

(No Model.)

F. H. RICHARDS.

ENDLESS APRON FOR ENVELOPE MACHINES.

No. 353,816.

Patented Dec. 7, 1886.

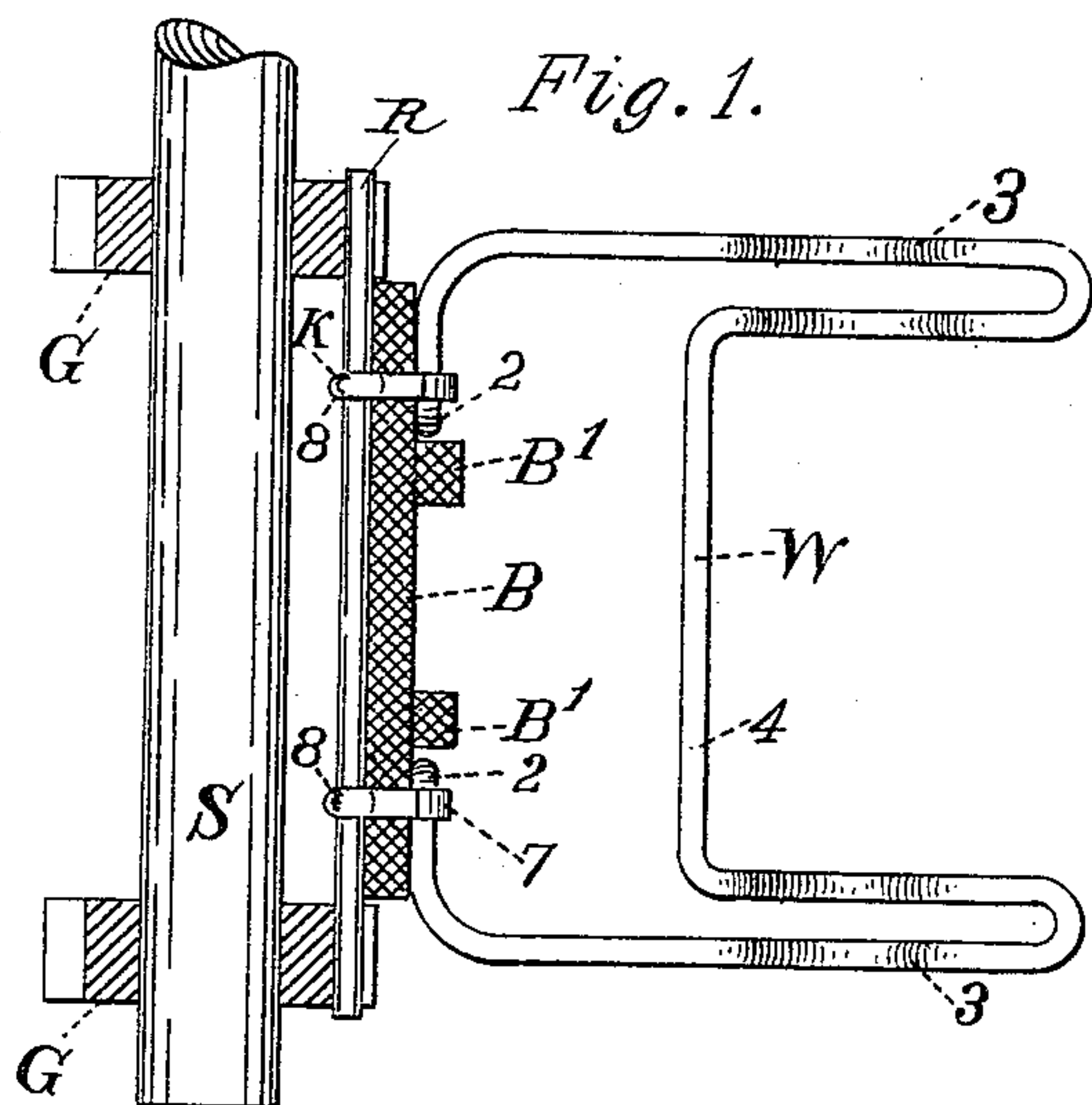


Fig. 5.

