

No. 651,906.

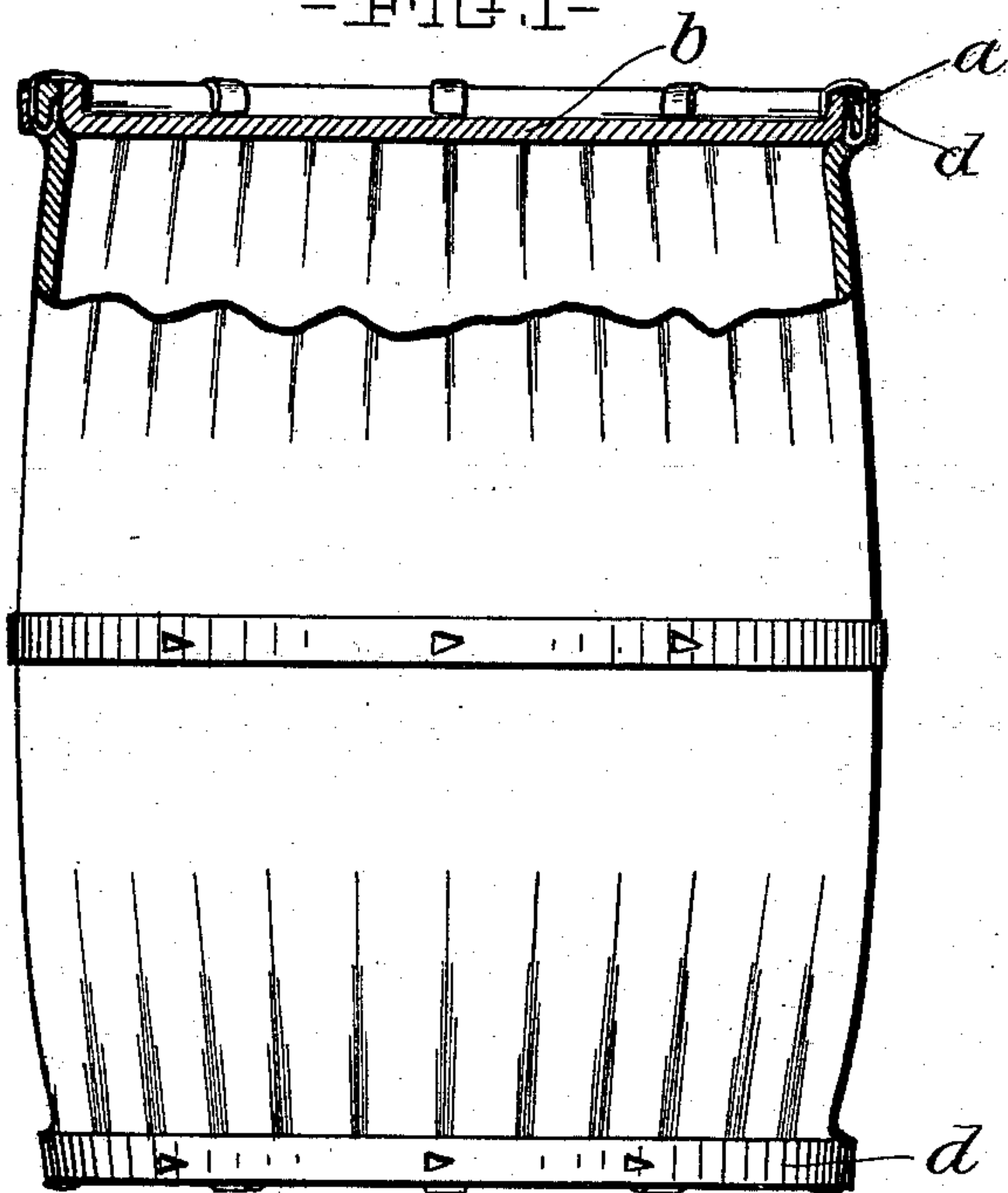
Patented June 19, 1900.

