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PATENTED AUG. 28, 1906.

W. I. FINKENBINDER.

ROLLING MILL.

APPLICATION FILED JUNE 19, 1905.

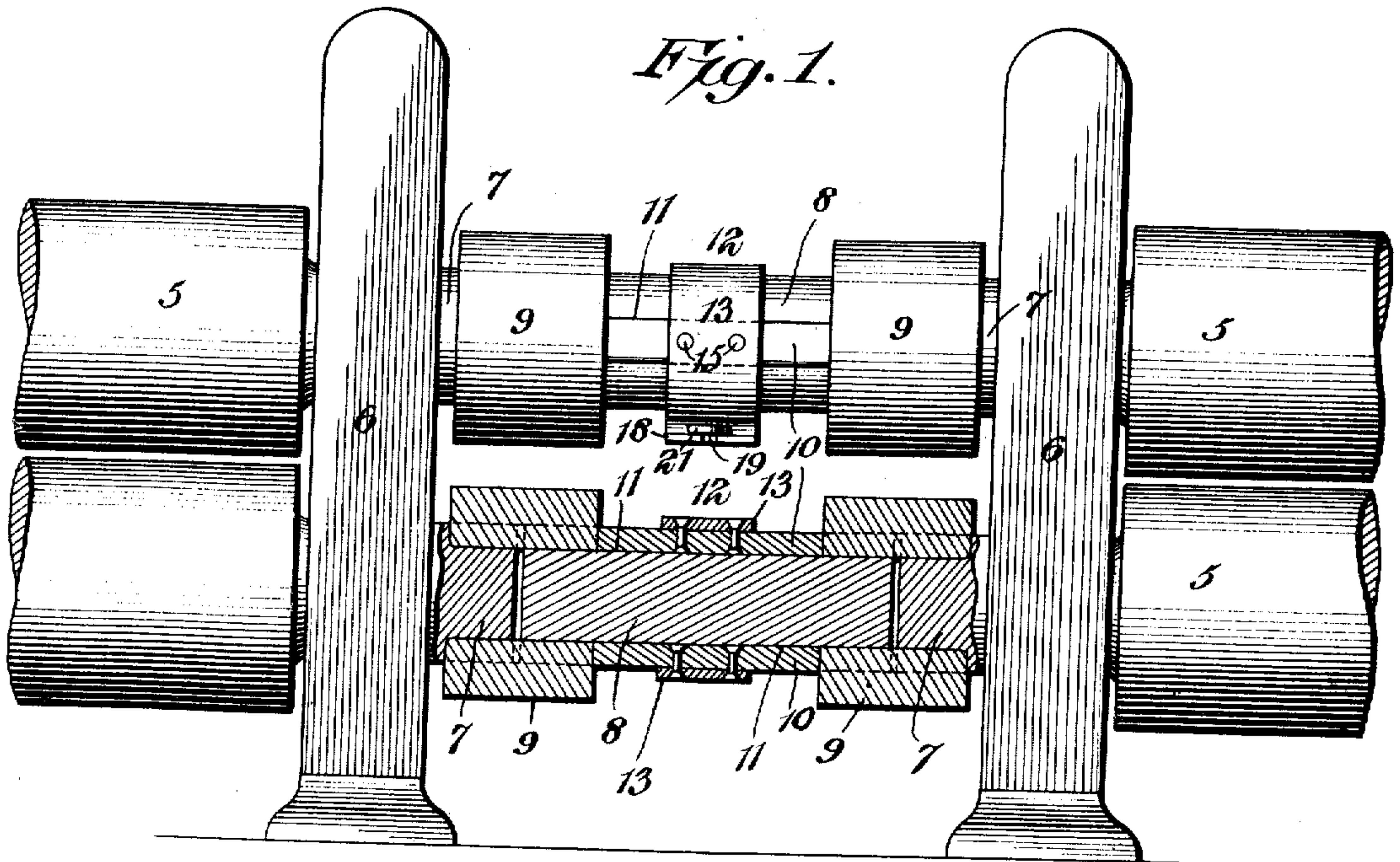


Fig. 3.

