

No. 685,609.

Patented Oct. 29, 1901.

W. A. HUFF.

ADJUSTING ATTACHMENT FOR SAW GRINDERS.

(Application filed July 15, 1901.)

(No Model.)

Fig. 1.

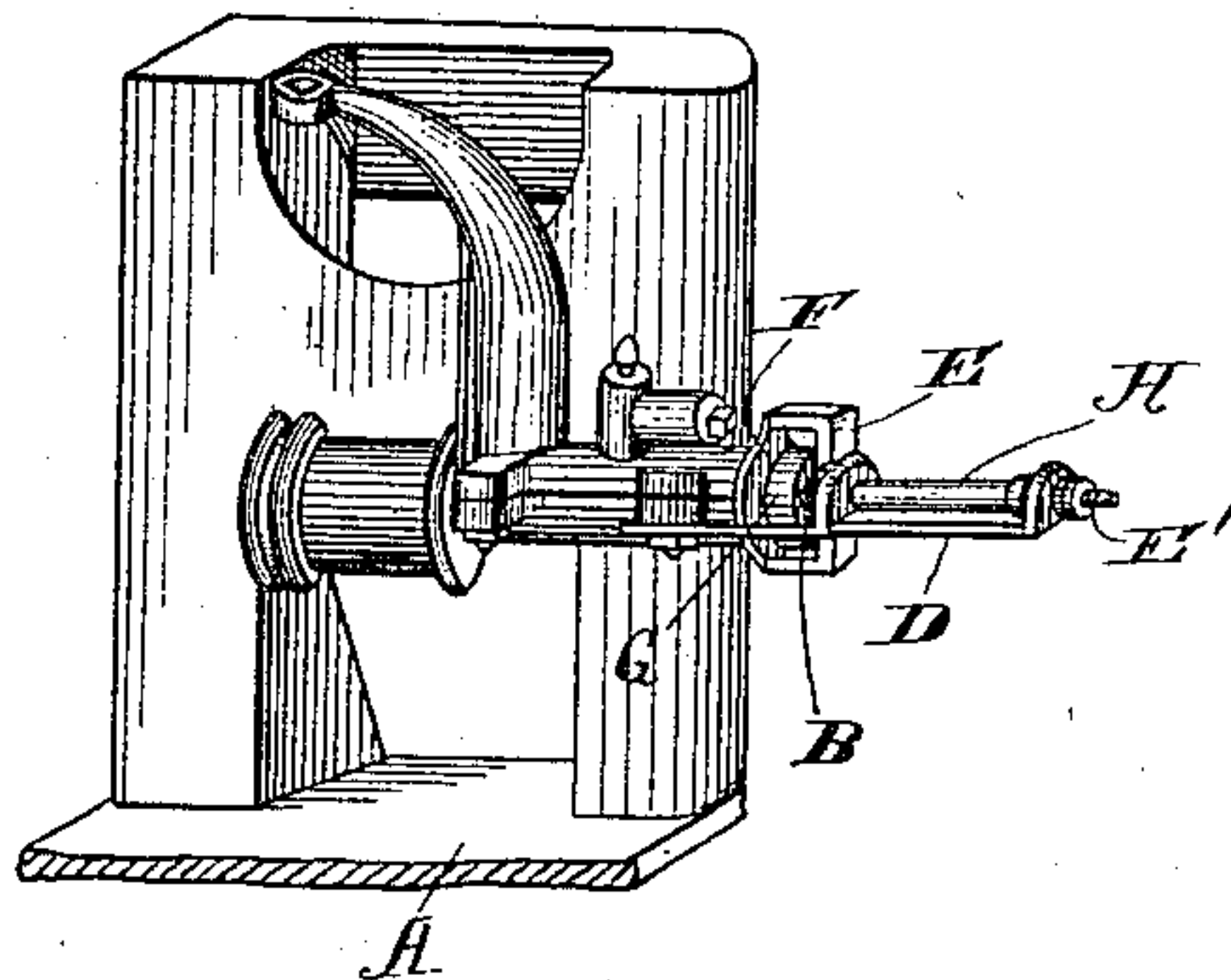


Fig. 2.

