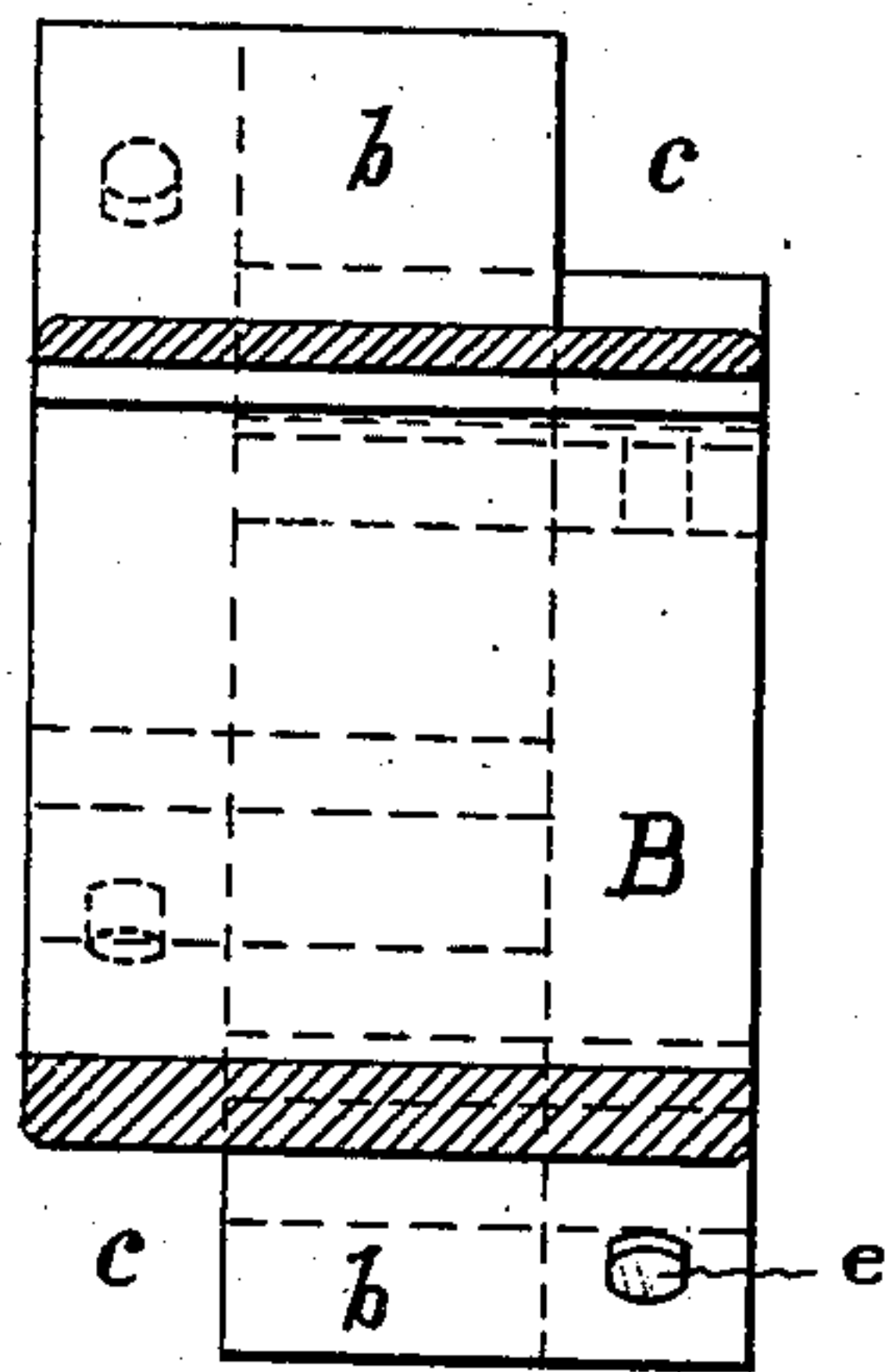
