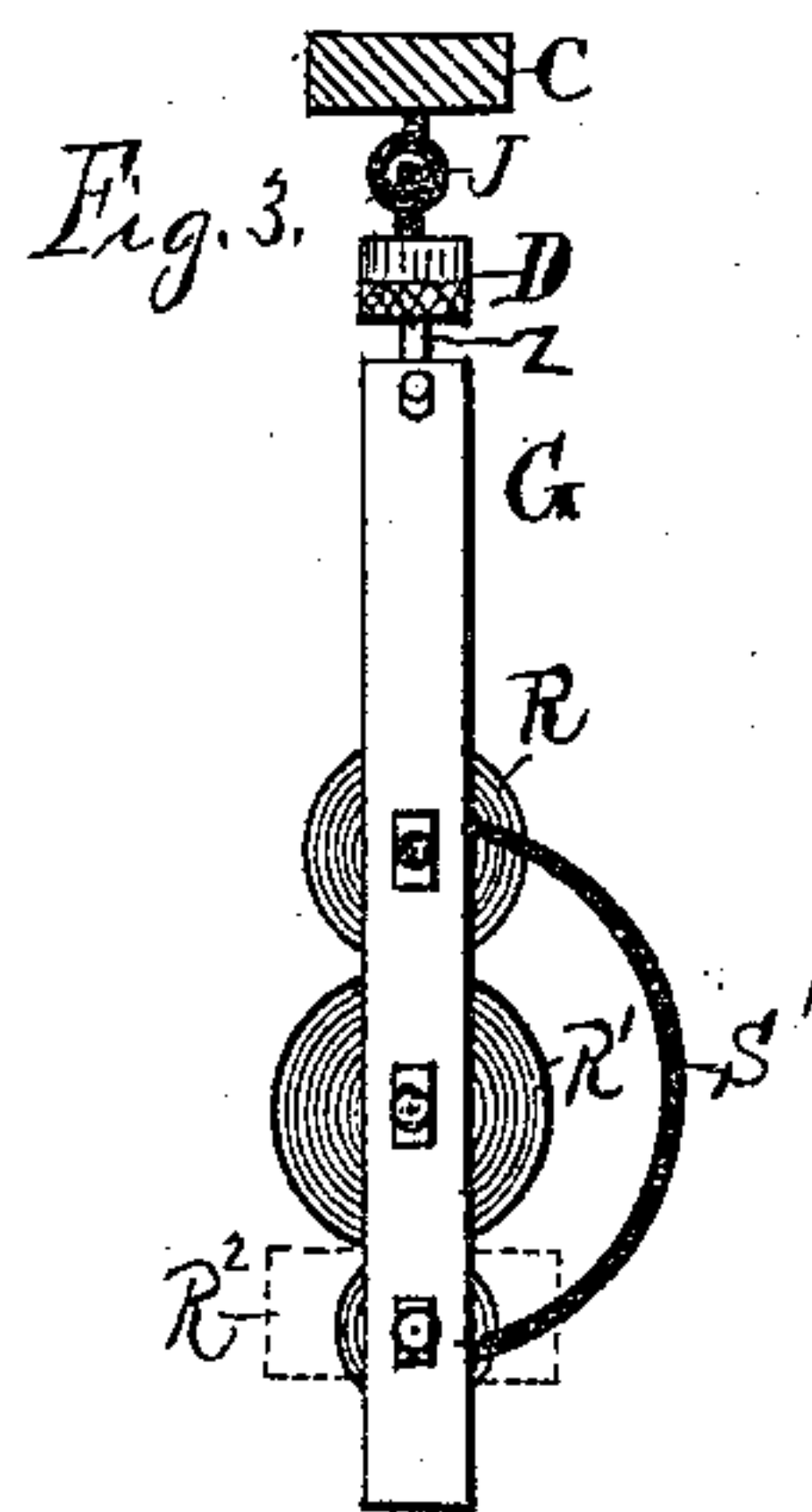
