

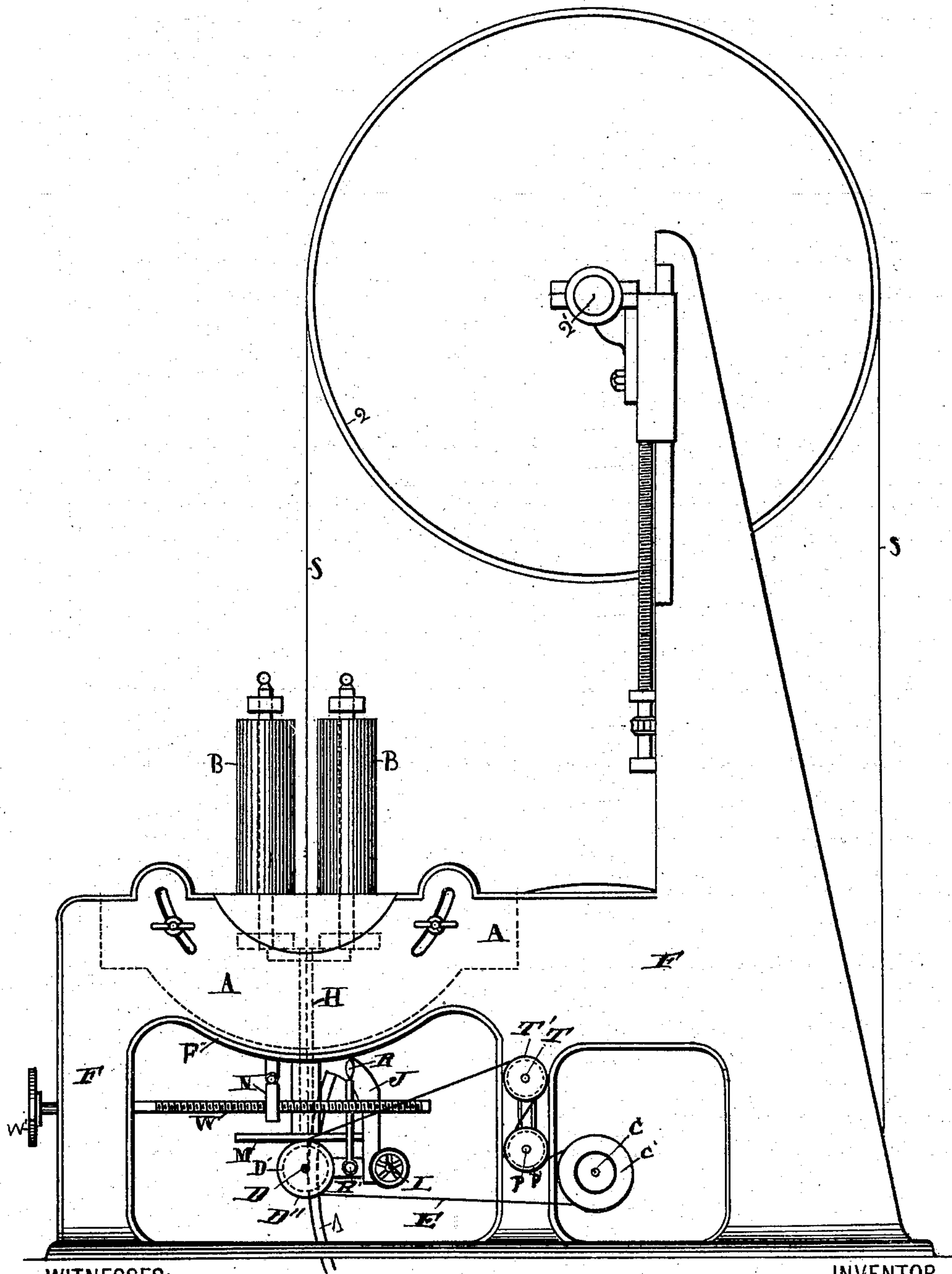
(No Model.)

3 Sheets—Sheet 1.

E. C. MERSHON.
BAND SAWING MACHINE.

No. 503,768.

Patented Aug. 22, 1893.



WITNESSES:
Charles S. Watson.
W. L. Elliott.

Fig. 1.