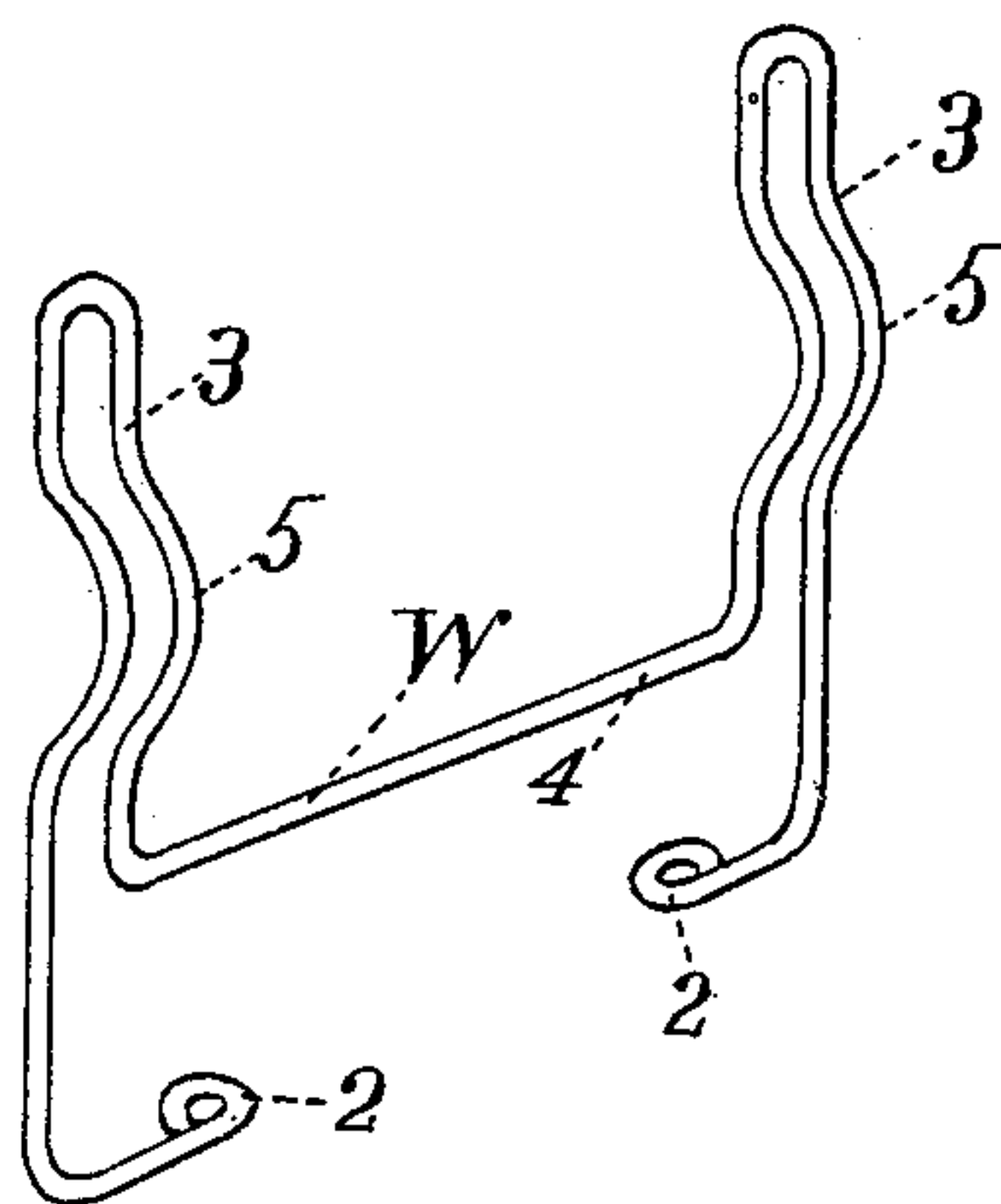


Fig. 3.

