(No Model.)

R. J. BENTLEY & G. H. SCHIEK.

PRINTING DEVICE.

No. 588,853. Patented Aug. 24, 1897.

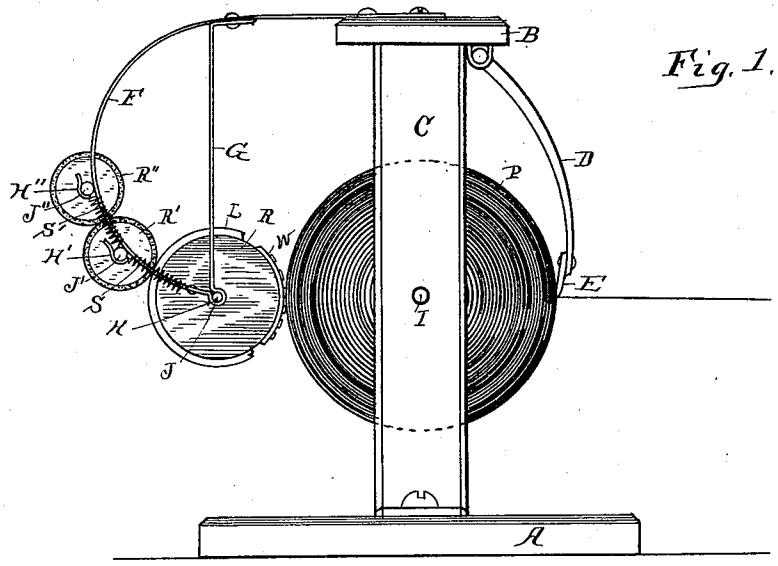


Fig. 1.

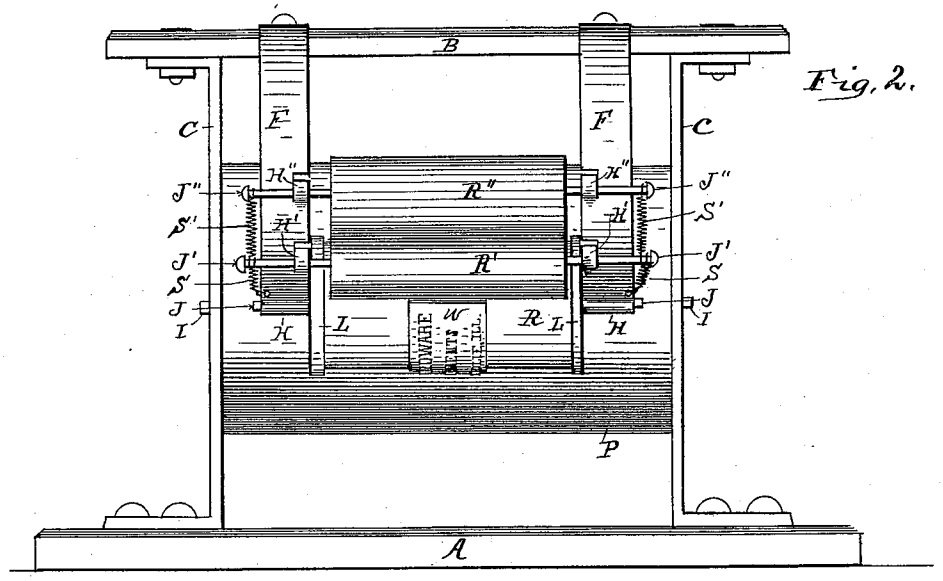


Fig. 2.

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ROBERT J. BENTLEY AND GEORGE H. SCHIEK, OF JOLIET, ILLINOIS.

PRINTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 588,853, dated August 24, 1897.

Application filed April 20, 1896. Serial No. 588,225. (No model.)

To all whom it may concern:

Be it known that we, ROBERT J. BENTLEY and GEORGE H. SCHIEK, citizens of the United States of America, residing at Joliet, in the county of Will and State of Illinois, have invented new and useful Improvements in Automatic Printing Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings, and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a side elevation of the apparatus, and Fig. 2 a front elevation of the same.

This invention relates to certain improvements in automatic printing apparatus designed especially to be combined and used in conjunction with stands or frames which support rolls of paper, such as is commonly used by dealers in merchandise for wrapping purposes, for automatically printing upon the paper such wording or characters as may be desired as it is drawn from the roll; and it consists in certain novel construction and arrangement of parts, which are fully set forth and described in the following specification and pointed out in the claims.