J. VAN DEVELDE.
PAPER BARREL.

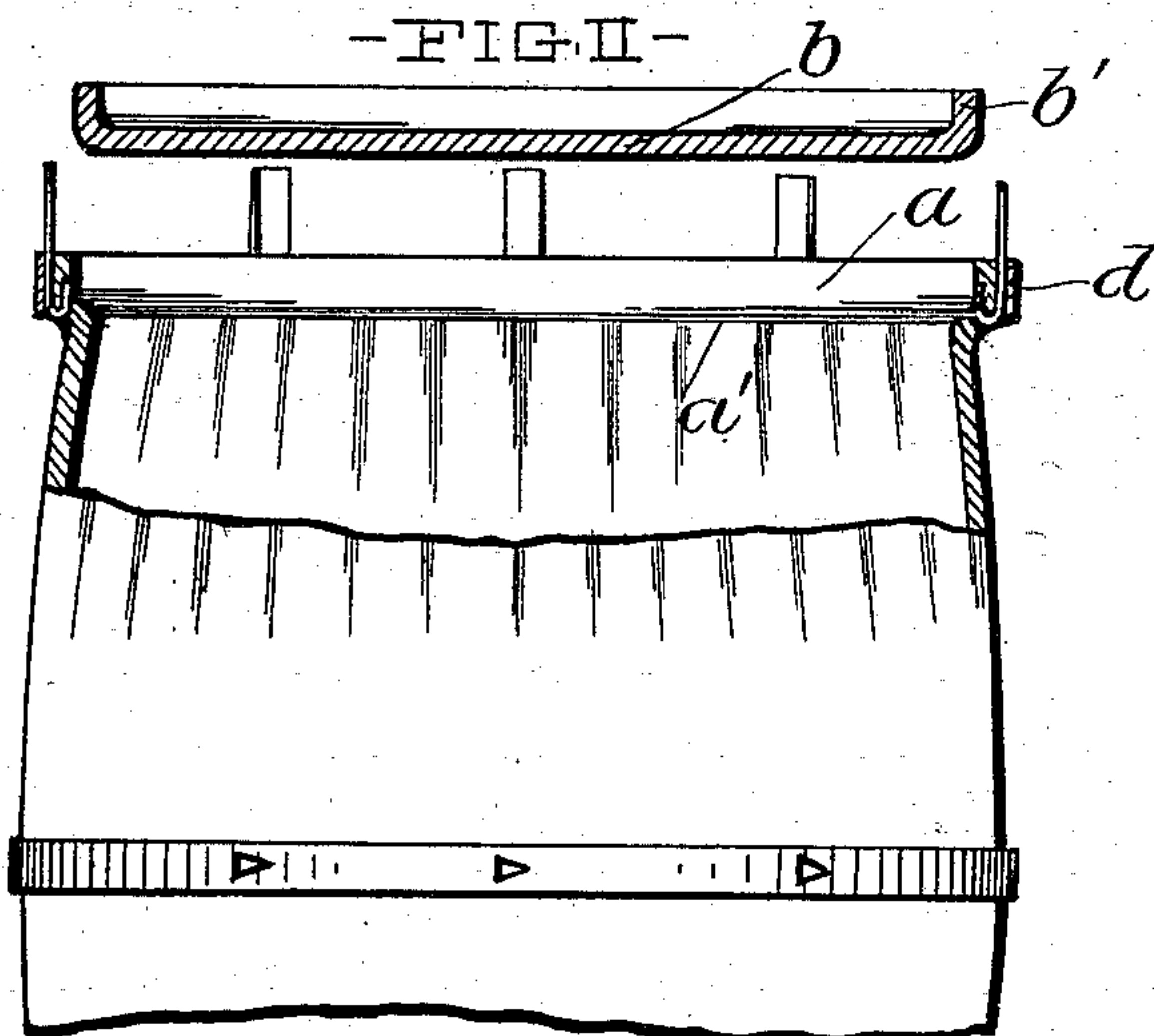
(Application filed Nov. 10, 1899.)

