(No Model.)

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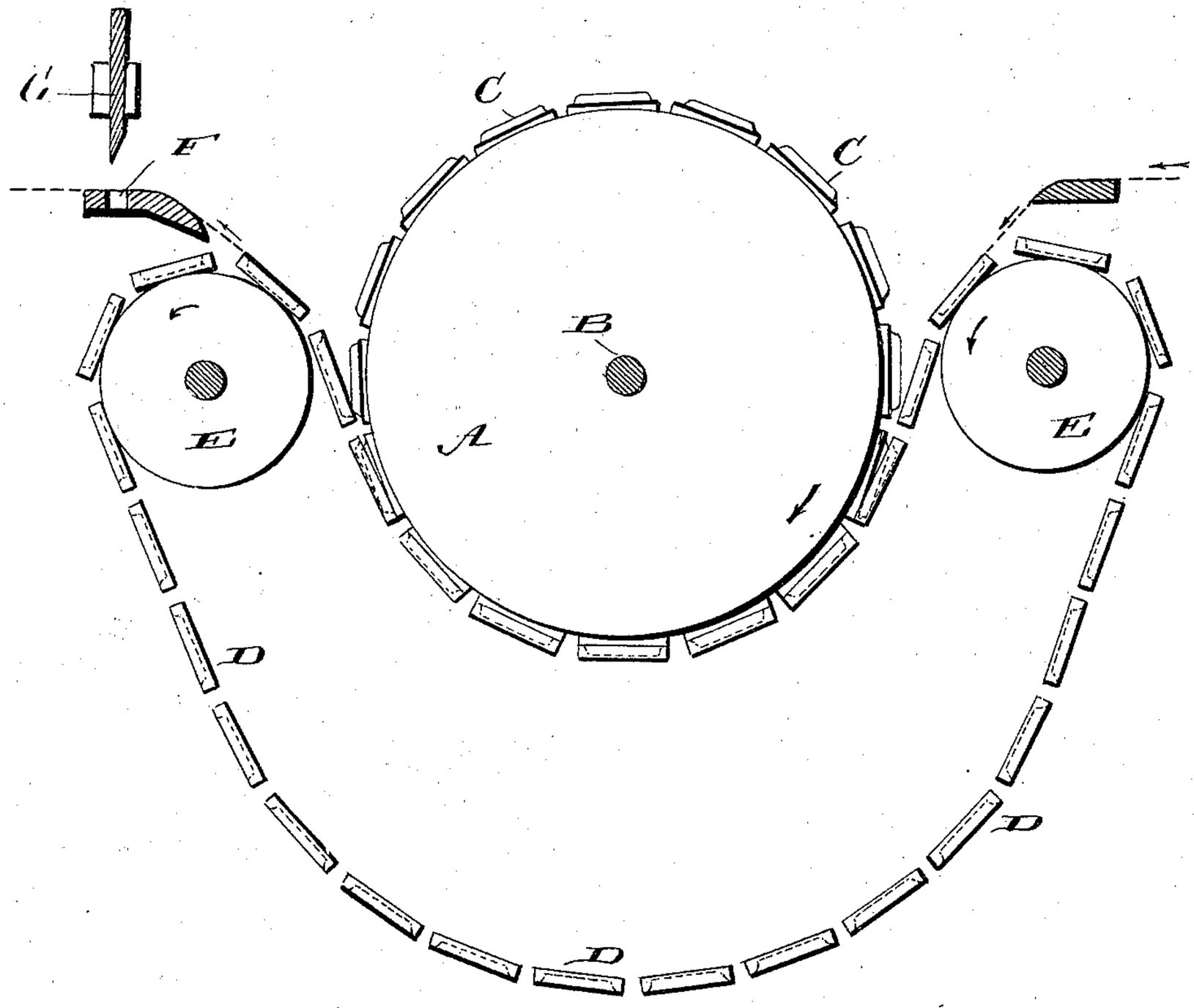
APPARATUS FOR MAKING PULP ARTICLES.