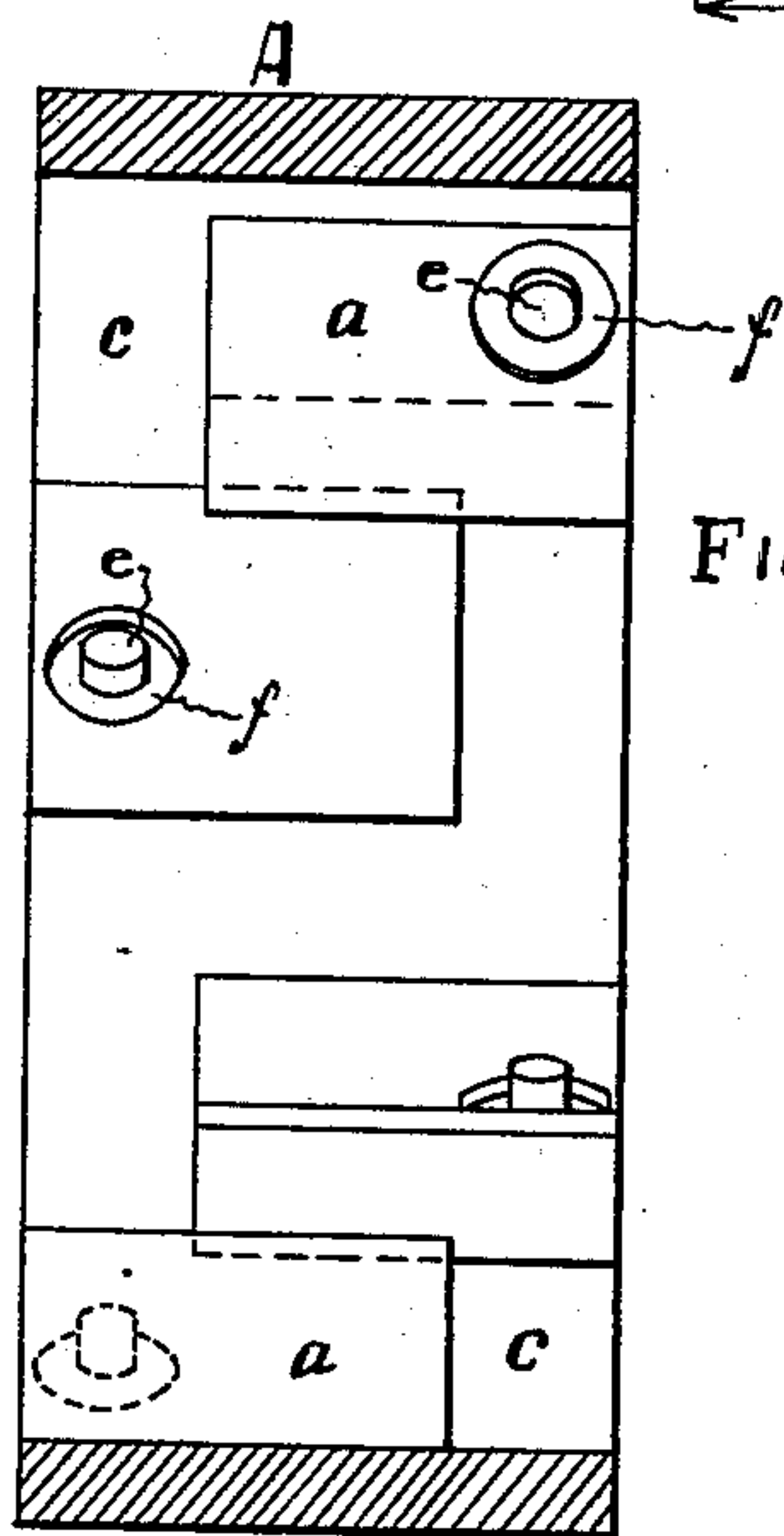
