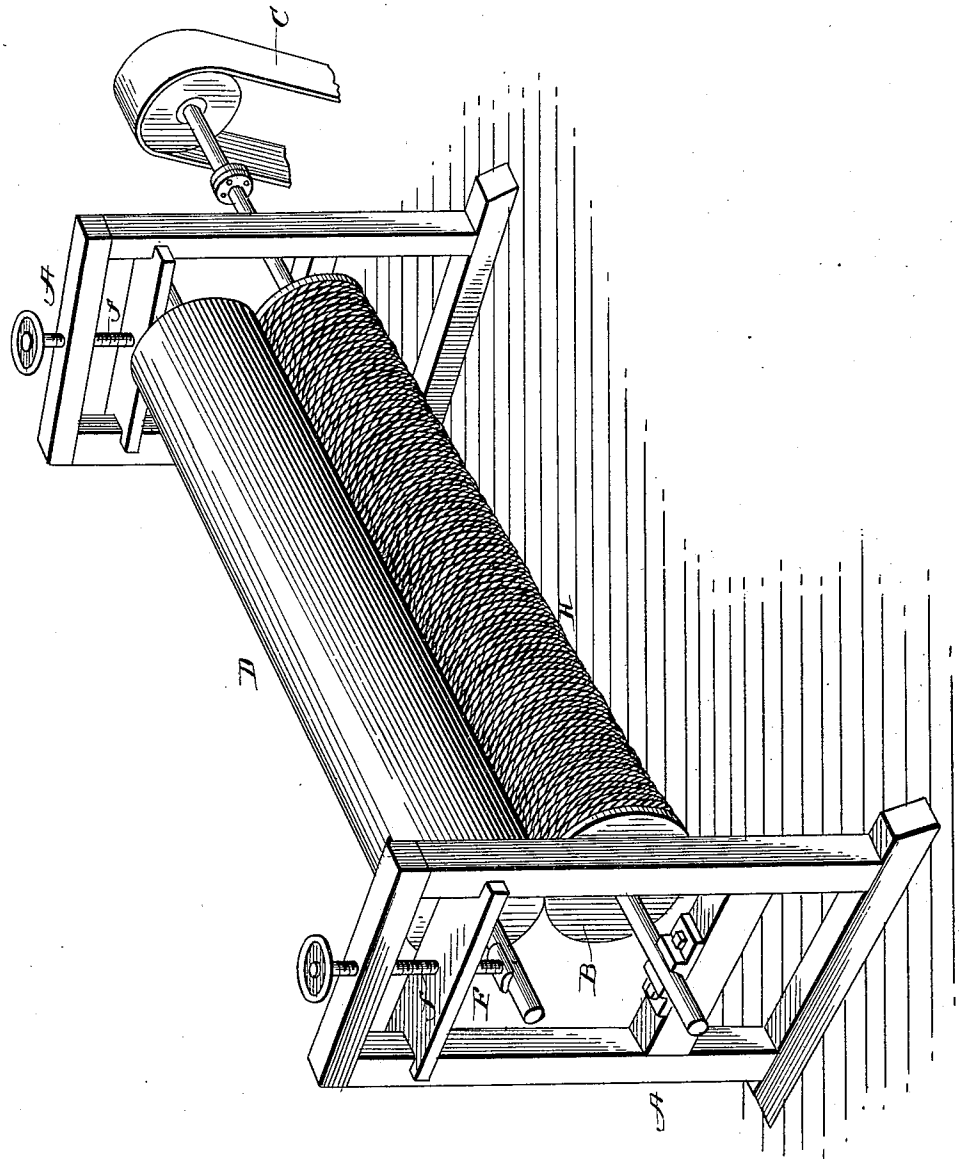
No. 669,277. Patented Mar. 5, 1901.

R. A. G. AULT.

MACHINE FOR INDENTING PAPER STOCK.

(Application filed Nov. 28, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

ROBERT A. G. AULT, OF YORK, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JOHN C. SCHMIDT, OF SAME PLACE.

MACHINE FOR INDENTING PAPER-STOCK.