Edward C. Mershon
BY

A. J. Swapston
his

INVENTOR

ATTORNEY

(No Model.)

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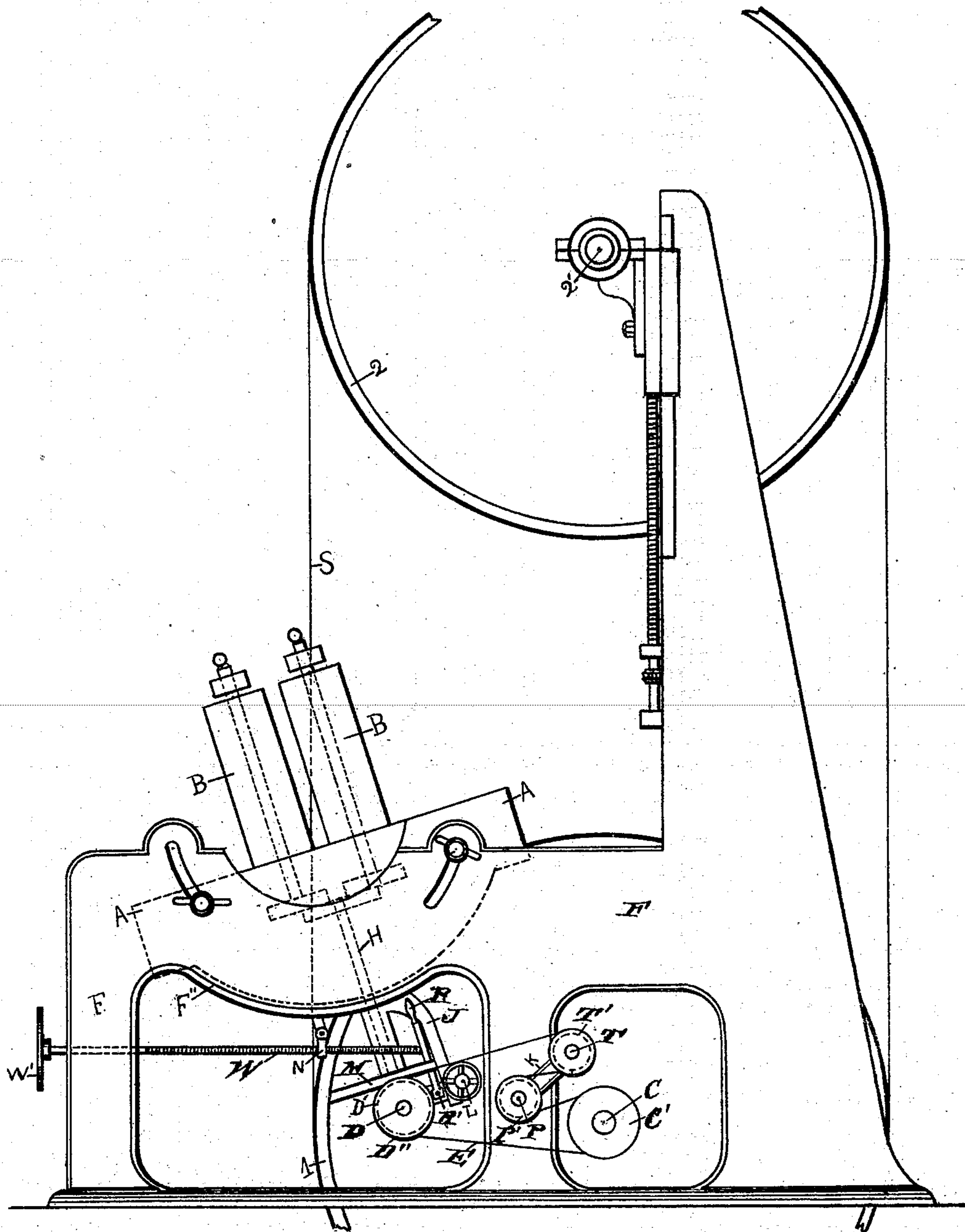


FIG. 2.

WITNESSES:
Charles S. Watson,
M. L. Elliott.

INVENTOR
Edward C. Mershon
BY
A. H. Anthony
ATTORNEY

(No Model.)

