No. 722,159. PATENTED MAR. 3, 1903.

H. J. STEPHENSON.

HOLDER FOR ROLLS OF PAPER.

APPLICATION FILED APR. 19, 1902.

NO MODEL.

FIG. 1.

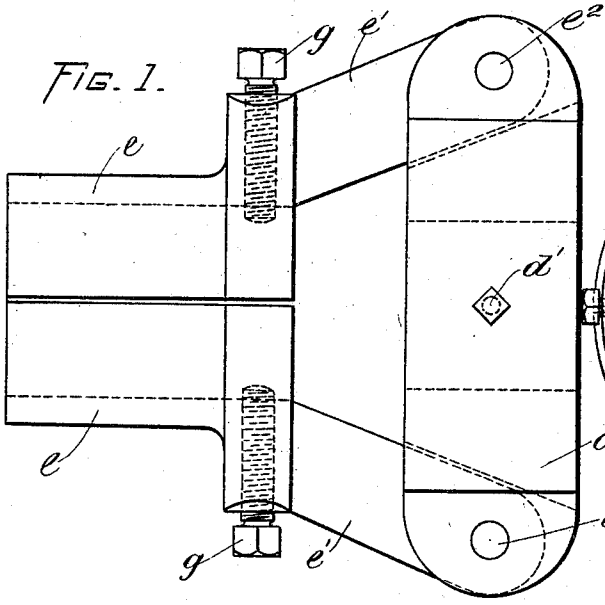


FIG. 2.

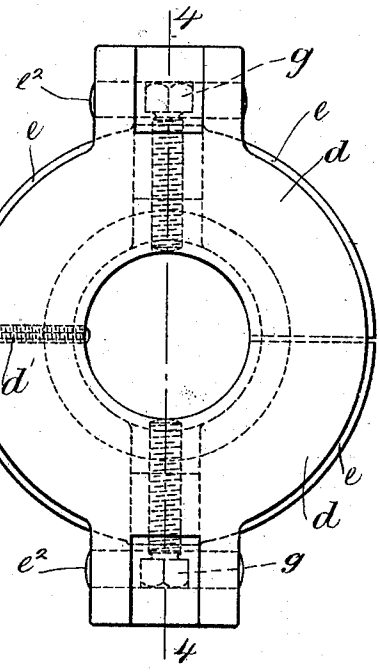


FIG. 4.

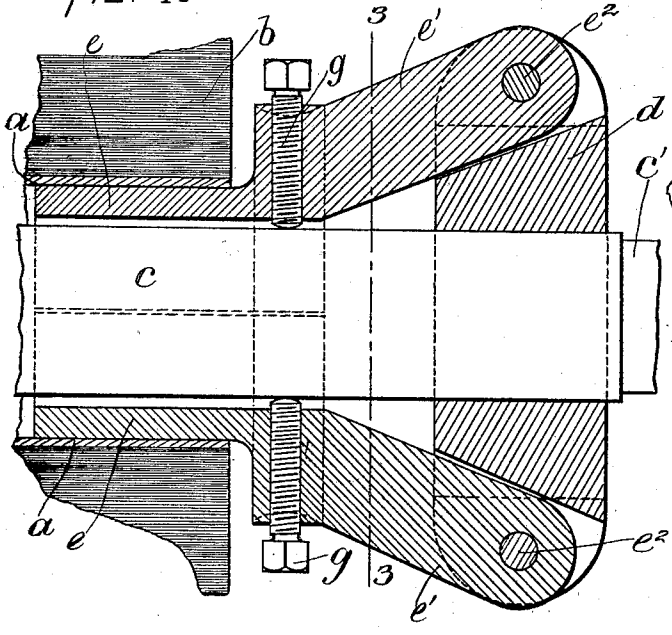
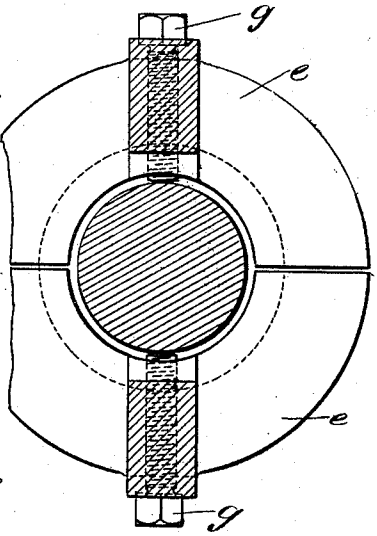


FIG. 3.



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UNITED STATES PATENT OFFICE.

HENRY J. STEPHENSON, OF LYNN, MASSACHUSETTS.

HOLDER FOR ROLLS OF PAPER.