No. 558,675. Patented Apr. 21, 1896.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR MAKING PULP ARTICLES.

SPECIFICATION forming part of Letters Patent No. 558,675, dated April 21, 1896.

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To all whom it may concern:

Be it known that we, CHARLES A. DEAN, residing at Boston, in the county of Suffolk, State of Massachusetts, and WILLIAM H. CUNNINGHAM, residing at Waterville, FRANK E. BOSTON, residing at Gardiner, and JAMES L. DEAN, residing at Winslow, in the county of Kennebec, State of Maine, citizens of the United States, have invented an Improved Apparatus for Making Pulp Articles, of which the following is a specification, reference being had to the accompanying drawing.

This invention relates to an improved apparatus for forming articles from paper-stock, having for its object to provide for the more rapid and economic production of articles from such character of material, the operation being continuous and the apparatus automatic in its action. The articles are formed from a continuously-fed web which passes between male and female dies by which the desired shape is given, and as the web emerges from the dies the web may be separated into strips or cut and slitted into single blanks. The cylinder or cylinders carrying the molds or dies may be heated in any suitable manner and the male and female dies are arranged so as to come together and meet square.

The invention further consists in the mechanical construction, arrangement, and combination of parts constituting the apparatus.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawing, in which the figure is a diagrammatic view of one form with parts in section.

Like letters of reference indicate like parts where they occur.

Referring now to the drawing, A designates a cylinder mounted to revolve upon a suitable axis B and having about its periphery male dies C, which may be of any suitable form and of a shape required to give to the article to be formed the desired shape, these male dies being secured to the cylinder in any suitable manner and suitably spaced for coöperation with the female dies D, which are flexibly connected in chain form, as shown, and mounted to pass over suitable pulleys or sprocket-wheels E, the cylinder and chain being designed to be continuously driven by any suitable means. (Not shown.) These molds are designed to move over the lower portion of the cylinder, contacting with the male dies at about the horizontal axial line of the cylinder and leaving them at substantially the same line on the opposite side.

The cylinder may be heated in any convenient manner, as may also the female dies. The arrows indicate the direction of movement of the various parts. The paper or board is introduced, as indicated in the drawing, and as it passes down between the approaching male and female dies it is pressed into the proper shape by being pressed into the depressions of the female dies, and as the web of paper emerges from between the cylinder and chain it passes over a suitable table or support F to be acted upon by a suitable knife or cutting mechanism G, which severs the web into strips transversely thereof, it being understood that the mold-chain may be a greater or less number of molds in width, the cylinder having a corresponding number of male dies abreast, and, if desired, a slitting knife may also be employed to separate the transverse strips into single blanks or plates, or they may be thus separated after they are cut by the knife G. The operation being continuous a great number of articles may be formed in a short space of time without any attention on the part of the attendant, except to feed the paper to the machine. These rollers or sprocket-wheels E are arranged with their axes upon substantially the same horizonal plane with the axis of the cylinder, whereby the male dies and molds are brought together so as to meet squarely.

What is claimed as new is—

1. The combination of a revoluble cylinder carrying a series of molds, a coöperating continuously-moving series of molds flexibly connected together and movable over a portion of the said cylinder and coöperatively arranged to meet the male dies squarely and to

be held in contact during a portion of the revolution of the cylinder, substantially as described.

2. The combination of a continuously-revolving cylinder carrying a series of male dies about its periphery, rollers arranged with their axes on the same horizontal plane with that of the cylinder, and a continuously-moving series of female dies mounted to move over and to be supported by said rollers and to coöperate with the male dies and to meet the same squarely, substantially as specified.

3. The combination of a continuously-revolving cylinder carrying a series of male dies about its periphery, rollers arranged with their axes on the same horizontal plane with that of the cylinder, and a continuously-moving series of female dies mounted to move over and to be supported by said rollers and to coöperate with the male dies and to meet the same squarely, said female dies being connected flexibly together in the form of an endless conveyer and unsupported except at said rollers, substantially as specified.

In testimony whereof we affix our signatures in presence of witnesses.

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