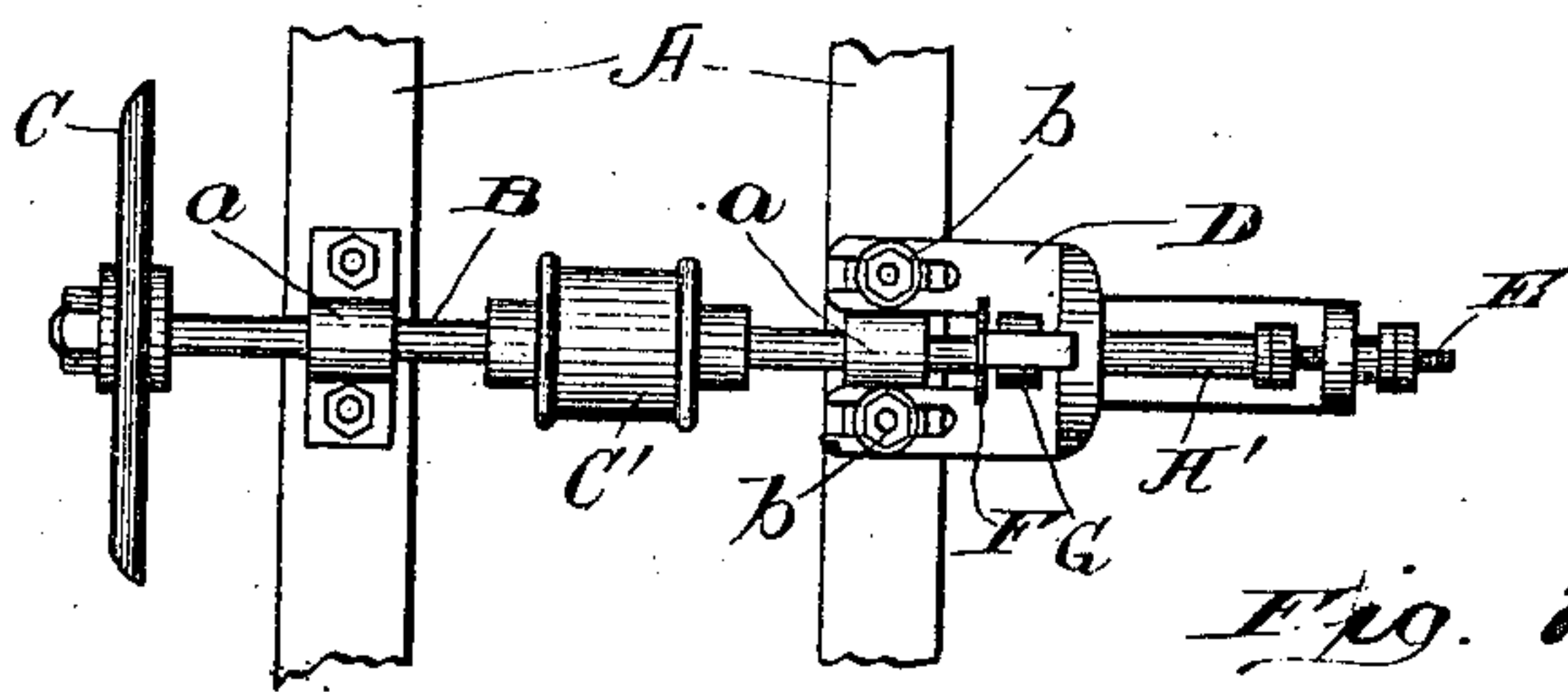


Fig. 6.