SPECIFICATION forming part of Letters Patent No. 722,159, dated March 3, 1903.

Application filed April 19, 1902. Serial No. 103,827. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. STEPHENSON, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Holders for Rolls of Paper, of which the following is a specification.

This invention relates to means for supporting rolls of paper in printing-presses and permitting the detachable connection of the tubular core on which the roll is wound with the shaft or mandrel which supports the roll in the printing-press and permits its free rotation as the paper is drawn off by the mechanism of the printing-press.

The invention has for its object to provide a simple and effective device adapted to be engaged both with the tubular core of the roll of paper and with the roll-supporting shaft or arbor.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, Figure 1 represents a side elevation of a holder embodying my invention. Fig. 2 represents an end elevation of the same. Fig. 3 represents a section on line 3 3 of Fig. 1. Fig. 4 represents a section on line 4 4 of Fig. 2.

The same reference characters indicate the same parts in all the figures.

In the drawings, *a* represents the tubular core on which a web of paper is wound to form a roll *b*, the roll being wound upon the core at the paper-mill ready for application to a printing-press. The core is usually a length of metallic tubing, although in some cases paper tubing has been employed for this purpose.

c represents a shaft or mandrel of smaller diameter than the internal diameter of the core *a*, the said shaft having reduced journal portions *c'* at its ends adapted to rest in bearings formed for their reception in the frame of the printing-press.

d represents a collar which is detachably fitted to the shaft *c* and is provided with means, such as a set-screw *d'*, whereby it may be affixed to the shaft.

e e represent jaws which are formed to enter an end portion of the core *a* and to engage the internal surface of the core. Each jaw *e* is preferably a half-cylinder, the two jaws constituting a longitudinally-divided cylinder which is expansible to engage the internal surface of the core *a* and is contractible, so that it may be freely withdrawn from the core. Each jaw is provided with an arm *e'*, which is pivoted at e^2 to ears formed on the collar *d*, the arrangement being such that the jaws *e* are substantially concentric with the axis of the shaft *c* when the collar is in place on the shaft.

Two of the above-described appliances are provided, one for each end of the core *a*, the said appliances being placed loosely on the shaft *c*, the latter having previously been inserted in the core *a*. When the roll of paper is to be installed in a printing-press, the jaws *e e* are first swung inwardly and are then moved endwise on the shaft and inserted in the ends of the core *a*. The jaws are then swung outwardly by suitable means, such as set-screws *g g*, until they come to a firm bearing on the inner surface of the core. The shaft *c*, with the roll thereon, may now be placed in its bearings in the printing-press, the collars, jaws, and roll having been properly positioned on the shaft to give the roll the exact position desired relatively to the mechanism of the press.

It will be seen that the above-described device is of simple construction and enables the paper-roll *b* to be accurately adjusted upon and secured to the shaft *c*. The said device may also be used in a paper-making machine.

It will be noted that the jaws *e e*, being semicylindrical, are substantially parallel with each other, and they therefore form a considerably-extended bearing for the tubular core *a*. Therefore the roll of paper and its core *a* may rotate upon said jaws, if such movement is desired, and if the shaft and the holders revolve, carrying the jaws with them, the extended bearing formed by the parallel surfaces of the jaws will steady the roll of paper as it unwinds down to the last coils.

I claim—

1. A device of the character specified, comprising a collar adapted to be adjustably secured upon a shaft or mandrel, jaws movably

connected with said collar and having substantially parallel external bearing-faces formed to engage the inner surface of a tube of larger diameter than the shaft, and means for adjusting or swinging said jaws to cause their bearing-surfaces to engage and release said tube, the said collar, jaws, and adjusting means being permanently connected together, independently of such shaft or mandrel.

2. A device of the character specified, comprising a collar adapted to be adjustably secured upon a shaft or mandrel, two substantially semicylindrical jaws collectively forming an expansible tube which is internally of greater diameter than the internal diameter of the collar, arms on said jaws pivoted to the collar, and means for swinging said arms and jaws to expand and contract said tube, the said collar, jaws, and adjusting means being permanently connected together, independently of such shaft or mandrel.

3. A device of the character specified, comprising a collar adapted to be adjustably secured upon a shaft or mandrel, two substantially semicylindrical jaws collectively forming an expansible tube which is internally of greater diameter than the internal diameter of the collar, arms on said jaws pivoted to the collar, and set-screws carried by the arms and adapted to bear on such shaft or mandrel for swinging said arms and jaws in opposite directions, to expand said tube.

In testimony whereof I have affixed my signature in presence of two witnesses.

HENRY J. STEPHENSON.

Witnesses:
C. F. BROWN,
H. L. ROBBINS.