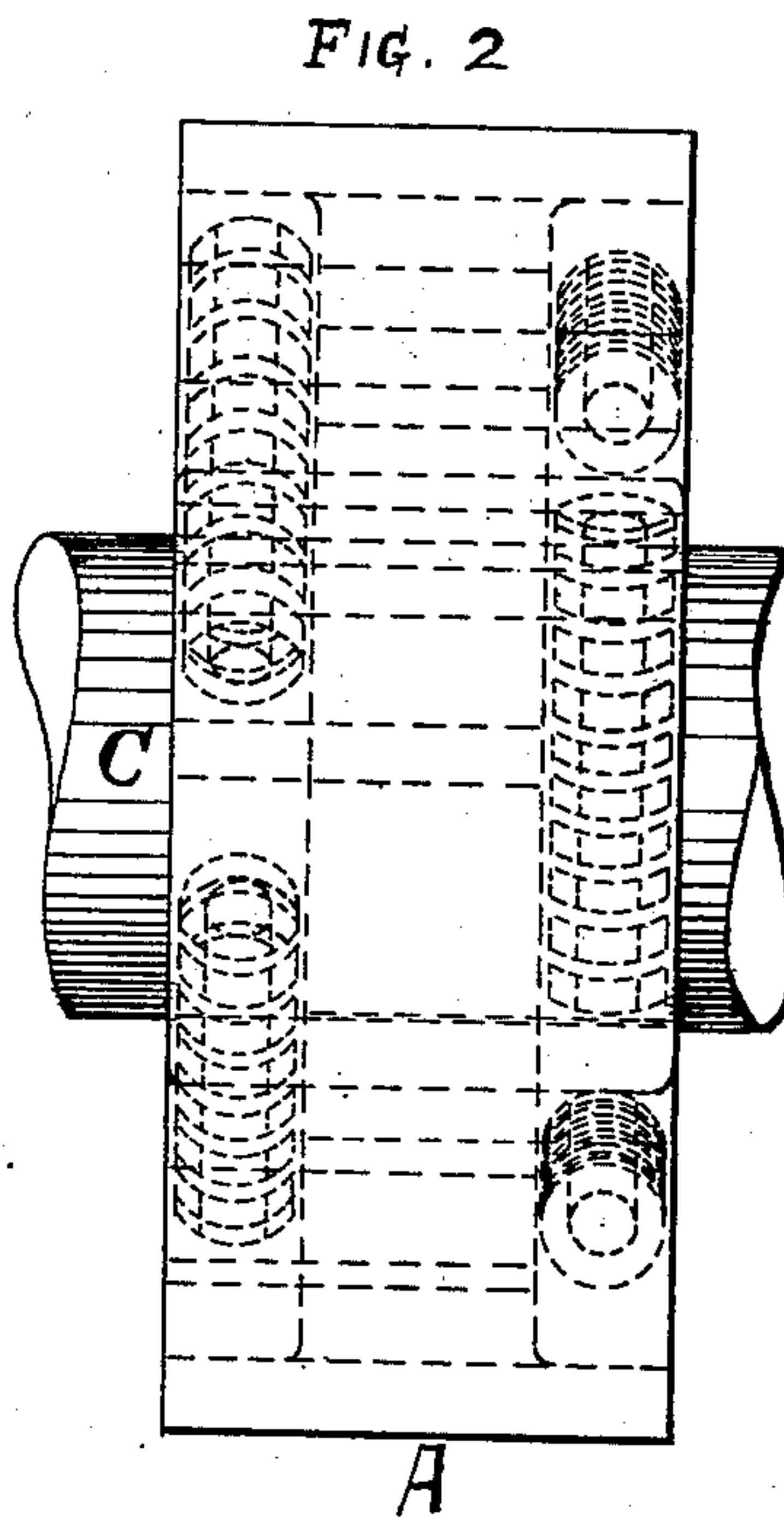