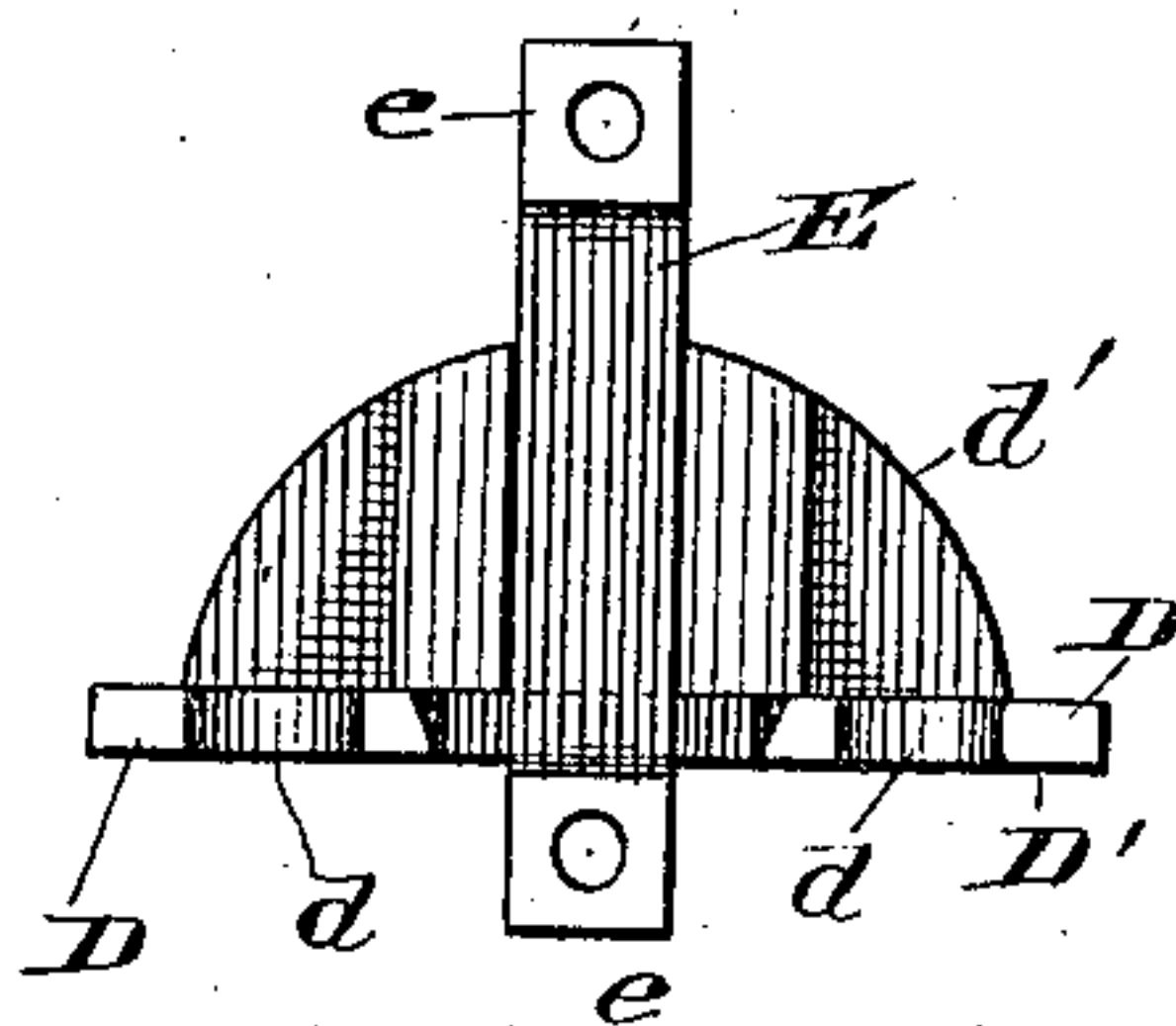


Fig. 7.

