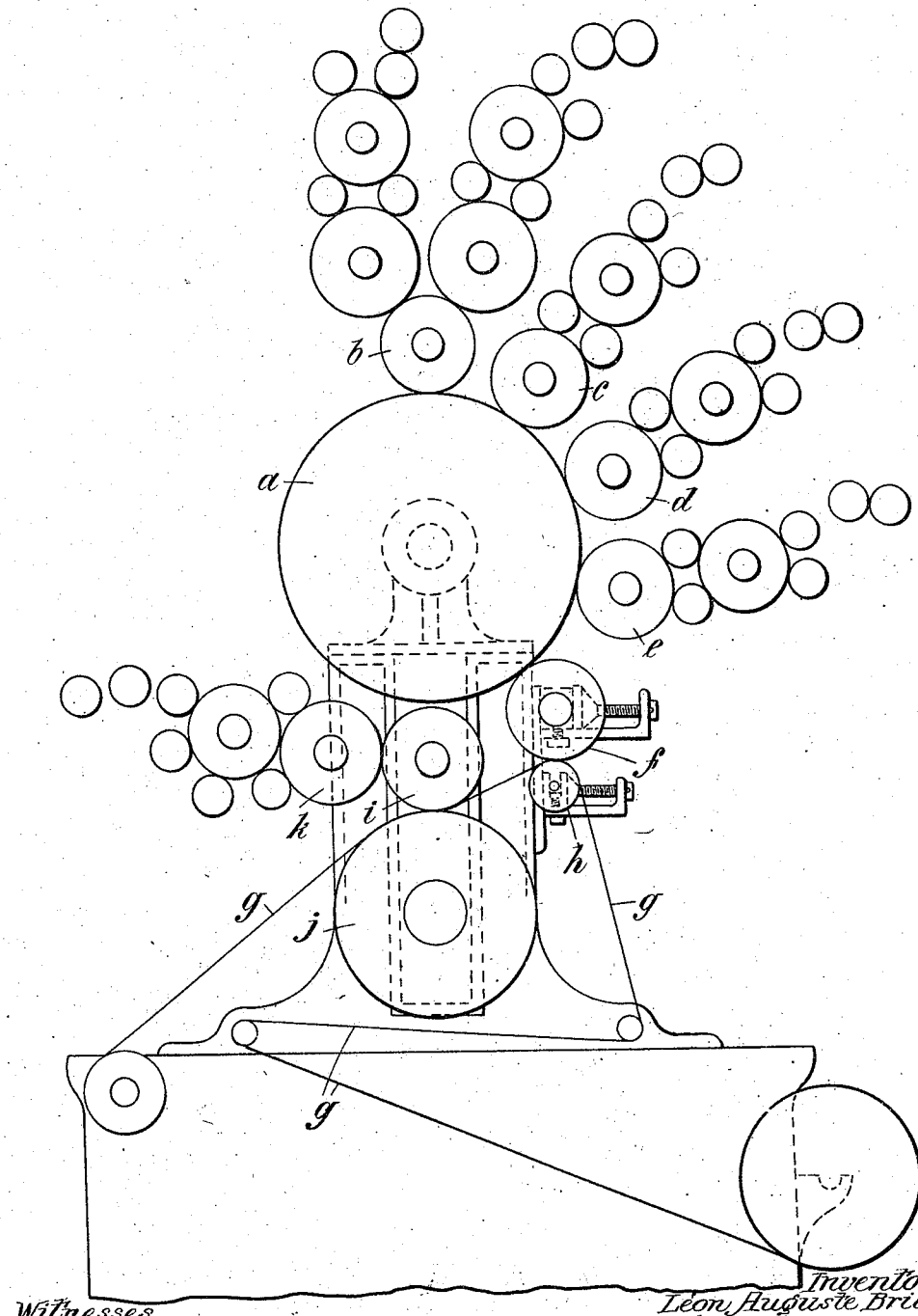
L. A. BRILA & W. ANDREWS.

EMBOSSING APPARATUS.

APPLICATION FILED MAY 4, 1912.

1,133,922.

Patented Mar. 30, 1915.



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UNITED STATES PATENT OFFICE.

LÉON AUGUSTE BRILA AND WALTER ANDREWS, OF LONDON, ENGLAND.

EMBOSSING APPARATUS.

1,133,922. Specification of Letters Patent. Patented Mar. 30, 1915.

Application filed May 4, 1912. Serial No. 695,144.