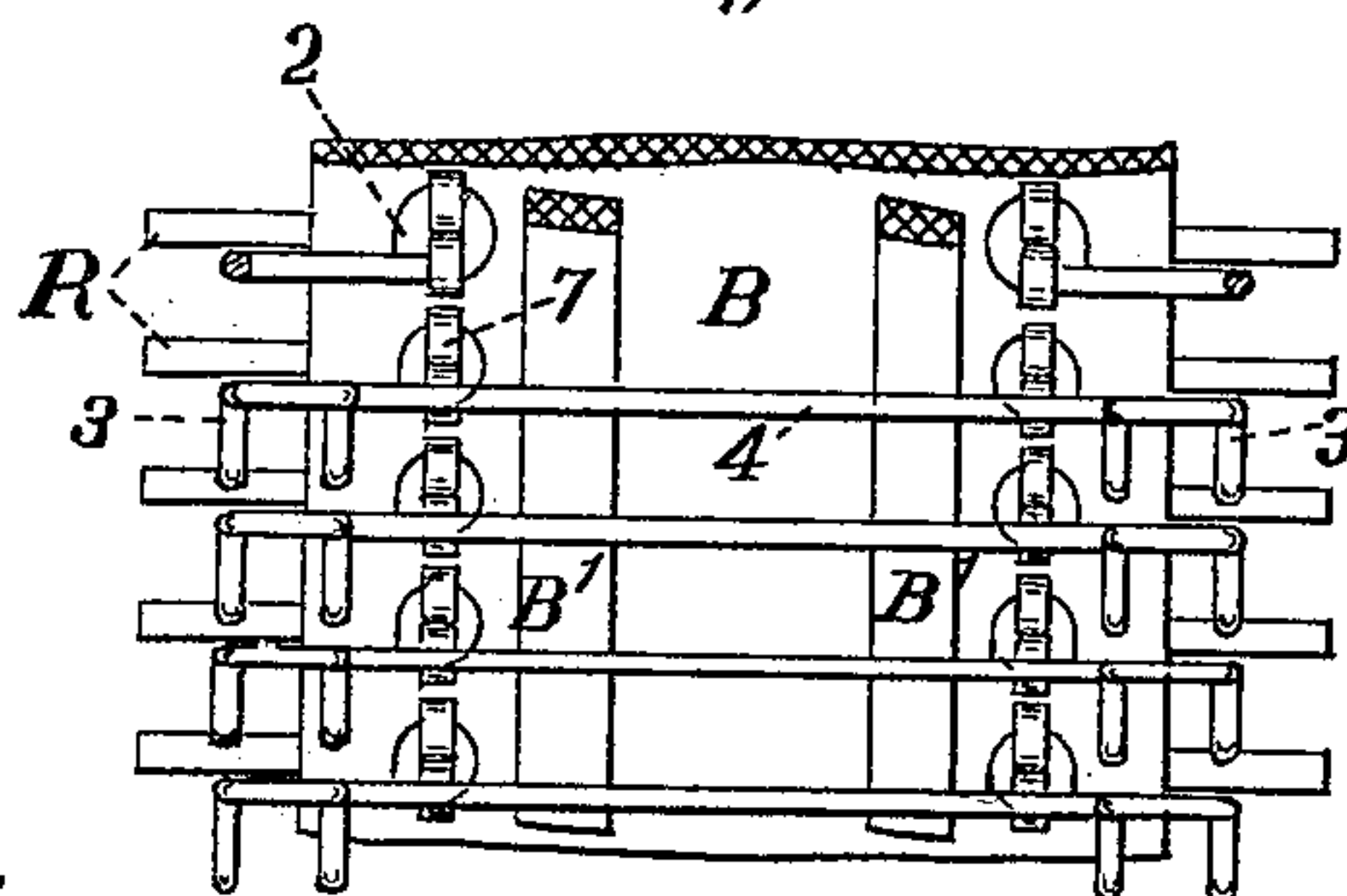
