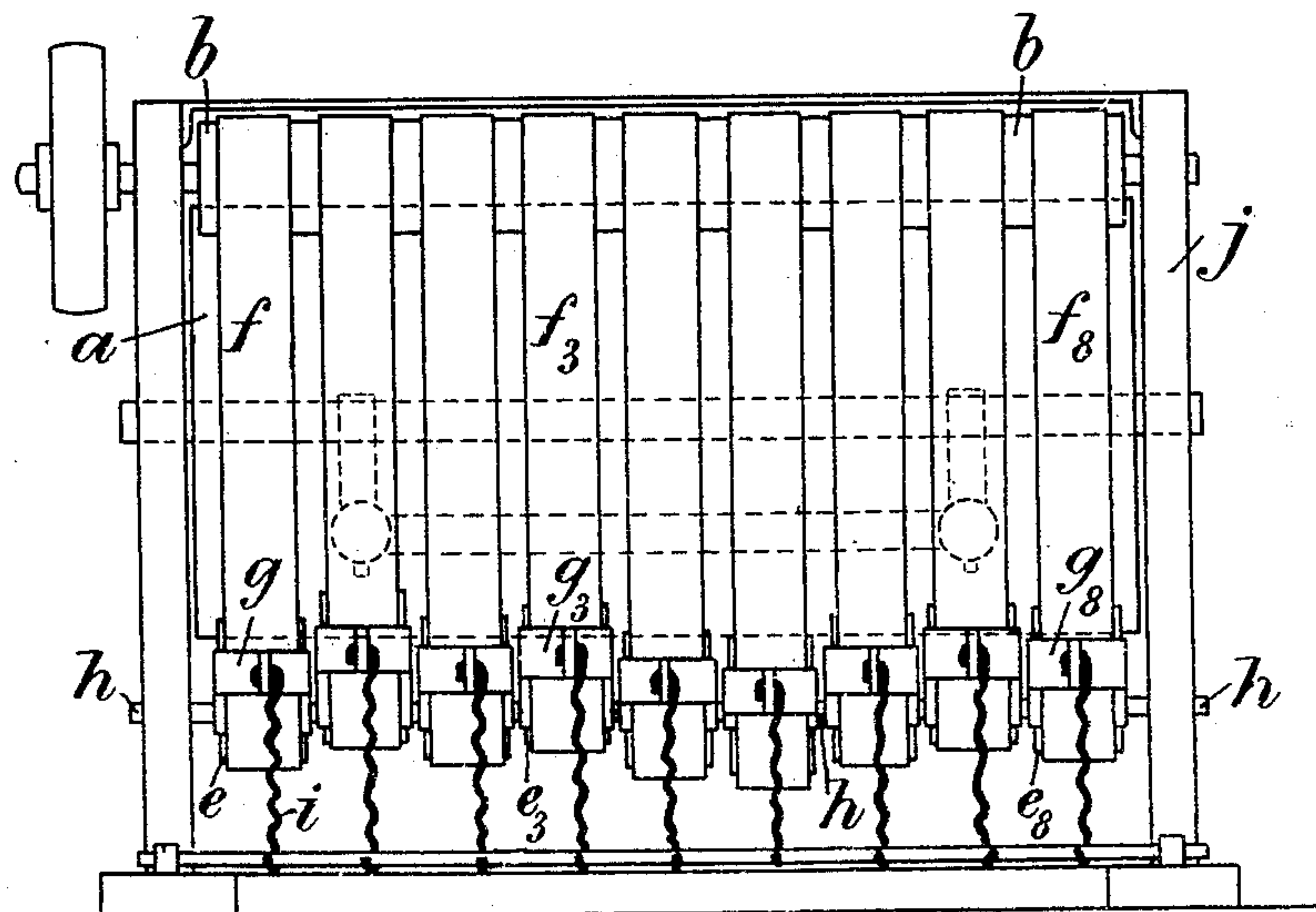


Fig. 2.



Witnesses:

Staldon Chapin
James D'Antonio

Inventor

Hans V. Siim-Jensen.
by *Rasmus Stockbridge*
Attys.

UNITED STATES PATENT OFFICE.

HANS VIGGO SIIM-JENSEN, OF COPENHAGEN, DENMARK.

PHOTOGRAPHIC-PRINTING APPARATUS.

No. 861,907.

Specification of Letters Patent.

Patented July 30, 1907.

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To all whom it may concern:

Be it known that I, HANS VIGGO SIIM-JENSEN, physician, a citizen of the Kingdom of Denmark, and a resident of Copenhagen, Denmark, have invented certain new and useful Improvements in Photographic-Printing Apparatus, of which the following is a specification.

In a photographic printing apparatus where the negative and the photographic paper by the aid of an endless stretching-cloth are pressed against a transparent hollow cylinder containing the light-source and supported by an axle or in some other suitable manner, various drawbacks sometimes occur of which may especially be mentioned, that the contact becomes deficient in some places if the cylinder is not quite accurately wrought and that an undivided stretching-cloth may easily stretch somewhat unevenly and have a tendency to running on one side causing the exact contact between the paper and the negative to cease. This drawback may be avoided by using instead of the broad stretching-cloth a row of narrow bands the edges of which must be at suitable distances from one another and which preferably have their own individual stretching-devices.

The drawing shows an embodiment of the invention in which:

Figure 1 is an end elevation of my photographic printing apparatus, one of the end stands being removed. Fig. 2 the apparatus seen from the side.

a signifies a cylindric tube of some transparent material for example glass.

In the drawing the cylinder a is supported on a fixed central axis formed by the shaft X, which is mounted on the bearings Y, of the frame. The source of light is indicated at Z and comprises a mercury vapor lamp, or other source of light, hanging from the axle X.

$f \dots f_3 \dots f_8$ denote endless bands carried over the rollers b , c , d , and e and around the cylinder a . The three first named rollers are single while the last-mentioned one is divided into a number of rollers equal to the number of bands used. These rollers (e, e_3, e_8) are each carried by an arm g, g_3, g_8 the one end of which turns round a bolt h while the other end is drawn downwards by the draw-springs i ; the other rollers have their bearings in the stand j .

The power that drives the apparatus works on the axle of one of the rollers b or c and the negative and the photographic paper are carried in between the roller b and the cylinder a . When this is rotating in the direction indicated by the arrow the paper and negative will pass around the cylinder and here be illuminated after which they will come out between the cylinder and the roller c .

The perfectly close contact between the negative and the paper is, as mentioned, attained by the narrow bands pressing these against the surface of the cylinder and it has been fully proved that the narrow intervening spaces between the bands do no harm.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

In a photographic printing apparatus, a transparent rotatable cylinder journaled to revolve on a fixed axis, a source of light within said cylinder, guide rolls, a plurality of narrow bands disposed side by side and extending around said cylinder, means for uniformly tensioning said bands, and means whereby the cylinder is rotated.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

HANS VIGGO SIIM-JENSEN.

Witnesses:

VIGGO BLOM,
F. A. USSING.