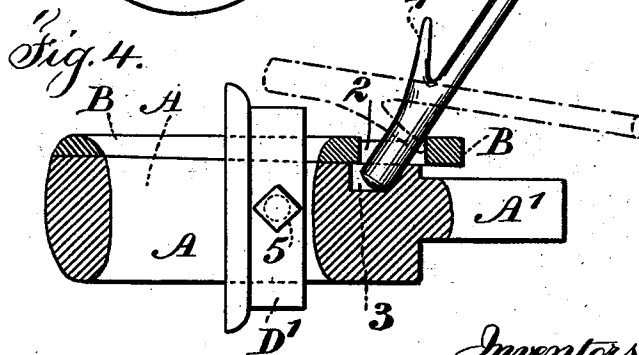
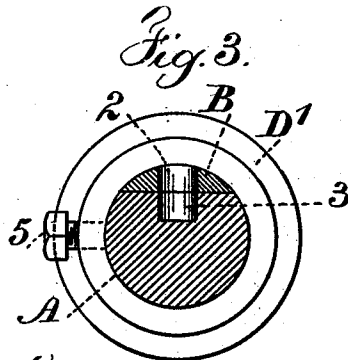
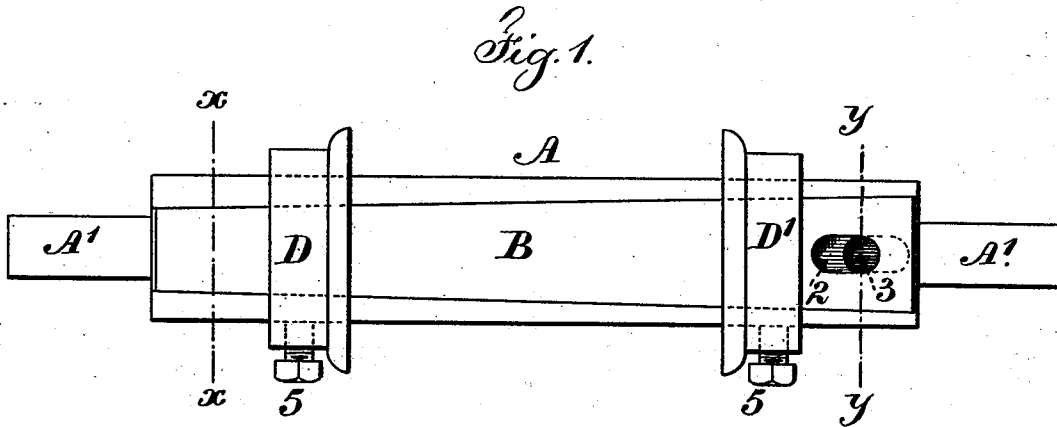


(No Model.)

J. H. BAKER, G. F. SHEVLIN & F. H. BAKER.
SHAFT FOR WINDING PAPER.

No. 508,801.

Patented Nov. 14, 1893.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES H. BAKER, GEORGE F. SHEVLIN, AND FREDERICK H. BAKER, OF
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SHAFT FOR WINDING PAPER.

SPECIFICATION forming part of Letters Patent No. 508,801, dated November 14, 1893.

Application filed October 31, 1892. Serial No. 450,419. (No model.)

To all whom it may concern:

Be it known that we, JAMES H. BAKER, GEORGE F. SHEVLIN, and FREDERICK H. BAKER, citizens of the United States, residing at Saratoga Springs, in the county of Saratoga and State of New York, have invented an Improvement in Shafts for Winding Paper, of which the following is a specification.

Paper as it is delivered at the mill in the form of a web is rolled up so as to be adapted to transportation and use, especially in printing presses, and in order to secure the advancing end of the sheet or web to the rotating shaft it has heretofore been usual to employ a shaft that is grooved at one side, and into this groove is laid a round metal rod to press the paper into such groove; hence when the paper is wound into the form of a roll the opening therein is not circular and to remove the shaft from the roll of paper the rod is drawn out endwise, usually by hammering upon an L-shaped projection, and this loosens the paper sufficiently to allow the shaft to be drawn out, but the irregular shape of the hole prevents the roll from running regularly and truly when placed upon the shaft previous to unwinding such roll, and considerable loss of paper arises in consequence of the irregular condition of the inner end of the paper, because in drawing off the paper the irregular shape of the same at the opening produces a slackness at one time and an unusual tension at another.

Our present invention is made with reference to employing a perfectly cylindrical shaft and holding the paper thereon so that the roll is wound up with uniformity and the opening in the paper is circular when the shaft is withdrawn.

In the drawings, Figure 1 is a side view representing the improved paper winding roll. Fig. 2 is a cross section at the line x, x . Fig. 3 is a cross section at the line y, y , and Fig. 4 is an elevation partially in section of one end of the roll.

The shaft A is provided usually with end bearings or journals A' adapted to be received into suitable boxes or bearings, and there is a wedge-shaped segment B at one side of this shaft. The convex surface of

this segment coincides with the cylindrical surface of the other portion of the roll, but the line of separation being at an inclination to the axis of the roll allows for the segment being larger at one end than the other, and in the larger end of the segment B is an elongated mortise 2, and there is a recess in the shaft itself at 3, so that the end of a bar C may be inserted through the mortise 2 into the recess 3, and such bar can be used as a lever for starting the wedge, as illustrated by full lines in Fig. 4, and upon the bar C there is preferably a hook 4 that can be introduced into the hole or mortise in the wedge so as to pull such wedge out from the roll of paper when desired, as shown by dotted lines in said Fig. 4. It is advantageous to employ the collars D D' around the shaft, and these collars are provided with set screws 5, so that they can be held in position after being set up to each edge of the web of paper. It is now to be understood that the screws are loosened and the collars D D' slipped away from each other and the end of the web or sheet of paper is laid upon the flat side of the roll A and then the wedge segment B is applied upon the surface of the paper and the collars D D' are slipped over the wedge and set up to the edges of the paper and clamped to hold the wedge and the winding operation is thereafter performed by the rotation of the roll A as usual, and when the roll of paper has been wound up of the desired size the wedge B is withdrawn by the action of the lever C, as before mentioned, the collars being loosened and subsequently removed, so that after the wedge has been withdrawn from within the roll of paper the shaft can be taken out, it being understood that the withdrawal of the wedge loosens the parts sufficiently so that the paper will not bind around the shaft A itself.

The length of the winding roll or shaft will vary according to the width of the paper.

We claim as our invention—

1. The roll for winding paper formed of a shaft with a wedge-shaped segment separated in a plane on an inclination to the axis in combination with collars movable longitudinally on the roll, and means for applying a

lever between the two parts of the roll to start the wedge for withdrawing the same substantially as specified.

2. The roll for winding paper, formed of a
5 cylindrical shaft with one side thereof removed in a plane at an inclination to the axis of the roll, in combination with a wedge fitting said flat surface of the roll and having a convex surface forming a segment of a cylinder
10 corresponding to the surface of the roll,

there being an opening in the wedge and a recess in the roll for the reception of a lever to move the wedge, substantially as set forth.

Signed by us this 25th day of October, 1892.

JAMES H. BAKER.

GEORGE F. SHEVLIN.

FREDERICK H. BAKER.

Witnesses:

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