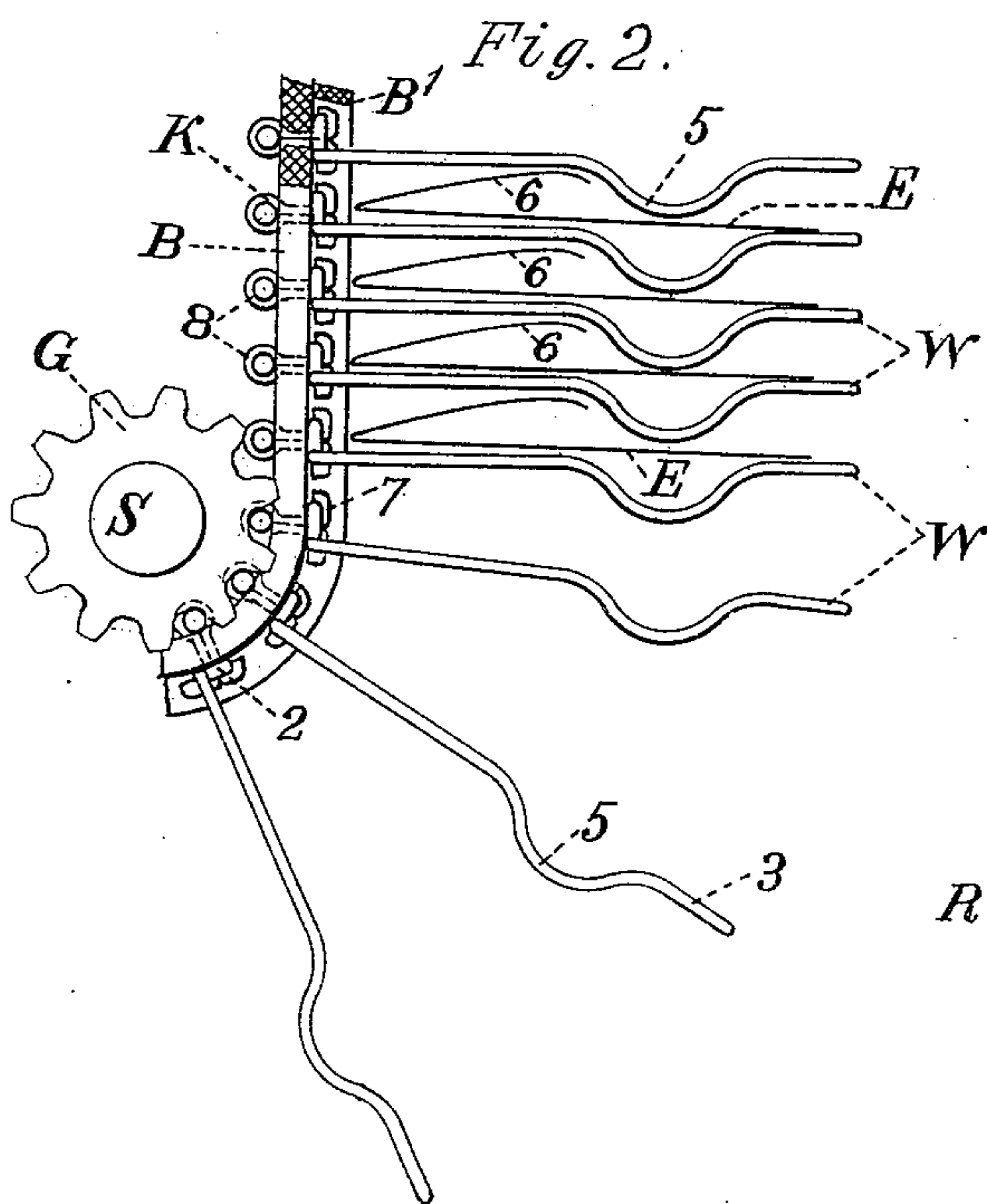