(No Model.)

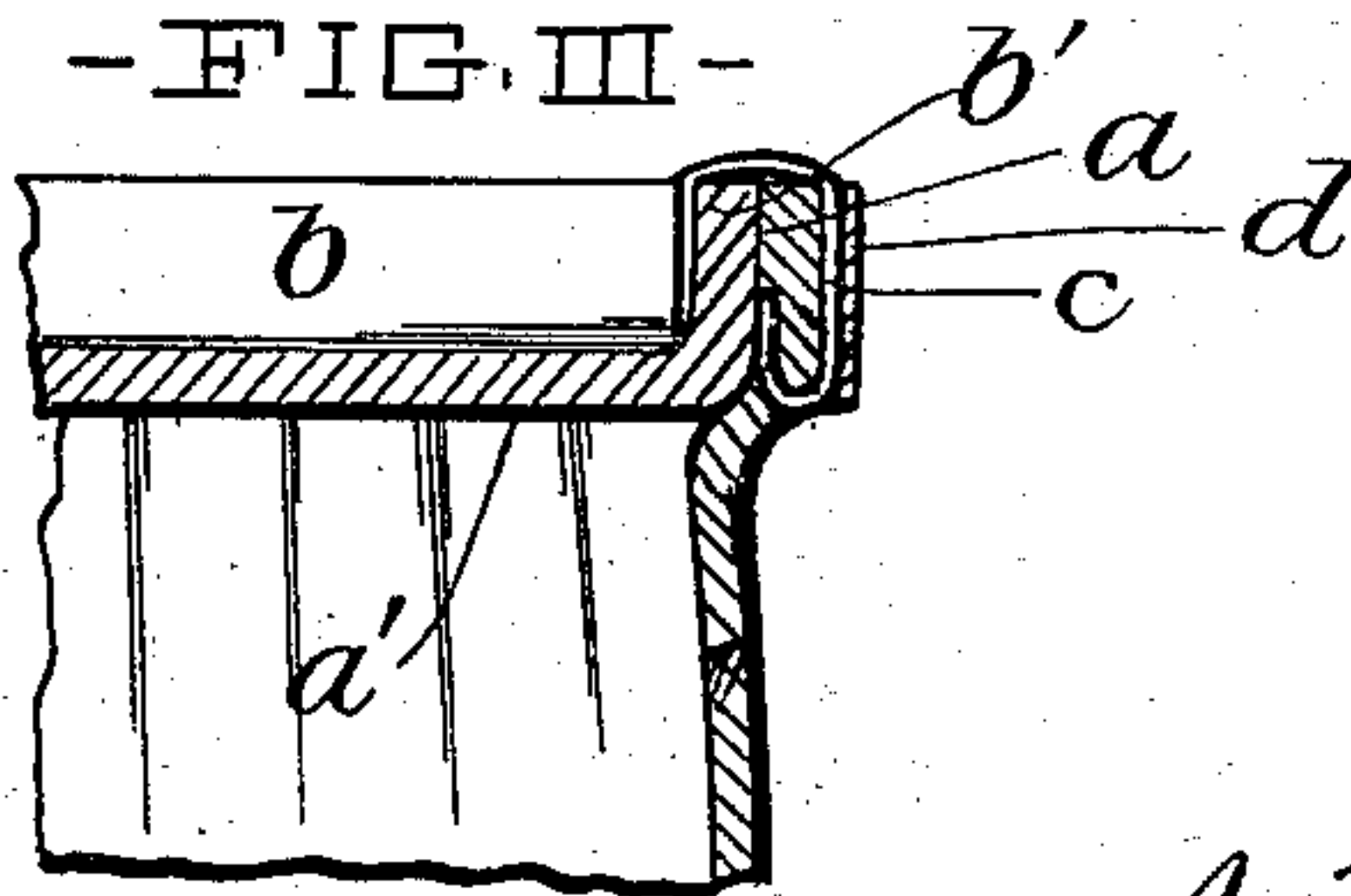
-FIG. I-



-FIG. II-



-FIG. III-



Witnesses,
J. C. Turney
A. C. Merkle

Inventor,
J. Van Develde,
By J. D. Fay Atty.