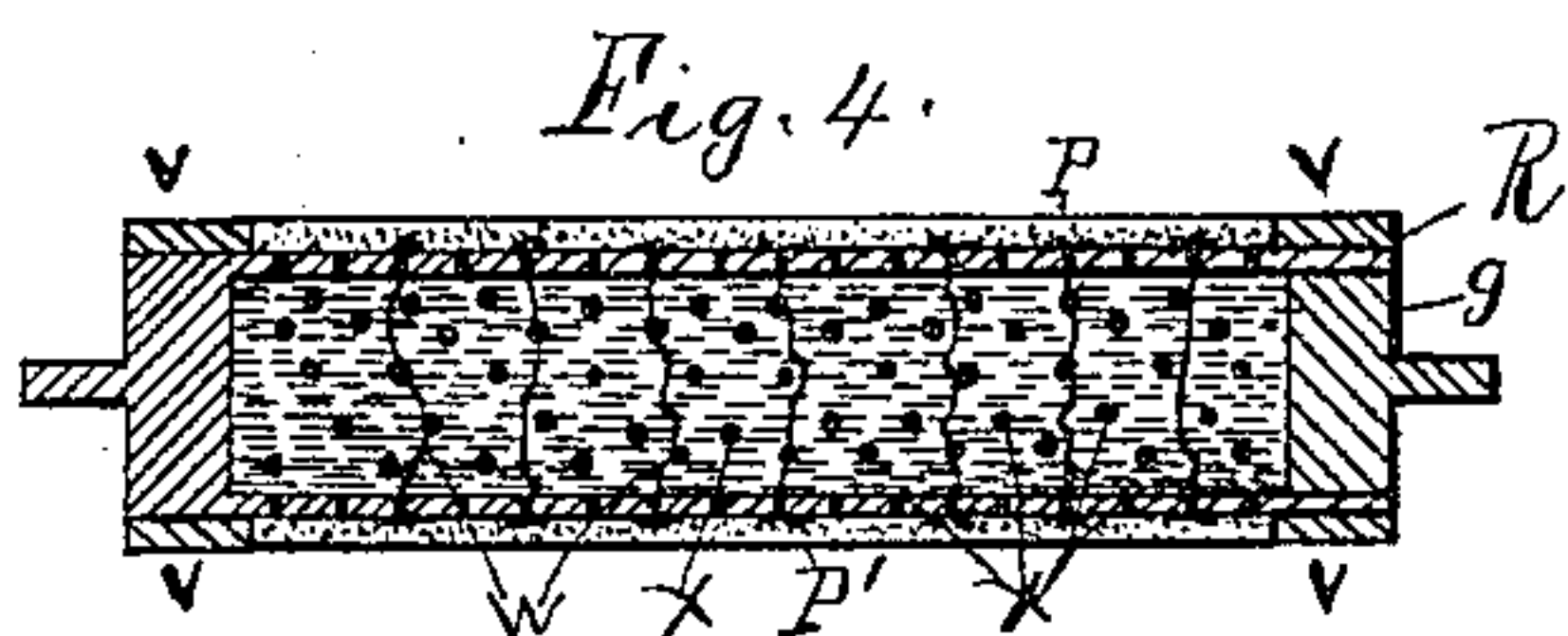
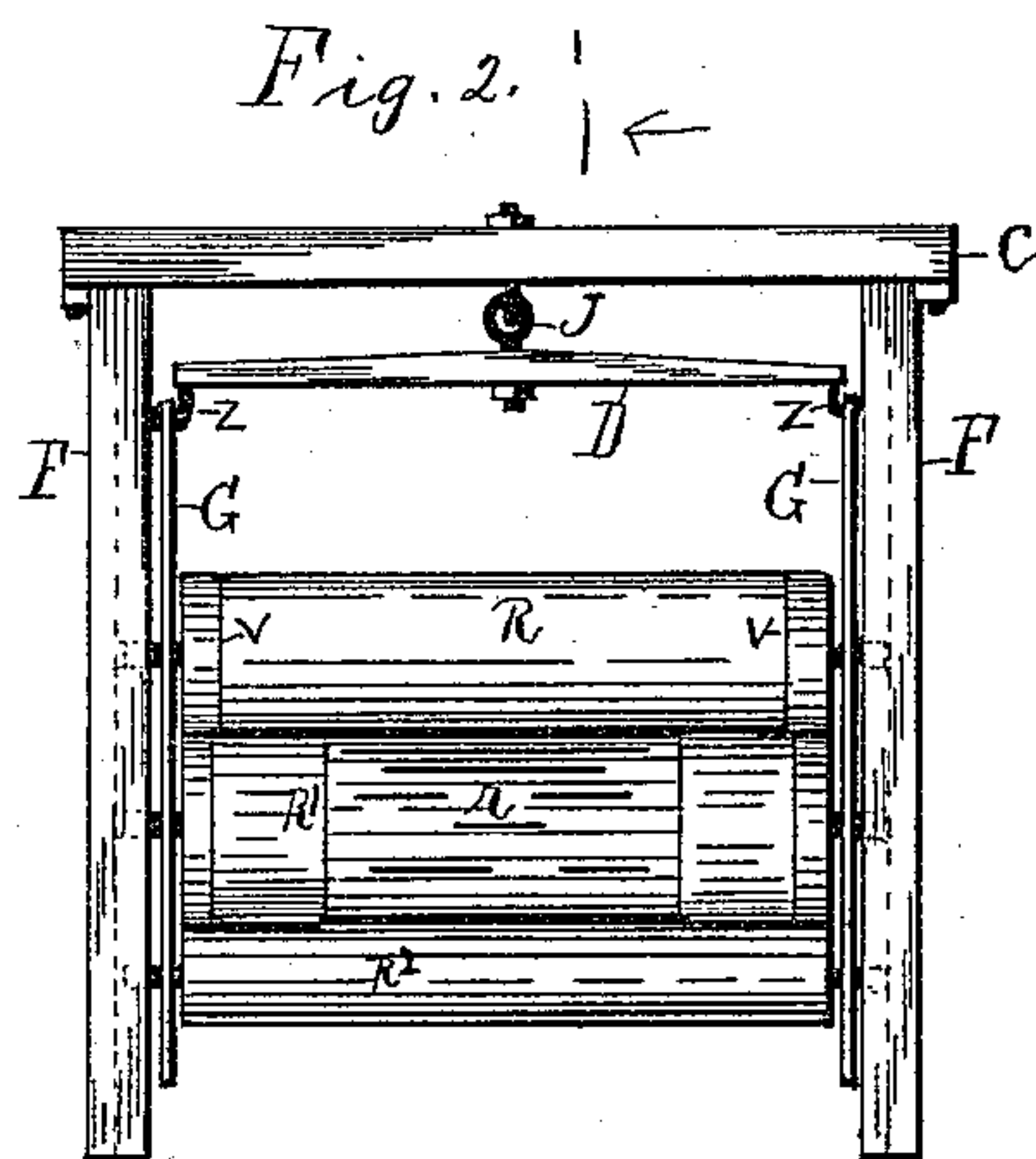