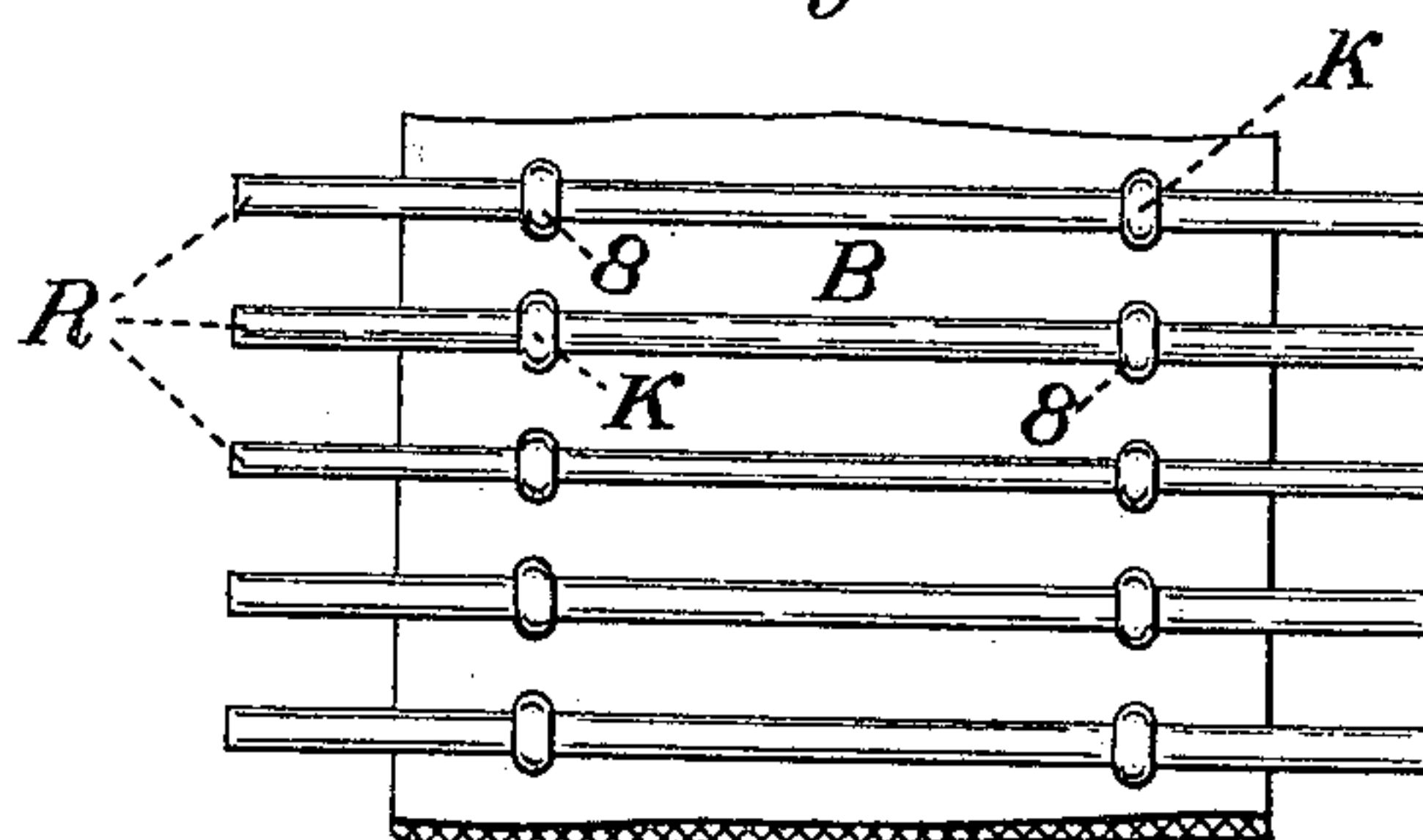