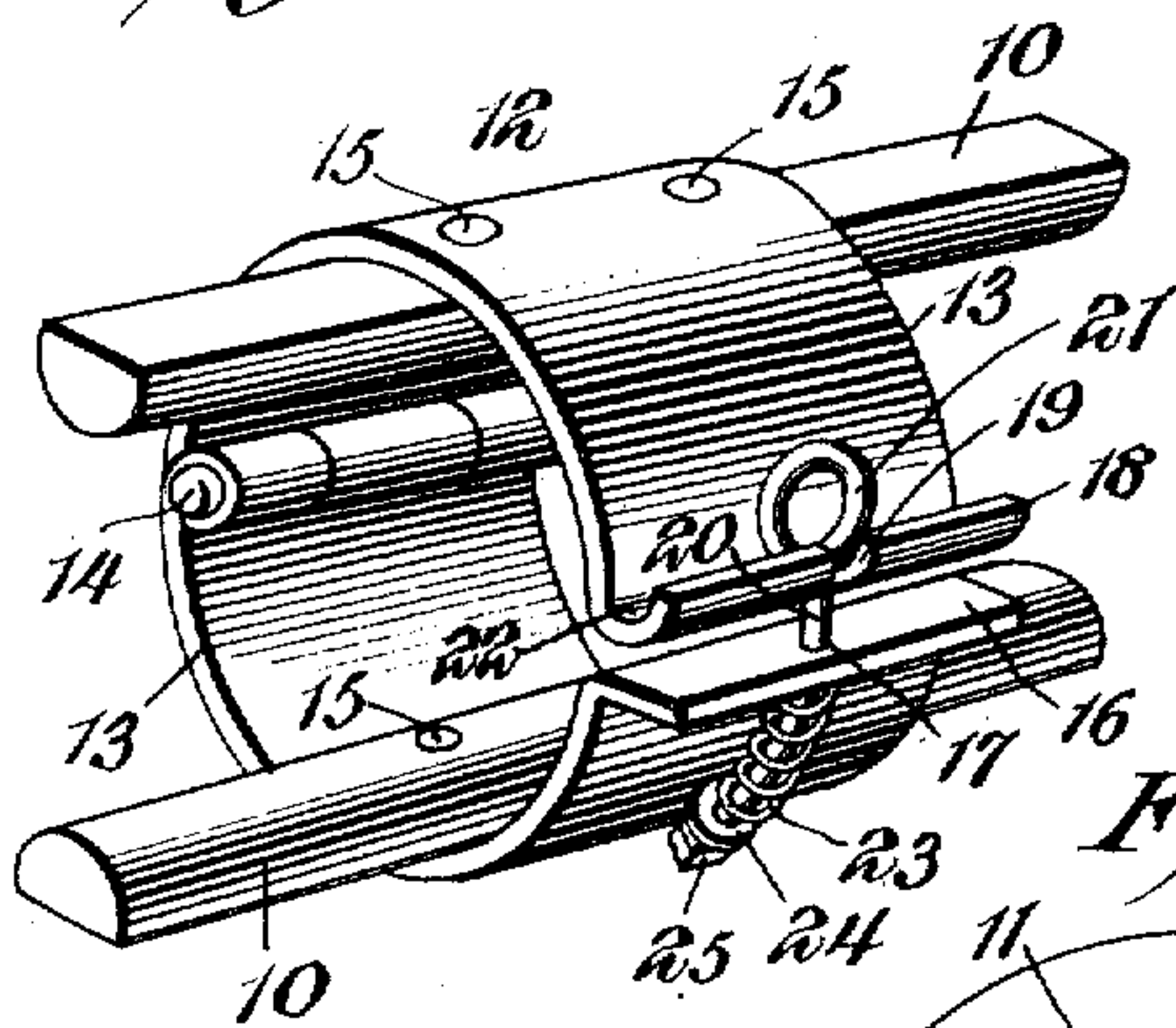


Fig. 4.