SPECIFICATION forming part of Letters Patent No. 669,277, dated March 5, 1901.

Application filed November 28, 1900. Serial No. 38,042. (No model.)

To all whom it may concern:

Be it known that I, ROBERT A. G. AULT, of York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Indenting Paper-Stock; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to machines for indenting paper-stock in the formation of paper for use as carpet-linings or for packing of fragile objects, such as bottles and the like, the objects of the invention being to provide a cheap and convenient mechanism for performing the indenting operation and a mechanism which may be readily changed to form different sizes and styles of indentation without the necessity of providing new indenting-rolls for each size or style.

To these ends the invention consists, broadly stated, in a machine for indenting paper-stock embodying a pattern-roll and a coöperating or platen roll, the latter being elastic or having a yielding surface and the former having its indenting-surface of material formed in lengths with a surface contour corresponding to the desired indentation and applied to the pattern-roll by being wound about the same.

The invention further consists in certain novel details of construction and combinations and arrangements of parts, all as will be hereinafter described, and pointed out particularly in the appended claims.

The accompanying drawing is a perspective view of a portion of a paper-machine embodying indenting-rolls constructed in accordance with the present invention.

In said drawing the letter A indicates a suitable framework of any desired character and provided with bearings for a pair of rolls, one of which, B, is the pattern-roll before referred to and is preferably mounted in fixed bearings and driven from any suitable source of power through the medium of a belt C or equivalent driving mechanism, and the other of which (lettered D) is the platen-roll, preferably mounted in adjustable bearings F, so as to be movable toward and from the pattern-roll to vary the degree of pressure, the adjustment being effected by screws *f* or other suitable and well-known adjusting devices.

The platen-roll D is made of or surfaced with an elastic or yielding material, such as soft rubber, and the pattern-roll B is preferably of a rigid material, but is surfaced for the application of the pattern material. In carrying the invention into practice the said pattern-roll B is preferably covered with windings of rope H, a rope being adopted which is preferably of tightly-wound strands, the several strands being well defined, so as to form projections which constitute the pattern to be indented in the paper-stock. The ends of the rope are preferably suitably secured to the pattern-roll itself, and it is obvious that where the convolutions of the rope are arranged close together the body of the roll may be plain and smooth; but where the windings are separated some suitable guiding means, as grooves, must be employed for retaining the rope in its position on the roll.

Obviously the size of the rope and the style or character of twist in the rope may be varied to form different patterns and that different ropes may be substituted without difficulty and without requiring a long stoppage of the machine. By providing a coöperating soft-surfaced platen-roll it is obvious that the indentations formed in the paper-stock will correspond to the pattern-roll whatever the particular pattern thereon may be. Hence there is no need of providing two pattern-rolls with coöperating projections and indentations, as has heretofore been customary in indenting paper-stock for the purposes contemplated by the present invention.

Any suitable material which may be applied to the pattern-roll, as described, may be substituted for the rope, and hence I do not wish to be understood as limiting myself by the use of the particular term "rope" to a material which is technically known in the trade as "rope," although in the preferred machine such material is the material employed. Any rope such as now found on the market, and particularly Manila rope, is the kind preferably employed, inasmuch as it is

found that this material lasts well in use, is cheap, and when mashed or worn may be quickly and readily renewed.

In operation the paper-stock after having been formed into a blanket and more or less condensed, but while still in a yielding and plastic condition, is passed through between the indenting-rolls and given its final formation, being thence led off for drying and finishing, as usual.

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

1. In a machine for indenting paper-stock the combination with a platen-roll having a yielding surface, of a coöperating pattern-roll having its surface formed by pattern material wound spirally thereon.

2. In a machine for indenting paper-stock the combination with a platen-roll having a yielding surface, of a pattern-roll having its surface covered with a spiral winding of rope; substantially as described.

3. An indenting-roll for paper-machines having a rigid body and a surface formed by winding rope spirally thereon with the convolutions in juxtaposition; substantially as described.

ROBERT A. G. AULT.

Witnesses:
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