To all whom it may concern:

Be it known that we, LÉON AUGUSTE BRILA, a citizen of the Republic of France, residing at 89 Brook street, Kennington, and WALTER ANDREWS, a subject of His Majesty the King of England, residing at 5 Belsize Park, both in the county of London, Kingdom of England, have invented a certain new and useful Embossing Apparatus, of which the following is a specification.

This invention relates to an improved machine for producing printed and embossed fabrics, sheets of paper and the like.

Heretofore machines have been provided for simultaneously printing in colors and embossing materials comprising generally an embossing roll, a counter roll, and one or more collecting rolls for receiving the whole impression from a series of intermediate transfer or collecting rolls for the separate colors and transferring it to the said embossing roll. In such a machine as at present constructed where a single collecting roll is employed which is in direct contact with the embossing roll, it has to be embossed if it is to transfer the pattern to the embossing roll in the intaglio portions, or else when a plain roll is employed for transferring the pattern to the relief portions of the embossing roll, it is necessary to employ a separate embossed roller for inking the recessed portions of the said roll. Now the separate embossed color collecting rolls and also the embossed collecting rolls which are usually made of rubber are very expensive to manufacture and at present they all have to be changed to produce different patterns and in order to avoid this expense we have devised our present invention which is hereinafter described with reference to the accompanying drawing which is a diagrammatic section through our improved machine.

As shown we employ a plain preferably cast iron collecting roll *a* for receiving the whole impression from a plurality of embossed gelatin intermediate color transfer or collecting rolls *b c d* and *e* all of which are comparatively inexpensive to provide. For receiving the impression from the collecting roll *a*, which in the present invention is out of contact with the embossing roll, we employ a single plain or embossed rubber roll *f* which prints on to the paper or other material *g* which is fed between such roll *f* and a plain counter roll *h*, both of which are as shown adjustable in any well known manner. After the paper has been printed by the roll *f* it then passes between an embossing roll *i* and its corresponding counter roll *j* to be embossed. This operation may if desired be facilitated by heating one or other of the rolls *i* or *j* which would not be possible where the embossing roll is in contact with the collecting roll as heretofore proposed. We may further if required as shown at *k*, provide additional means for forming the ground or inking the paper or material either after it has been embossed or as shown, simultaneously therewith and this roll *k* may either bear directly on the paper *g* or other material passing over the roll *j* or as shown directly on the roll *i*. It will thus be seen that a change in pattern can be made much more readily and cheaply than heretofore as it is practically only necessary to provide another embossing and counter roll *i*, and *j* and the one embossed rubber printing roll *f;* the gelatin transfer inking rollers *b c d e* and *k* being cheaply made and cut and of small consideration from a manufacturer's point of view. Another advantage is that the loss of time heretofore necessary for adjusting the counterpart is avoided as work can be started as soon as the exchange of design has been effected.

It will be understood that the arrangement of the ink contact distributing rolls for the rolls *b c d e* and *k* may be varied as desired, these separately forming no part of the present invention.

The rolls *i* and *j* are driven synchronously with the rolls *a* and *f* and the collecting roll is of course a multiple of the diameter of the printing and embossing rolls.

What we claim and desire to secure by Letters Patent of the United States is:—

1. In an apparatus for printing colors and embossing paper, fabrics or other materials, a frame, a metallic collecting roll journaled therein, a plurality of embossed gelatin ink transfer rolls arranged for coöperation with said collecting roll, a rubber printing roll engaging the metallic collecting roll, and adjustable to and from the same, a counter roll mounted below the printing roll between which and said printing roll the strip of fabric to be printed is fed, and heating rolls mounted below the collecting roll and adjacent said printing and counter rolls between which the strip passes.

2. In an apparatus for printing colors and

embossing paper, fabrics or other materials, a frame, a collecting roll journaled therein, a plurality of embossed gelatin ink transfer rolls arranged to engage one side of the collecting roll for coöperation therewith, a printing roll engaging said collecting roll and disposed adjacent the under side thereof, means for adjusting said printing roll to and from said collecting roll, a counter roll adjustable below said printing roll, between which and the printing roll the paper to be printed is fed, heating rolls mounted below the collecting roll, and between which said strip passes, and an engaging roll mounted in the frame and engaging the heating roll which engages the strip to emboss it.

In testimony whereof we have signed this specification this 19th day of April 1912.

LÉON AUGUSTE BRILA.
WALTER ANDREWS.

Witnesses:
HAROLD A. FARMAN.
G. W. BIGREL.