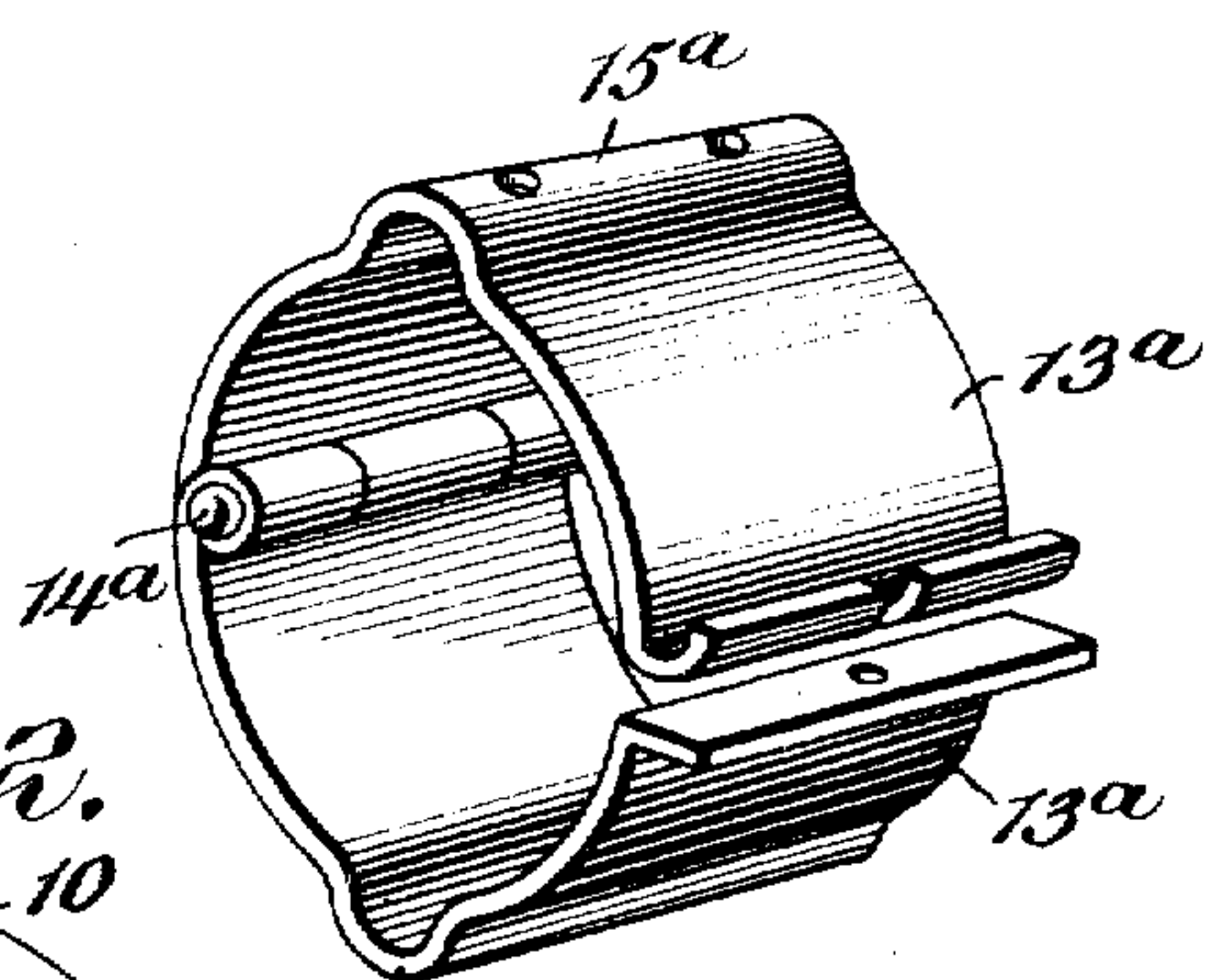
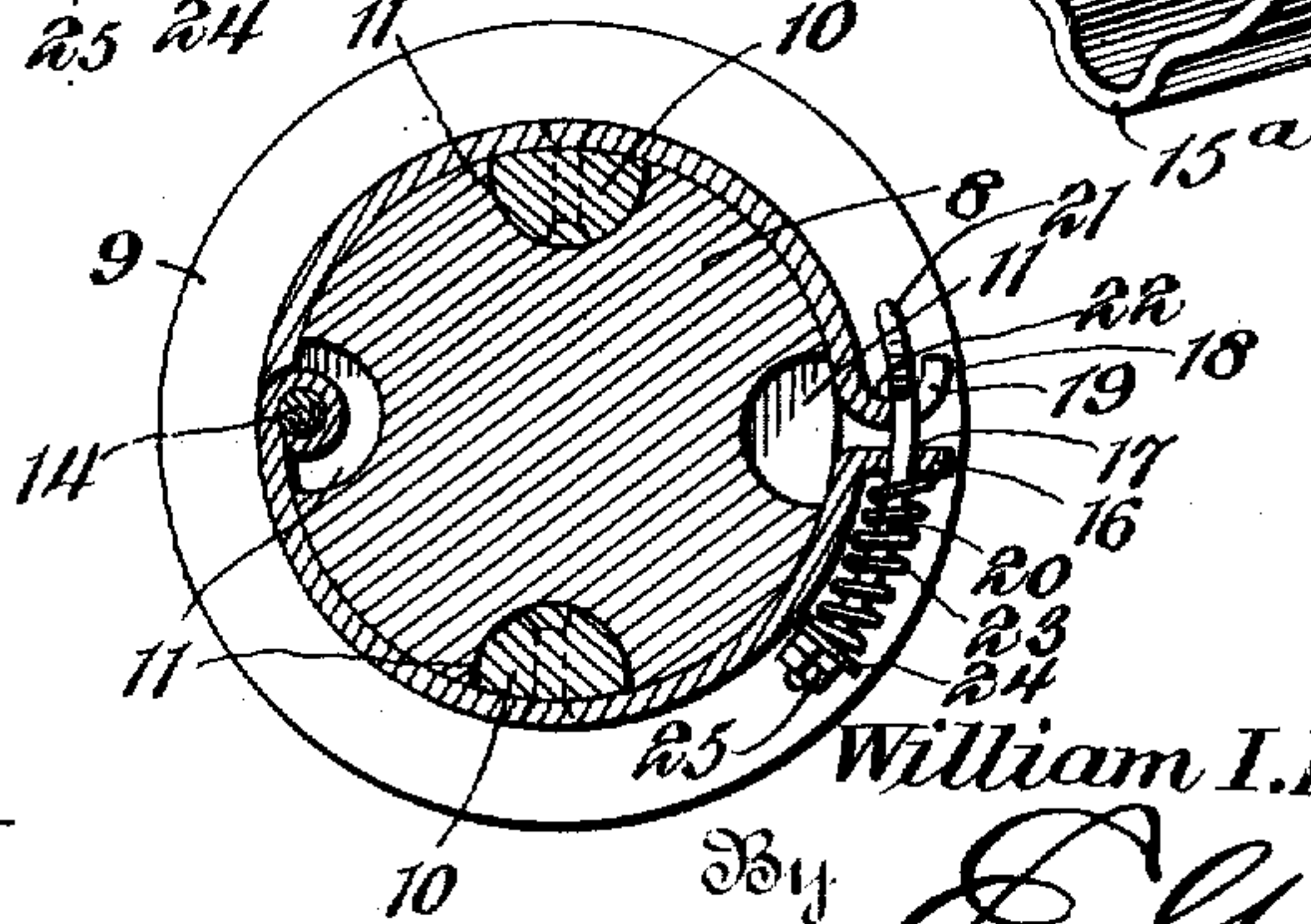