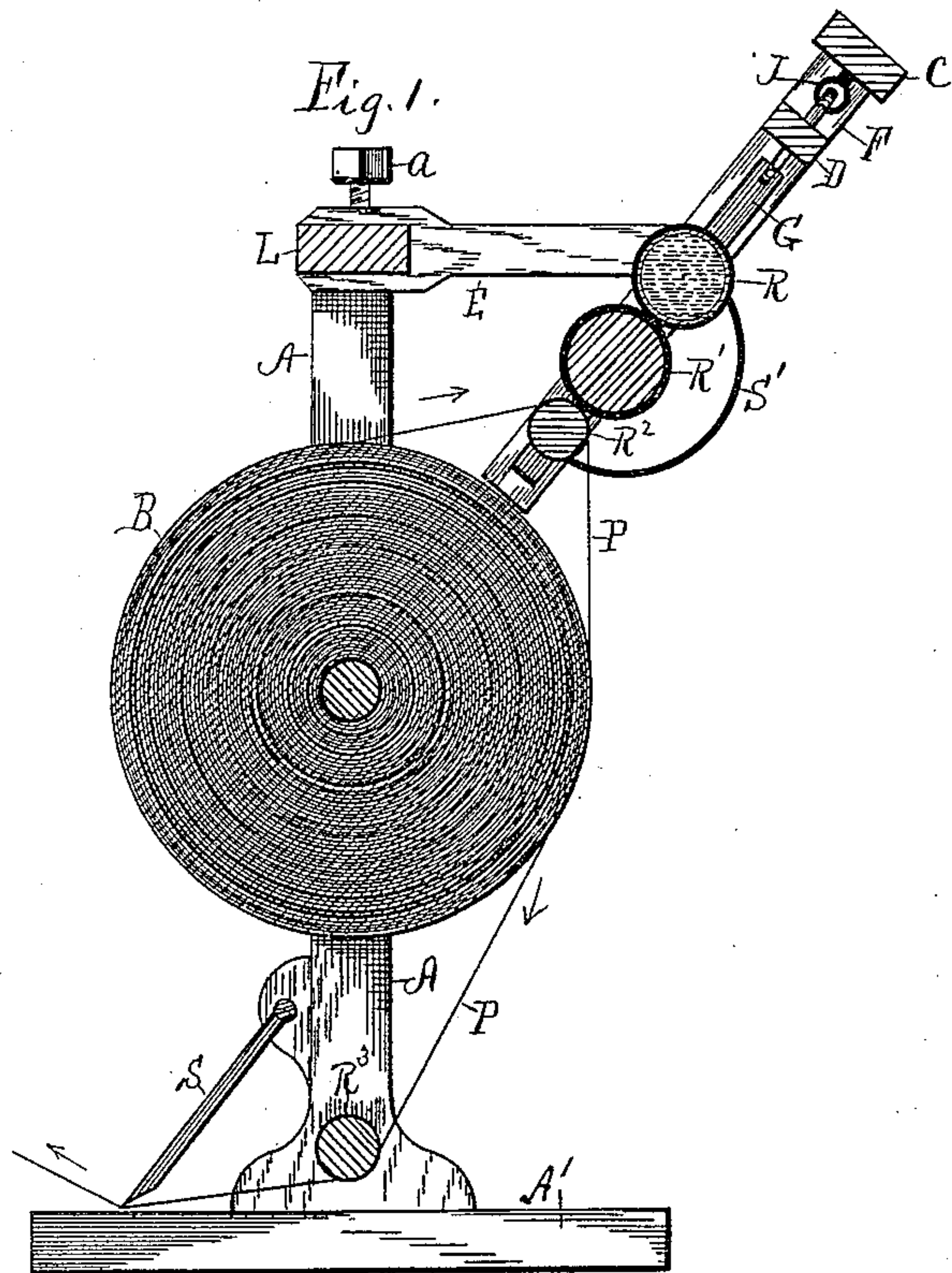