UNITED STATES PATENT OFFICE.

JOHN VAN DEVELDE, OF CLEVELAND, OHIO.

PAPER BARREL.

SPECIFICATION forming part of Letters Patent No. 651,906, dated June 19, 1900.

Application filed November 10, 1899. Serial No. 736,456. (No model.)

To all whom it may concern:

Be it known that I, JOHN VAN DEVELDE, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Paper Barrels, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle so as to distinguish it from other inventions.

My invention relates to barrels or kegs; and it consists in an improvement in the construction shown and described in Letters Patent No. 614,218 issued to me November 15, 1898, said improvement being hereinafter fully described.

In the annexed drawings, Figure I represents a vertical axial cross-section of my improved barrel. Fig. II represents a similar section of the end of said barrel, showing the head removed therefrom; and Fig. III represents an enlarged detail view of a portion of such end.

During the process of constructing the barrel-body, in which the said body is formed out of a continuous sheet of paper rolled to a suitable thickness and caused to converge from its middle portion toward its two ends, each of said ends is formed with a cylindrical surface *a* in continuation of the inner inclined or converging surface, the inner diameter of such cylindrical surface being somewhat greater than that of the barrel at the inner diameter of the extremity of the contiguous inner inclined surface. Such provision of a cylindrical surface forms an inner shoulder *a'* in the body of the barrel a short distance from each outer end, upon each of which a head *b* is caused to rest and secured against inward displacement. In order to prevent outward displacement of the head after being seated as above described, said cylindrical portion is provided with a series of fasteners *c*, extending circumferentially around said surface. Each such fastener consists of an inelastic strip or band, one end of which is passed from the outside of the barrel through the shell and clenched upon the inside of said cylindrical surface, the other end being of a length sufficient to permit of its being bent over the end of said shell and caused to project downwardly and upon a circumferential flange *b'*, formed upon each head *b*, each of the latter being thereby

firmly secured against outward displacement, as shown in Fig. I.

The cylindrical surface may be and is preferably formed during the process of rolling the paper to form the barrel-body, as described in the above-mentioned Letters Patent, by constructing the rollers or mandrels with suitable end flanges for effecting such formation. The fasteners *c* may be laid upon such flanges and inserted and secured automatically simultaneously with the formation of the said cylindrical surface. Each such fastener passes through the shell and between the latter and a hoop *d*, one of which incloses each shell end, the inner end of each fastener being located immediately of the extremity of the shell and the shoulder *a'*, as shown in Fig. III. By so locating the said inner ends it is seen, Fig. II, that the heads of the barrel exert a pressure against such ends and tend to prevent the withdrawal of the fastener, thus making the latter much more secure, and consequently insuring the fixture of the heads.

What I claim, and desire to secure by Letters Patent, is—

1. A barrel formed of sheet-paper and having a circumferential shoulder located upon the inner surface of one end of the barrel-shell, a series of fasteners each consisting of a metal band passing through said shell, the inner end of each fastener being located upon the inner surface of the shell immediately of the extremity thereof and said shoulder, and a head resting upon said shoulder, engaged and secured by the outer ends of said fasteners, substantially as set forth.

2. A barrel formed of sheet-paper and having a circumferential shoulder located upon the inner surface of one end of the barrel-shell, a series of fasteners secured in the barrel during the formation thereof, and each consisting of a metal band passing through said shell, the inner end of each fastener being located upon the inner surface of the shell immediately of the extremity thereof and said shoulder, and a head resting upon said shoulder, engaged and secured by the outer ends of said fasteners, substantially as set forth.

Signed by me this 8th day of November, 1899.

JOHN VAN DEVELDE.

Attest:

D. T. DAVIES,
A. E. MERKEL.