Referring to the drawings, A represents the base, B the cross-head, and C C the roll-supporting posts of a frame such as is commonly used by dealers for standing upon their counters for supporting rolls of wrapping-paper, as shown at P, and which frame is provided with the usual spring-arms D for holding the usual blade E, which clamps and holds the free end of the paper strip and also serves as a shear against which the paper is brought to sever it from the roll-strip after a portion has been drawn from the roll, and as a means of supporting the paper-roll in said frame a rod is placed through its core, or its core may be provided with trunnions, as represented at I. Fixed to said cross-head B is a pair of spring-arms F, shaped so as to extend outward and downward to a point about horizontal with the axis of roll P, and each of said arms is provided with a stay-bar G, placed at the chord of their arch, for the purpose of preventing their portion at said arch from yielding and thereby confining their yielding to that portion between said arch and cross-head B. Said arms F are each provided at their lower terminal with an eye H and above said eye with keeper-hooks H′ and H″ in successive order, as shown.

R is a roll, preferably made of wood, having trunnions J placed in said arm-eyes H, and, further, said roll is provided about either end with rubber bands L and is yieldingly held by said arms F, so as to bring said bands to bear against the roll of paper P with sufficient pressure, so that when roll P is turned by drawing paper therefrom roll R will also be caused to turn, and attached to said roll R on its surface between said bands is the printing-type, which are preferably made of rubber, as represented at W, which type are of equal height as the thickness of said bands L, and hence will come to bear against said paper-roll as the same is turned.

R′ and R″ are inking-rolls, preferably made with a felt covering, and are respectively provided with trunnions J′ and J″, placed, respectively, in the keeper-hooks H′ and H″ of arms F and yieldingly held so roll R′ will impinge roll R and so roll R″ will in turn impinge roll R′ by means of coil-springs S and S′, which respectively connect the trunnions J′ of roll R′ with the lower extremity of arms F and also connect together the trunnions of both side rolls R′ and R″, as shown. The roll R″ being for the purpose of primarily receiving the printing-ink, when by the joint rotation of all the rolls, caused by their yielding face-contact, the ink is taken on roll R′ from roll R″ and given out to ink the type W on roll R, as the said type is brought about in contact therewith, so the type will be supplied at each turn with ink to print upon the paper strip or roll P such matter or character as may be desired by the dealer, and by reason of roll R′ being of less diameter than roll R the type W will not engage said roll R′ successively in the same place, and hence a uniform distribution of ink is made. The arms F are made with a yielding capacity sufficient to accommodate roll R to various diameters of the roll of paper P. The form of said spring-arms F are such that when the paper-roll P changes by consumption from a large to a small size the printing-roll will be brought by the tension of said spring-arms toward the axis of the

paper-roll, and by reason of the curved form of said spring-arms, the fact of their being secured to the paper-roll holding the frame directly above the paper-roll, the yielding pressure of the printing-roll against the paper-roll will be constant in the direction of the axis of the paper-roll at all diameters of the paper-roll, and therefore the apparatus is adapted to properly print the paper as it is drawn from the roll from the greatest to the smallest diameter of the paper-roll.

The form of frame for supporting the roll of paper P may be changed to any convenient type from that shown, the manner of attachment and design of the yielding arms F may be altered, and the type of springs used for yieldingly holding said rolls R, R′, and R″ together may be changed and not affect the nature of this invention.

Having thus described our invention, what we claim as new and useful, and desire to secure by Letters Patent, is as follows:

1. In combination with a frame supporting a rotatable paper-roll, of a pair of curved spring-arms provided with vertically-disposed chords and having eyes formed therein continuous with the said parts at their points of juncture, a printing-roll rotatably carried in said eyes and having frictional bands thereon to contact with the paper-roll and also provided with type standing out equally with the said bands, successively-arranged hooks on the said arms, ink-rolls rotatably carried by the said hooks, and springs engaging the trunnions of said ink-rolls and the said arms, substantially as described.

2. In combination with a supporting-frame having a paper-roll journaled therein and a cutter coacting with said paper-roll, of a pair of curved spring-arms having vertically-disposed chords, a diametrically-operating type-roller carried by the lower portions of said spring-arms at the point of juncture with the chords, and successive inking-rollers yieldingly engaging the said type-roller, said type-roller being held continuously in line with the axis of the paper-roll, substantially as described.

3. The combination with a supporting-frame having a paper-roll therein and a cutting attachment coacting with the said paper-roll, of a pair of continuous curved spring-arms having their lower ends in line with the axis of the paper-roll and provided with chords, a type-roll carried at the lower portions of the said arms and situated in line with the axis of the paper-roll, and successive inking-rolls bearing against each other and one of the same against the said type-roll, said type-roll and inking-rolls being in curved alinement, and the pressure of each on the other exerted directly in line with the axis of the paper-roll, substantially as described.

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