(No Model.)

W. H. HARRISON & G. C. WESTERVELT.
PRINTING ATTACHMENT FOR PAPER ROLL HOLDERS.

No. 441,660.

Patented Dec. 2, 1890.



Witnesses

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WILLIAM H. HARRISON AND GEORGE C. WESTERVELT, OF MARSEILLES,
ILLINOIS.

PRINTING ATTACHMENT FOR PAPER-ROLL HOLDERS.

SPECIFICATION forming part of Letters Patent No. 441,660, dated December 2, 1890.

Application filed July 18, 1890. Serial No. 359,238. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. HARRISON and GEORGE C. WESTERVELT, both citizens of the United States of America, residing at Mar-
seilles, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Printing Attachments for Paper-Roll Holders, of which the following is a specification, reference being had therein to the accompanying drawings and the letters and figures of reference thereon, forming a part of this specification, in which—

Figure 1 is a central vertical cross-section of the paper-roll holder and its attachments complete. Fig. 2 is a side view of the rolls of the printing attachment and of the frame for supporting them. Fig. 3 is an end view of the rolls of the printing attachment and of the frame for supporting them, and Fig. 4 is a central longitudinal section of the tubular inking-roll.

This invention relates to certain improvements in a printing attachment for a paper-roll holder, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, B is a roll of paper wound on a shaft journaled at each end in the posts A of the frame, which posts are secured at their base in the base-pieces A' and connected with each other at their upper ends by means of the cross-bar L.