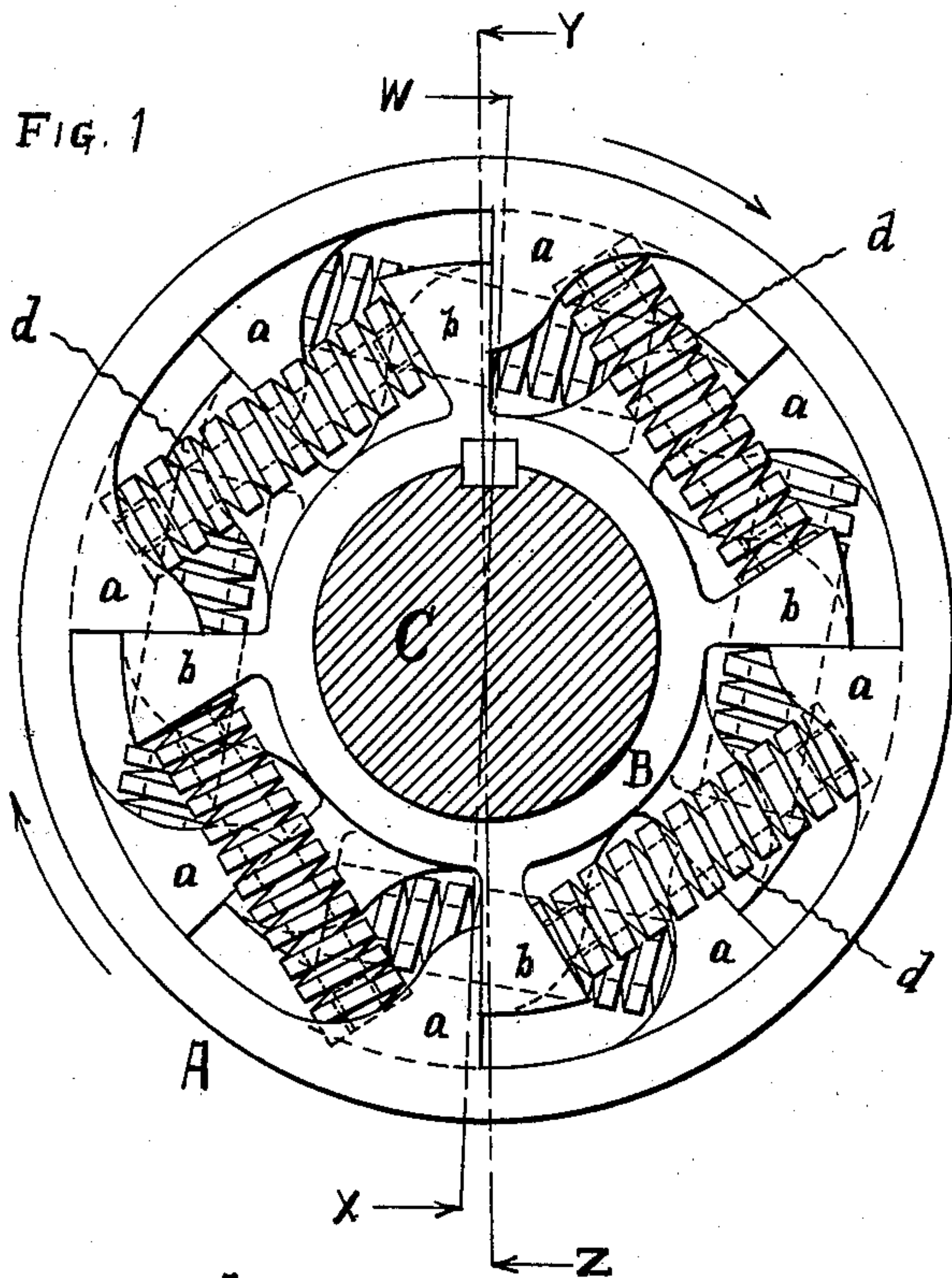