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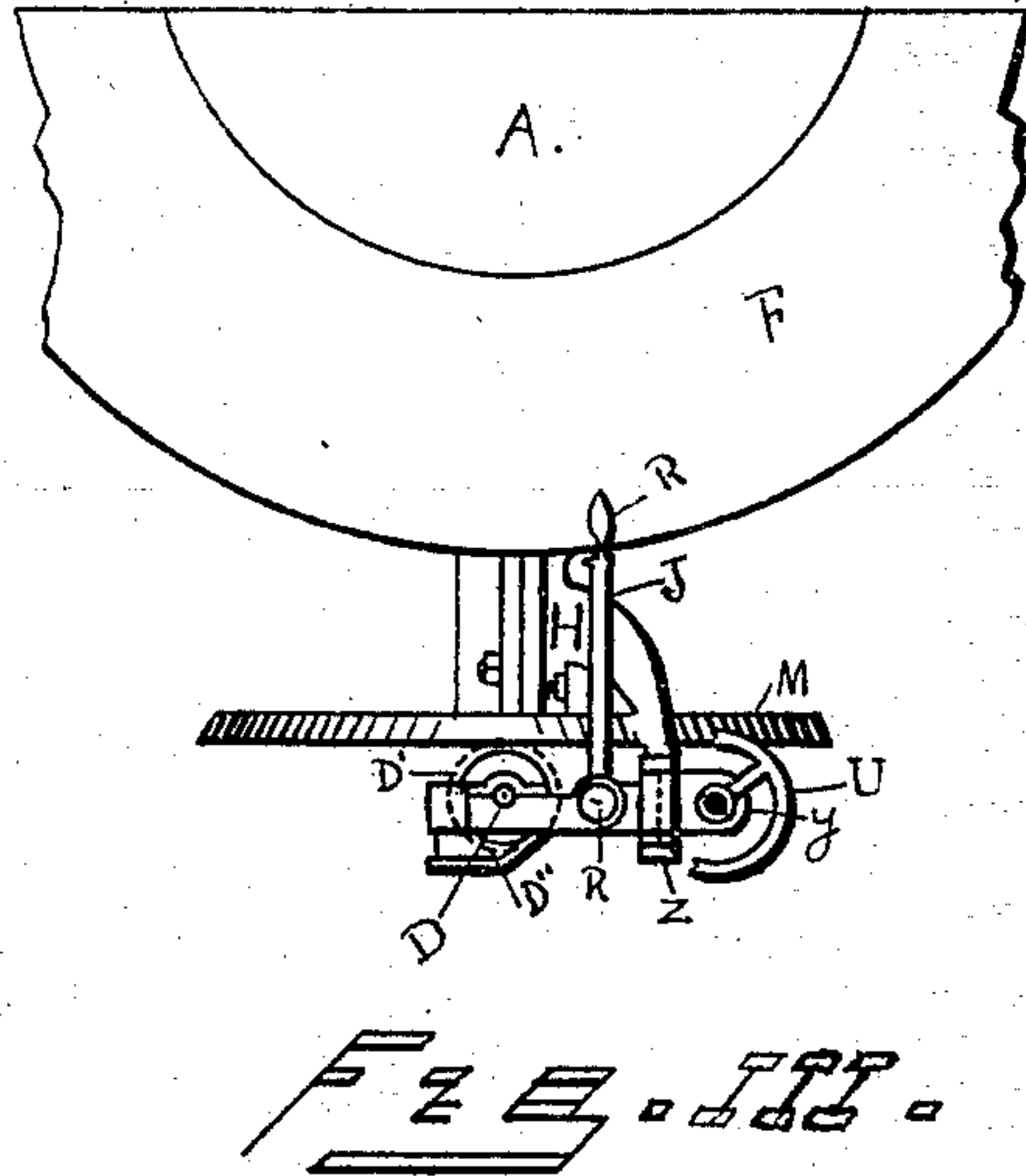


FIG. III.