F F are a pair of bars having grooves in their sides facing each other for receiving the journals of the rolls and are connected at their upper ends by means of the cross-bar C. These bars F have arms E, by means of which they are detachably connected with cross-bar L of the paper-roll frame by means of set-screws a.

G G are a pair of bars arranged between the bars F and respectively hooked at their upper ends to the outer ends of the bar D, which is connected at about its center with the cross-bar C, immediately above it, by means of the eyebolts J, forming a hinge, by means of which connection said bar D may oscillate and move vertically the bars G G, hooked thereto, as stated.

R is an inking-roll, R' is a printing-roll, and R² is an impression-roll. These rolls are journaled at each end in the suspended bars G G,

their journals passing through slot-boxes in said bars, as shown in Fig. 3, into the side grooves in the bars F F, the slot-boxes in the bars G G permitting said rolls to be held in contact with each other by means of springs S', the ends of which are hooked, respectively, over the journals of rolls R and R², one at either end of said rolls.

S is an ordinary swinging cutting-blade, under which the paper P passes from the paper-roll B, and by means of which the paper is cut off the required length.

The inking-roll R is formed of a tube having the ends closed, one end g being removable, like a stopper, so as to furnish means for filling the roll with ink or for cleaning it out.

P is an inking-pad, which is wound around the outer surface of the perforated roll R and receives its ink from the interior chamber of the roll through the perforations X, with which the sides of the tubular roll is provided.

W are wicks arranged to extend across the ink-chamber and having their ends extend through opposite perforations and under the ink-pad P', and are for the purpose of conducting ink through said perforations to the pad. All the perforations need not be provided with these wicks, as a limited number will accomplish the purpose.

The rolls are journaled in the suspended bars G G for the purpose of permitting the rolls to have an oscillating motion within certain limits for the purpose of preventing the paper P from running to one side as it passes between the printing and impression rolls, as it is found that sometimes the paper as it comes from the roll will run to one side, and if the rolls are rigidly boxed at either end and not adapted to oscillate the paper cannot be prevented from running to one side and being spoiled. It is found that if the rolls are permitted to oscillate as the paper begins to run to one side the paper will be prevented from running to one side in consequence of the oscillation of the print and impression rolls, and for that reason they are journaled in a suspended frame adapted to oscillate, as stated.

V V are a pair of rubber bands arranged on the ends of the inking-roll R for contact with the printing-roll R'.

If desired, the impression-roll R^2 may be substituted by a bar, (shown in broken lines in Fig. 3,) in which case the said bar would be arranged to be non-rotatable but operate otherwise the same as the impression-roll.

In operation the paper P is passed from the paper-roll B in the direction shown by the arrows, between the printing and impression rolls, from thence under roller R^3 , and from thence under the cutting-blade S . As the paper is drawn along it is printed by means of the printing-roll with a suitable card or advertisement and cut off between the printed portions by means of the blade S . The whole forms a very neat, durable, and effective printing device for printing of this character.

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

1. The combination, with the frame $A A'$ L of the paper-roll shaft, of the frame $F F C$, suspended frame $D G G$, tubular perforated inking-roll R , printing-roll R' , impression-roll R^2 , and springs S' , substantially as and for the purpose set forth.

2. The printing attachment for paper-roll holders shown and described, consisting of the detachable frame $E F C$, frame $D G G$, sus-

30 pended within frame $C F$, the tubular inking-roll R , printing-roll R' , impression-roll R^2 , and springs S' , substantially as and for the purpose set forth.

3. The combination of cross-bar C , bars $F F$, secured thereto and having longitudinal grooves, bar D , connected with bar C by means of the eyebolts J , bars $G G$, suspended, respectively, from each end of bar D and provided with slot-boxes for receiving the roll-journals, inking-roll R , printing-roll R' , impression-roll R^2 , and springs S' , all arranged to operate substantially as and for the purpose set forth.

4. A tubular inking-roll having its ends closed, forming a chamber for holding ink and having the sides of its chambers perforated, said perforations leading to an inclosing ink-pad, and wicks having their ends extended through opposite perforations in the sides of said ink-chamber and leading to said ink-pad, all combined and arranged to operate substantially as and for the purpose set forth.

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