

R. A. BELL.
MACHINE FOR MAKING PRINTS.

(Application filed Feb. 13, 1902.)

(No Model.)

Fig. 1.

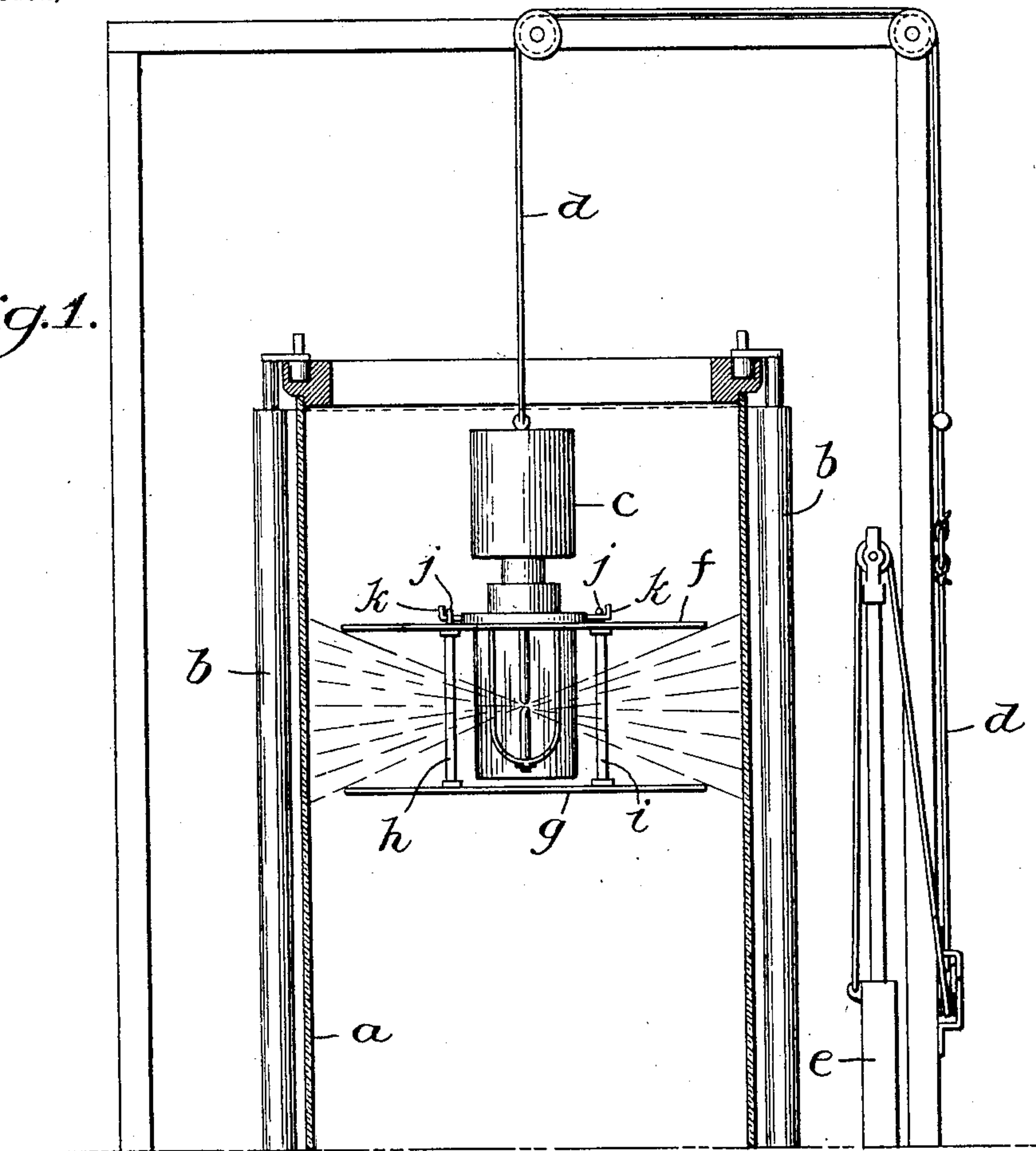
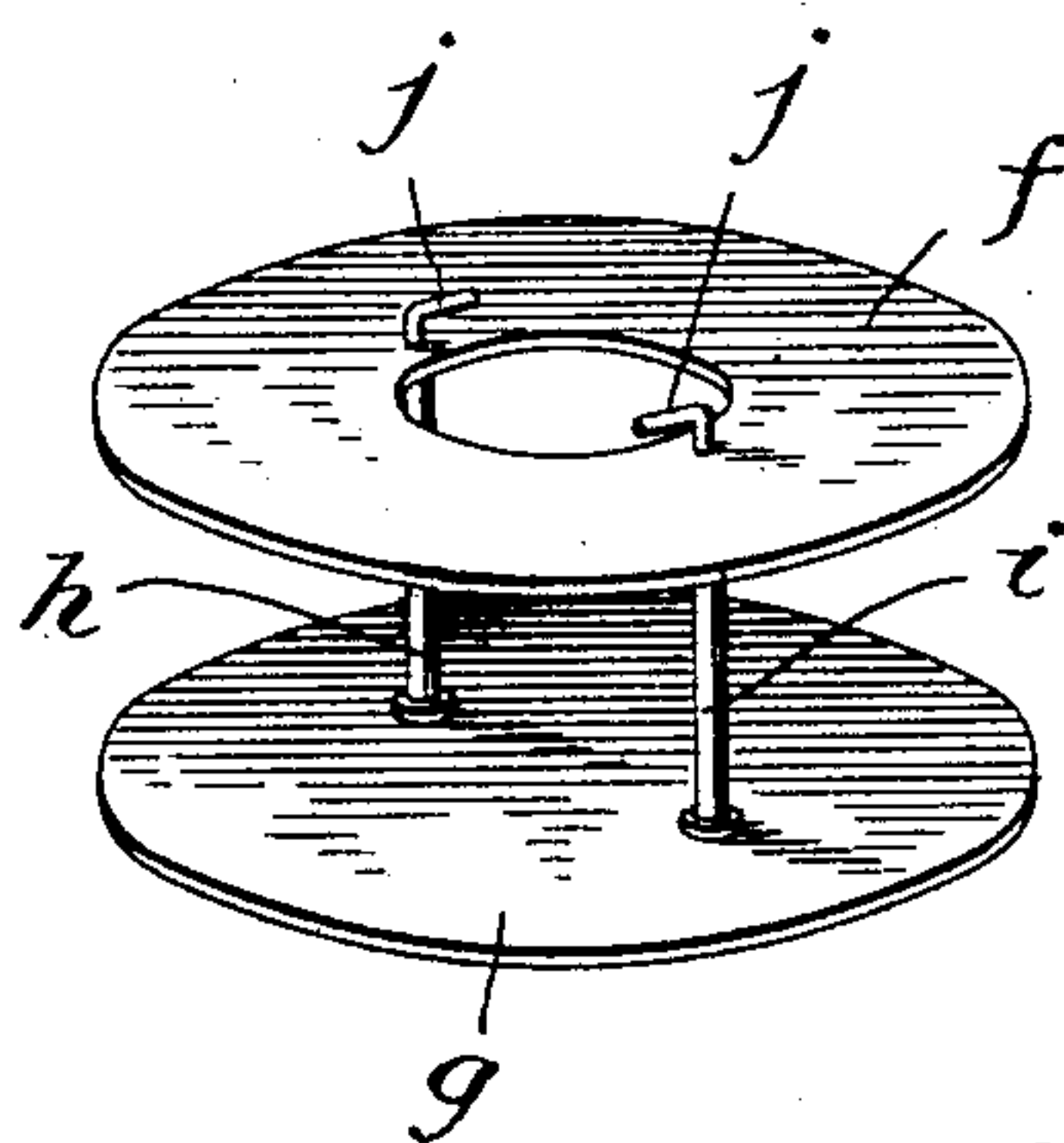