Fig. 2.



Witnesses

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ROLLING-MILL.

No. 829,393.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM I. FINKENBINDER, a citizen of the United States, residing at Duncannon, in the county of Perry and State of Pennsylvania, have invented a new and useful Rolling-Mill, of which the following is a specification.

This invention relates to means for retaining the stretchers in place between the coupling-boxes.

The principal object is to provide a simple and effective device of a novel nature which will hold the stretchers in place and yet may be easily and quickly detached and reapplied as often as found desirable or necessary.

A further object is to provide a device of the above character that is durable and is not deleteriously affected to any material degree by heat and water.

In the accompanying drawings, Figure 1 is a view, partly in elevation and partly in section, of a portion of a mill with one form of the novel retaining device in place. Fig. 2 is a cross-sectional view through the same. Fig. 3 is a perspective view of the retaining device, and Fig. 4 is a perspective view of a slightly-modified form of construction.

Similar reference-numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated the usual rolls are designated 5 and are journaled in housings 6 with their gudgeons or "wabblers" 7 disposed in opposing relation. Interposed between the gudgeons are spindles 8, connected in the usual manner thereto by coupling boxes or sleeves 9. The stretcher-blocks 10 are located between the boxes or sleeves 9 and may be of any suitable material, being seated in the ordinary grooves or recesses 11 of the spindles.