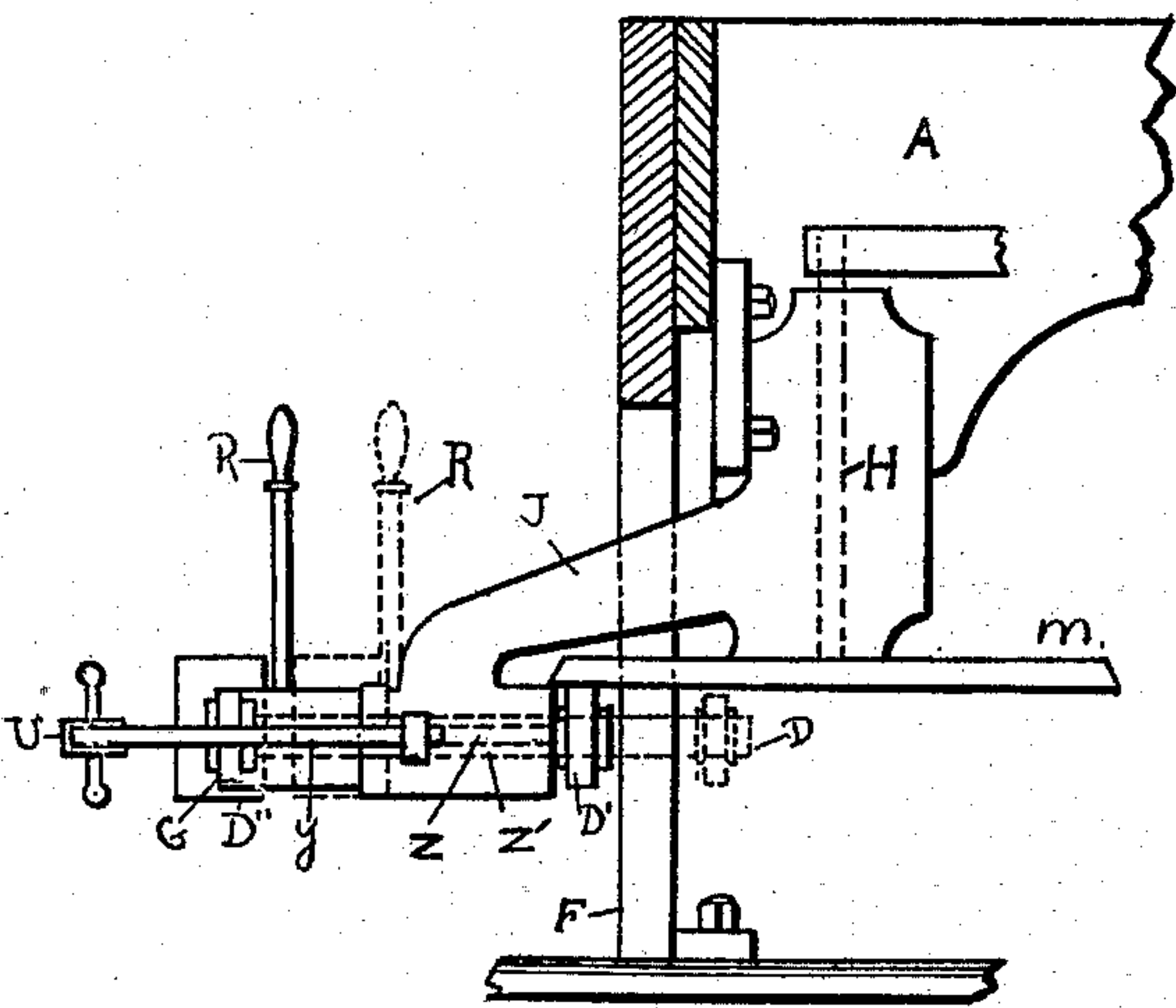


FIG. IV.