Fig. 2.



WITNESSES:

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MACHINE FOR MAKING PRINTS.

SPECIFICATION forming part of Letters Patent No. 708,989, dated September 16, 1902.

Application filed February 13, 1902. Serial No. 93,815. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ANGELO BELL, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Machines for Making Prints, of which the following is a specification.

My invention relates to improvements in machines for making prints by electric or other artificial light; and the object of my invention is to furnish a means whereby the print will be of equal intensity throughout.

One of the most common forms of machine for making prints by artificial light consists of a glass cylinder or platen against the outside of which the tracing or negative is placed and outside of this the sensitive paper, which, together with the negative or tracing, is held in place against the cylinder by a curtain or blanket, which is drawn tightly around the cylinder. The light which fixes an image of the tracing or negative upon the sensitive paper is gradually passed through the cylinder, its rays acting in the usual manner upon the sensitive paper. It has been found in practice that this machine is defective in that the light is applied unequally at different parts of the cylinder, the top of the cylinder, for instance, receiving light before the lamp enters it while the lamp is passing down past it and after the lamp has passed, while the lower part of the cylinder receives light only during the approach and passage of the lamp, the result being a print of greater intensity upon the top than on the bottom. To remedy this defect, I place both above and below the light screens, which cut off all rays above and below, permitting only rays to pass between them. The screens are preferably of a size to just pass freely through the cylinder. They are preferably arranged as reflectors upon their sides next the light, so as not to absorb any of the rays, and one or both are easily detachable from the lamp, so that access may be had to the latter for trimming or adjustments.

In the accompanying drawings, forming part of this specification, and in which simi-

lar letters of reference indicate similar parts throughout both views, Figure 1 is a central sectional elevation through the platen of a blue-printing machine, the lamp being shown in side elevation; Fig. 2, a perspective view of the screens for masking the upper and lower rays from the light.

a is a glass platen; *b*, a curtain or blanket for holding the negative or print and the sensitive paper against the platen. *c* is an electric arc lamp; *d*, a cord from which lamp *c* is suspended; *e*, a hydraulic governor to which the cord *d* is attached and which serves to lower the lamp through the platen with a perfectly regular motion. All of these parts were fully described in an application for patent filed by me in the United States Patent Office November 15, 1901, Serial No. 82,462, and will not need detailed description at this time.

f g are screens carried by lamp *c*, the screen *f* above the light, the screen *g* below it. These screens are of a diameter just small enough to pass freely through cylinder or platen *a* and cut off all light above the upper and below the under one, causing all parts of the sensitive paper to receive the same exposure from the lamp during its passage through the cylinder. The lower screen is preferably secured to the upper one by rods *h i*, and the top of the upper screen is furnished with catches *j*, which are adapted to engage with catches *k*, carried by the lamp, in order to removably secure the screens to the lamp, although any other suitable and convenient means may be used for carrying the screens and for attaching them to the lamp.

While my light-controlling screens are shown applied to a printing-machine having a circular platen, it will be understood that the same principle may be applied to machines having flat platens and using an artificial light.

By the term "negative" used in the claims I include whatever may be used in producing the print desired. This may be a properly-termed negative or a drawing, tracing, &c., according to circumstances and the wishes of the user of the apparatus. The paper or

other body upon which the print is to be made will be referred to in the claims as a "sensitized surface."

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

1. In an apparatus for making prints by artificial light, the combination of a glass platen, means for holding a negative and a sensitized surface against the platen, an artificial light movable across the platen, and means for protecting all portions of the platen except those opposite the light at any point in its travel from the rays of said light.

2. In an apparatus for making prints by artificial light, the combination of a glass platen, means for holding a negative and a sensitized surface against the platen, an artificial light movable across the platen, and screens moving with said light and preventing the rays thereof from striking the platen except at points opposite the light.

3. In an apparatus for making prints by artificial light, the combination of a glass platen, means for holding a negative and a sensitized surface against the platen, an artificial light movable vertically of the platen, and two screens moving with and arranged, respectively, above and below said light, the screens

being arranged to prevent the rays of said light from striking the platen except at points opposite the light.

4. In an apparatus for making prints by artificial light, the combination of a glass platen, means for holding a negative and a sensitized surface against the platen, an artificial light movable vertically of the platen, and screens detachably connected to and moving with said light to prevent the passage of rays therefrom above or below said light.

5. In an apparatus for making prints by artificial light, the combination of a glass platen, means for holding a negative and a sensitized surface against the platen, an artificial light movable vertically of the platen, a disk or screen arranged above and moving with said light and acting to prevent the rays of said light from striking the platen above said disk, and a second disk or screen, arranged below the light and detachably connected to the first said screen, and acting to prevent the rays of said light from striking the platen below said lower disk.

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Witnesses:

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