For the purpose of retaining the stretcher-blocks in place a band 12 is employed, comprising substantially semicircular sections 13, hinged together, as shown at 14, each of the sections preferably having one of the stretcher-blocks 10, carried thereby and secured thereto by any suitable means—as, for instance, rivets 15. The free end of one of the band-sections is provided with an out-turned lip 16, having an opening 17 centrally therethrough, while the corresponding end of the other section is also provided with an out-standing lip 18, which lip is preferably turned back and provided with a transverse slot 19.

Fastening means in the form of a retaining latch-stem 20 slidably passes through the opening 17, said opening being of sufficient size to permit the swinging movement of the stem, and this stem has at one end a head in the form of an eye 21, that is adapted to interlock in the seat 22, formed by the rearwardly-turned lip 18, the portion of the stem directly adjacent to the head or eye detachably engaging in the slot 19. A coiled spring 23, arranged on the stem, has one end bearing against the rear side of the lip 16, the other end being abutted against a washer 24, held in place on the rear end of the stem by nuts 25.

The manner in which the device is used will be clear to those skilled in the art. When the coupling boxes or sleeves 9 have been placed in position, the retaining-band 12 is clasped upon the spindle and the stretcher-blocks 10 seated in the grooves 11. The free ends of the band are then locked together by the latch, as clearly shown in Fig. 3. The stretchers are thus efficiently maintained in position and the retaining means is not affected by the heat and water. To uncouple the mills, it is only necessary to disengage the latch from the lip 18, whereupon the band-sections may be swung upon their hinge, and thus the stretchers detached. The boxes may thereupon be moved toward each other and the spindles disengaged from the gudgeons or wabblers. Consequently it will be seen that the device is not only efficient, but is convenient to operate, is durable, and can be cheaply manufactured.

A slight modification of the structure is illustrated in Fig. 4, wherein the band-sections are designated 13^a and are hinged together, as shown at 14^a. Each of the sections is provided with an outstanding portion 15^a, forming a seat to receive a stretcher; otherwise the structure is the same as that already set forth, and a further description thereof is believed to be unnecessary.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. A retaining device for holding stretchers on the couplings of rolling-mills, comprising a band having free ends, a device slidably mounted on one end and having a detachable engagement with the other end, and means for maintaining said engagement between the device and end of the band.

2. A retaining device for holding stretchers on the couplings of rolling-mills, comprising a band having free ends, and a latch including a stem having a longitudinal sliding and a lateral swinging connection with one end of the band, said latch also having a detachable engagement with the other end of the band.

3. A retaining device for holding stretchers on the couplings of rolling-mills, comprising a band having free ends, a latch having a sliding and swinging connection with one end and a detachable interlocking engagement with the other end, and a spring for effecting the sliding movement of the latch in one direction, said spring yieldingly holding the said latch in its said interlocked engagement.

4. A retaining device for holding stretchers on the couplings of rolling-mills, comprising a band having free ends provided with outturned lips, one of said lips having a slot, the other having an opening, a latch-stem slidably mounted in the opening of the one lip and having a head that detachably en-

gages the other lip, the stem detachably engaging in the slot thereof, and a spring engaging the stem for maintaining the head in engagement with the lip.

5. A retaining device for holding stretchers on the couplings of rolling-mills, comprising a band composed of sections, a hinge connecting the corresponding ends of the sections, the free ends of said sections being provided with outturned lips, one of which is rearwardly turned to form a seat, said rearwardly-turned lip having a slot and the other lip having an opening, a latch-stem slidably mounted in the opening and arranged to engage in the slot, said stem having an eye at one end that detachably engages in the seat, and a coiled spring located on the stem for yieldingly maintaining the eye in the seat.

6. In a rolling-mill, the combination with a band arranged to surround the coupling-spindle and comprising hingedly-connected sections having free ends, of fastening means carried by one of the free ends and detachably engaging the other free end to thereby secure the band upon said spindle, and stretcher-blocks connected to and carried by the different sections of the band.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM I. FINKENBINDER.

Witnesses:

CLYDE CUMMINGS,
DAVID BOYD.