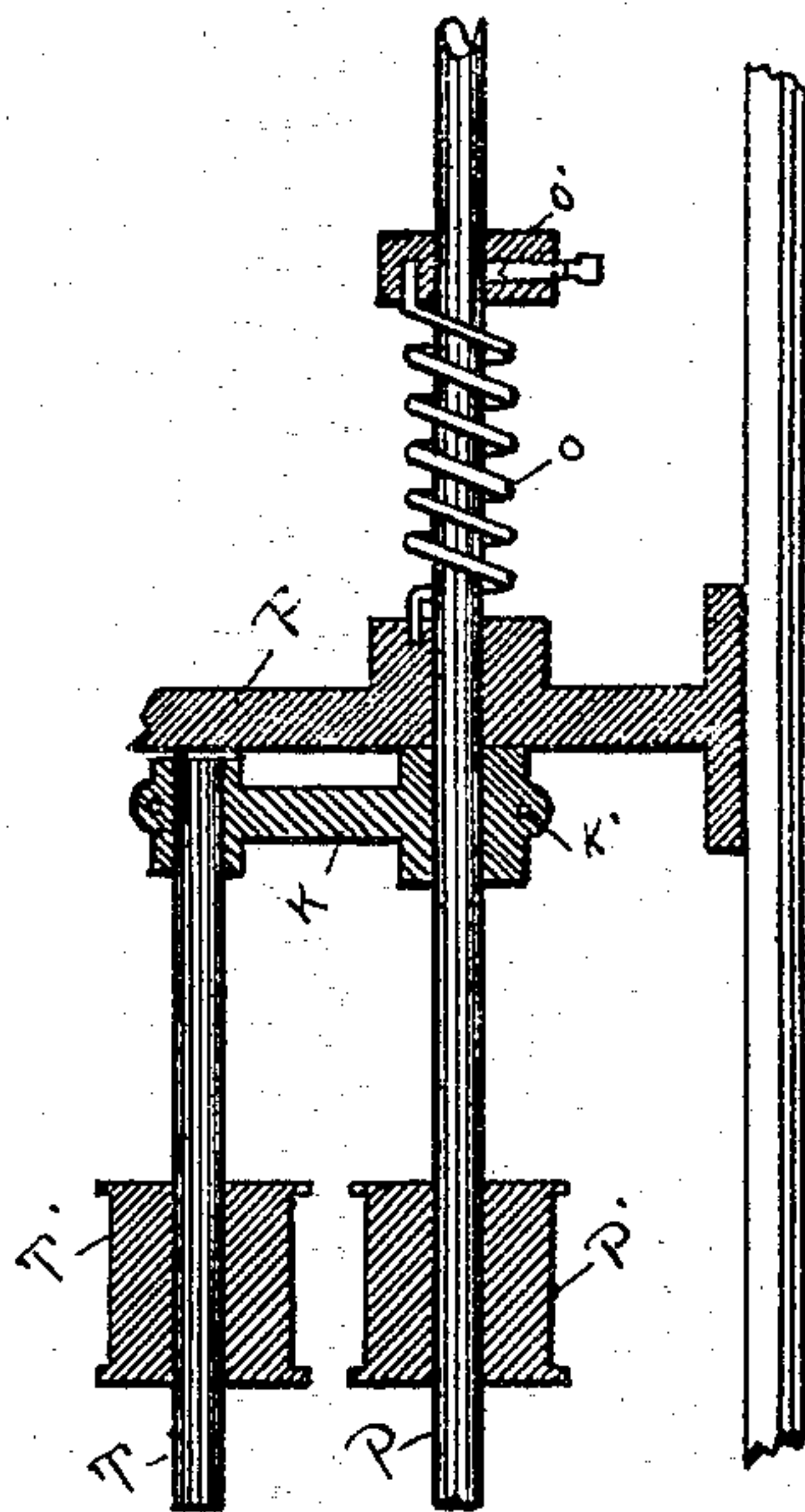


FIG. V.

WITNESSES:

Charles S. Watson.
M. L. Elliott.

Edward C. Mershon

INVENTOR

BY

A. H. Wray

ATTORNEY

UNITED STATES PATENT OFFICE.

EDWARD C. MERSHON, OF SAGINAW, MICHIGAN.

BAND SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 503,768, dated August 22, 1893.

Application filed December 12, 1892. Serial No. 454,957. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. MERSHON, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Band Sawing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to the feeding devices of band re-sawing machines and consists of the novel arrangement of the parts by means of which the power is applied to the feed rolls, and the adjustable frames supporting the same.

By the arrangement described herein, not only a most simple means is provided for driving the rolls in any position they may be adjusted with the frame, but the speed at which they revolve is most perfectly under control of the operator.

Figure 1 is a front elevation. Fig. 2 is the same view with the parts adjusted to a different position. Fig. 3 is an enlarged view of the feeding device. Fig. 4 is a side view of the same from side next the driving shaft C. Fig. 5 is a side view of the belt tightener.