L. B. WHIPPLE.
SECTIONAL FEED ROLL FOR PLANING AND OTHER MACHINES.
APPLICATION FILED FEB. 10, 1908.

899,276.

Patented Sept. 22, 1908.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LELAND B. WHIPPLE, OF ROCHESTER, NEW YORK, ASSIGNOR TO AMERICAN WOOD WORKING MACHINERY CO., OF ROCHESTER, NEW YORK, A CORPORATION OF PENNSYLVANIA.

SECTIONAL FEED-ROLL FOR PLANING AND OTHER MACHINES.

No. 899,276.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed February 10, 1908. Serial No. 415,267.

To all whom it may concern:

Be it known that I, LELAND B. WHIPPLE, of the city of Rochester, county of Monroe, and State of New York, have invented a new and useful Improvement in Sectional Feed-Rolls for Planing and other Machines, of which the following is a specification.

My invention relates to revolving rolls for feeding stock into a planing or other machine, in which the feeding surface is separated into short sections for the purpose of feeding a number of strips of varying thickness, and it consists principally in a novel disposition of spiral springs on the inner periphery of the yielding sections and a peculiar construction of the driving members or lugs to operate the sections.

In the accompanying drawings Figure 1 is a transverse elevation of a feed roll section made according to my invention. Fig. 2 is a side elevation; Fig. 3 is a cross section at Y, Z, Fig. 1. Fig. 4 is a cross section of the driving sleeve at W, X, Fig. 1.

A is a ring or shell constituting one section of a feed roll. This is provided on the internal periphery with lugs *a* against which corresponding lugs *b* rest, said lugs *b* being a part of, or secured rigidly to, the driving spider or sleeve B. Sleeve B is keyed or otherwise properly secured to the roll shaft C which is driven in any suitable or usual manner in the direction indicated by the arrows. There are preferably eight of the lugs *a*, but there may be any even number of them as found desirable in rolls of different diameters. Lugs *a* are cut away at one end to accommodate spiral springs *d*, as indicated at *c*, Fig. 3. The springs *d* are arranged in two sets, and preferably have their seats in shallow recesses *f*, *f*, in lugs *a*, and projections *e* which enter their ends may be provided. Opposite ends of the springs rest similarly against the driving lugs *b* on the sleeve B. The springs are approximately tangential to an imaginary cylindrical surface parallel to the exterior surface of shell A.

It will be noticed that one full set of springs is thus located near one edge of a roll section, and the other set near the opposite edge, and alternate springs thus pass each other at an angle as shown in Fig. 1; and furthermore that the lugs *a*, *b*, are cut away alternately so that the two sets of springs lie in different planes of rotation. The object of this arrangement is to provide as equally dis-

tributed tension as possible to the roll sections by increasing the number of the springs and their points of contact upon the driver B and section A. At the same time the increased length of the springs thus obtained is such that they are much more durable than if they were disposed in the same plane in the middle of the section, thus necessitating comparatively short springs. It will be further noted that the driving lugs *a* and *b* have a wearing surface extending about two thirds of their length, enough only being cut away from the ends of alternate lugs to allow the springs to pass as shown in Figs. 3 and 4. This is an important point, because it has been found by experience that these surfaces are subject to extreme wear by constant use, no lubrication being possible.

The drawings, Figs. 1 and 2 show the roll section as in its normal or central position with reference to the shaft and driver B, but when in actual use the section becomes more or less eccentric thereto, the springs retaining a constant pressure on the material under the section, and each lug *b* of the driver coming successively into action on the section lugs *a*, as the motion continues; in fact one pair of lugs *a*, *b*, only are in contact at any one instant, each contiguous pair approaching, touching and receding successively, so long as the roll section is out of center.

It is not essential to the spirit of my invention that the sleeve B be employed, but the spring receiving seats and driving lugs *b* can be a part of the shaft C or attached directly thereto.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. The combination in a sectional feed roll of an even number of compression springs arranged in two sets and operating tangentially, or nearly so, to the rotation of the roll, roll sections with internal lugs having suitable seats at opposite ends of alternate lugs to receive one end of said springs, a driving member having corresponding spring receiving lugs, whereby each set of springs acts alternately with reference to each other, but all act successively on the roll section as it rotates, substantially as set forth.

2. The combination in a sectional feed roll, of roll sections having an even number of internal lugs, alternate lugs being cut away at opposite ends to accommodate tan-

gential springs, corresponding lugs on a driving member also cut away alternately, all said lugs being adapted to receive and retain the ends of said springs, for the purposes set
5 forth.

3. The combination in a sectional feed roll, of roll sections having an even number of internal lugs, a driving sleeve secured to the roll shaft and provided with a corresponding number of driving lugs, each con-
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tiguous pair of lugs being cut away at one end only, to allow tangential springs to pass, whereby maximum contact surface is obtained for said driving and receiving lugs, substantially as set forth.

LELAND B. WHIPPLE.

Witnesses:

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