

(No Model.)

J. PETERS.
METHOD OF MAKING PAPER TUBES.

No. 539,777.

Patented May 21, 1895.

Fig. 1.

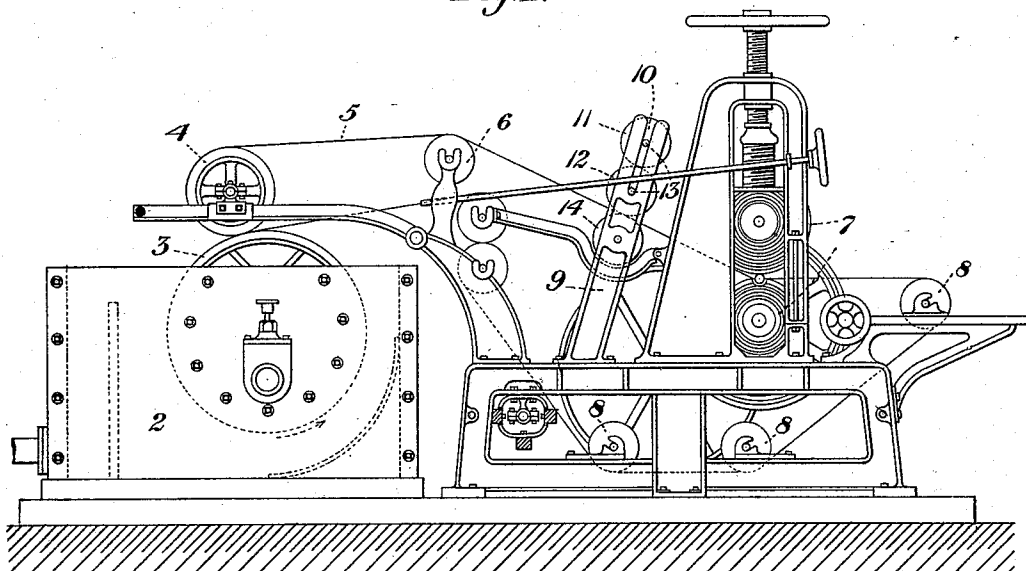
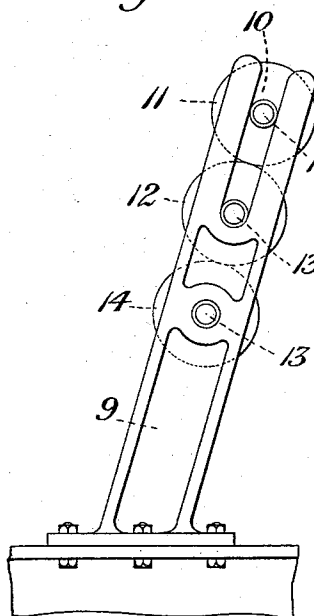


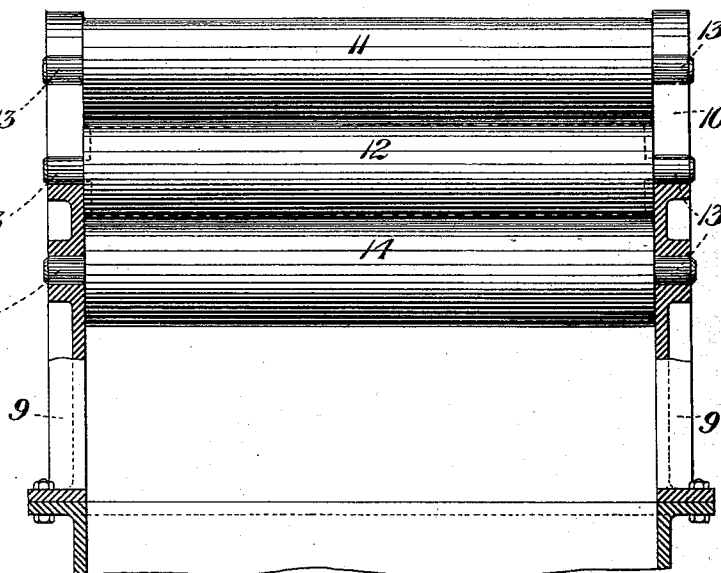
Fig. 2.



WITNESSES

S. M. Corwin
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Fig. 3.



INVENTOR

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UNITED STATES PATENT OFFICE.

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METHOD OF MAKING PAPER TUBES.

SPECIFICATION forming part of Letters Patent No. 539,777, dated May 21, 1895.

Application filed December 28, 1891. Serial No. 416,330. (No specimens.)

To all whom it may concern:

Be it known that I, JAMES PETERS, of Latrobe, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Improvement in Methods of Making Paper Tubes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a wet machine provided with an attachment for the operation of my improved process. Fig. 2 is an enlarged side view of the attachment; and Fig. 3 is an end elevation of the same, partially broken away.

My invention relates to the art of making paper tubes, and it consists in an improved method of forming such tubes, as hereinafter more fully described and set forth in the claim.

In the drawings, 2 indicates the vat or tub containing the paper pulp, and 3 the mold-roll which revolves therein, this mold roll being perforated and having an exhaust device connected therewith, in order to form a layer of pulp thereon as ordinarily. Upon this roll rests the couch-roll 4, between which and the mold-roll passes the wet felt 5, for removing the layer of pulp from the mold-roll. From the couch roll the felt passes over the guide-roll 6, and thence between the press-rolls 7, and returns by the guide-rollers 8, as usual in wet paper-machines. These parts are all old and common elements in a wet-paper machine and to form paper tubes according to my invention, I bolt to each side of the machine, between the guide-roll 6 and the press-rolls, the detachable supports or standards 9, having deep slots 10 in their upper ends forming bearings for the rolls 11 and 12, which bear loosely therein by their gudgeons 13, the roll 11 resting upon the roll 12, while beneath the felt is the supporting press roll 14. The

roll or core 12 may be hollow or solid, as desired, and if hollow may be suitably screw-threaded at one end for the reception of a steam pipe when the roll is removed with the tube formed thereon. The roll 11 may be dispensed with, as the tube can be formed upon the core 12 alone without a pressure or squeezing roll bearing thereon.

The method is as follows: The pulp being drawn from the mold-roll upon the felt is withdrawn therefrom and wound upon the roll or core 12 until the desired thickness of the paper tube is obtained, when the core is taken out of the slot and removed to the drying-room where the tube is partially dried in any suitable way, as by attaching a steam pipe thereto, and the tube then slid endwise off from the core which is returned to the machine. The tube dries on the exterior first and is removed before the interior parts are set so that it is easily removed from the core. A number of these cores is provided so that as soon as a tube is formed upon one, another core takes its place. In this way the tubes may be produced very rapidly and cheaply, and the device is readily attached to any wet machine of ordinary type.

The method is simple, of few steps, and cheaply carried out, no complicated machinery being necessary.

I claim—

The method of forming paper tubes, consisting in winding the pulp from the belt upon a removable core cylinder, removing said cylinder, and partially drying the tube thereon, and then sliding the tube from the core; substantially as described.

In testimony whereof I have hereunto set my hand this 22d day of December, A. D. 1891.

JAMES PETERS.

Witnesses:

W. B. CORWIN,
H. M. CORWIN.