F is the frame of the machine provided with a concave bed F'' for securing and supporting the feed roll frame A, the center of the circle of this concave bed F'' being in the line of the endless saw S, running over the driving wheels 1 and 2 mounted on the shafts C and 2', supported on the frame F. The frame A carries the feed rolls B, B, their shafting, journals, and usual gearing, also the friction driving device hereinafter described depending from the frame A, the whole forming one integral mass, and so rests in the bed F'' that the saw will be in line between the feed rolls when they are perpendicular. Depending from the frame A is a bracket J supporting the friction disk I on the vertical shaft which drives the rolls B, B, and the friction wheel D' and shaft D.

The bracket J secures the housing of the friction arbor D in the horizontal groove Z in the casting secured to the bracket J. In this

casting is a threaded lug G into which the regulating screw rod L is inserted, moving in the groove Z and connected to the shaft D. By turning the screw rod L in one direction the friction wheel D' will approach the center of the friction disk I causing the rolls B, B to revolve more rapidly, while turning it in opposite direction decreases their speed.

The lever R operating an eccentric on the shaft R' adjusts the pulley D' to and from the plate I. The shafts C, 2', D and the center of the circle of the concave bed F'' are all parallel to each other, and will remain parallel as the machine is adjusted. The shaft C carrying the saw wheel also carries the pulley C' for the belt that drives the mechanism on the shaft D.

The frame A is adjusted by means of a screw W working in the nut N hinged to the bottom of the bed, one end of the rod W being journaled in the frame F.

In Figs. 3 and 5 I have illustrated a device by means of which the belt E, driving the mechanism operating the feed rolls, may be kept taut as the bed A is adjusted and the mechanism depending therefrom, operated by the belt, approaches to and recedes from the pulley C'. It consists of the shaft P carrying a loose pulley P' and passes through and is journaled to the frame F between the pulleys D'' and C'. To the opposite end of the shaft P is secured a collar O' holding one end of a coiled spring O around the shaft, the other end of the spring resting against the frame F. On the opposite side of the frame from the spring and secured to the shaft P is a frame K carrying a shaft T bearing a loose pulley T' opposite the pulley P' on the shaft P. The belt E runs over these pulleys, and is kept taut by the operation of the spring O on the shaft P, the spring turning the shaft and with it the frame K as the tension on the belt is removed.

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

1. In a band re-sawing machine, the combination with a tilting frame and feed rolls supported on said frame, of a horizontal friction disk secured to the end of a vertical shaft connected to the gearing of the feed rolls and journaled in and supported by a bracket

depending from the tilting frame, a friction wheel engaging the friction disk and adapted to be moved laterally across the disk, and means for operating the friction disk, all supported by a bracket depending from the tilting frame, and all tilted simultaneously with it, substantially as specified.

2. In a band re-sawing machine, the combination with a main frame supporting shafts carrying driving wheels, an endless band saw running over the wheels, and a concave bed adapted to receive the frame supporting the feed rolls, of the adjustable frame for the feed rolls, the feed rolls, and the driving mechanism for the feed rolls supported by a bracket depending from the adjustable frame, consisting of a horizontal friction disk secured to the end of a vertical shaft connected to the feed roll gearing, a friction wheel engaging the friction disk and adapted to be moved laterally on the face of the friction disk, and a pulley on the shaft of the friction wheel; the main driving shaft, the friction wheel shaft and a line through the center of con-

cavity of the bed, all being parallel and remaining parallel as the adjustable frame is tilted, substantially as specified.

3. In a band re-sawing machine, the combination with a tilting frame carrying feed rolls and having depending therefrom the driving mechanism for the feed rolls, being a friction disk supported on the end of a vertical shaft, a friction wheel engaging the friction disk, and adapted to be adjusted laterally on the face of the friction disk, and a pulley on the friction wheel shaft, all depending from and suspended with the tilting frame in the main frame, and tilting simultaneously with the tilting frame, of the belt E, the pulley C' and the intermediate belt tightener, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD C. MERSHON.

Witnesses:

A. H. SWARTHOUT,
CHARLES S. WATSON.