Fig. 4.



Witnesses;
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UNITED STATES PATENT OFFICE.

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ENDLESS APRON FOR ENVELOPE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 353,816, dated December 7, 1886.

Application filed January 19, 1885. Serial No. 153,235. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS H. RICHARDS, a citizen of the United States, residing at Springfield, county of Hampden, State of Massachusetts, have invented certain new and useful Improvements in Endless Aprons for Envelope-Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a horizontal section of an endless apron embodying my improvements. Fig. 2 is a side elevation of a short piece of the apron. Fig. 3 is a front view of the same. Fig. 4 is a back view; and Fig. 5 is a perspective view of one of the envelope-holders which are attached to the apron.

Similar characters designate the same parts in all the views.

This invention relates to endless aprons for receiving the envelopes from an envelope-folding machine, and holding them until the gum on the seal-flap is dry, the object being to provide such an apron which can be readily made of durable and light materials, so that a long apron may be used without necessitating the erection of heavy frame-work for its support.

The invention consists in certain improvements and combinations, which will first be described in connection with the drawings, and afterward pointed out in the claims.

In the drawings, B designates an endless flexible belt, which I make of stout leather.

W are the envelope-holders, each of which I make of a single piece of wire bent into substantially the shape shown in Figs. 1 and 5—that is, having eyes 2, whereby the holder is secured to the belt, and fingers 3 for supporting the envelopes. The middle portion of the piece of wire forming the holder constitutes a connecting part, 4, between the two sides 3 of the holder. The fingers are, in practice, curved, as at 5, the better to retain the envelopes E, Fig. 2, the seal-flaps of which, 6, are held down by part 4 in the usual manner. The holders are secured to the belt by means of some suitable fastening, which may be a rivet or other clamping device. The kind of fastening which I consider best for this purpose is a split pin, K, which is inserted through the belt and the eye 2, and clinched over said eye, as at 7. On the back of the belt rods R

pass through the eyes 8 of the split keys, preventing them from drawing through or into the leather, and furnishing a means whereby the belt may be driven.

S designates the ordinary intermittently-rotating endless-apron-driving shaft, which carries spur-wheels G, engaging with the ends of rods R, as shown. To prevent the envelopes from striking against the fastenings, flexible strips B' are put onto the belt, being held thereto in any convenient manner, as by sewing or pegging them together.

The operation of this improved endless apron is substantially the same as that of the old forms of endless aprons which are made of castings—such, for instance, as shown in United States Patent, No. 235,453, dated December 14, 1880, to which reference may be had. It is therefore unnecessary to set forth said operation further than it has been indicated in the preceding description.

I do not claim, broadly, an endless flexible belt having arms attached thereto, for I am aware such have been used for various purposes; but

I claim as my invention—

1. The combination of a flexible endless apron, a series of rods, R, the holder W, constructed substantially as described, and fastenings, substantially as described, extending through said apron and holding thereto said rods and holders, substantially as set forth.

2. The combination of an endless apron, envelope-holders having eyes 2, and pins K inserted through said apron and clinched over said eyes, substantially as described.

3. The improved envelope-holder herein described, consisting of a single piece of wire bent to form the sides 3, which have curved parts 5, and eyes 2, whereby it may be secured to an apron, substantially as set forth.

4. The combination, with an endless apron having envelope-holders and holder-fastenings, substantially as described, of the strips B', substantially as set forth.

5. The combination of belt B, envelope-holders having eyes 2, rods R, and split pins K, substantially as described.

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Witnesses:

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