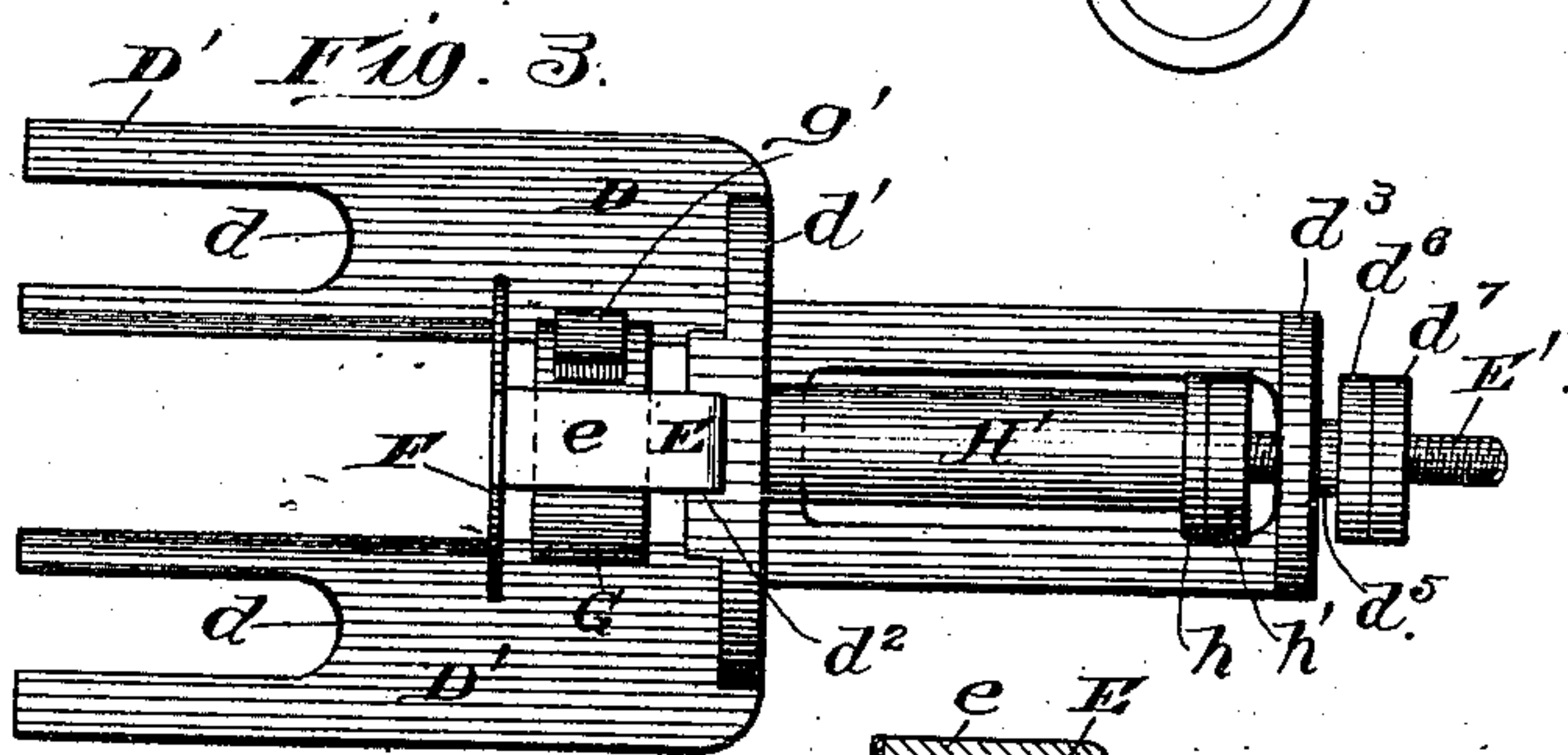
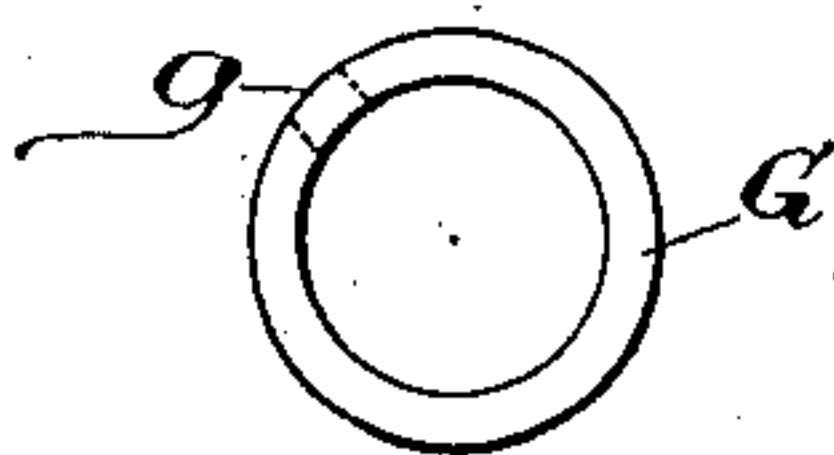
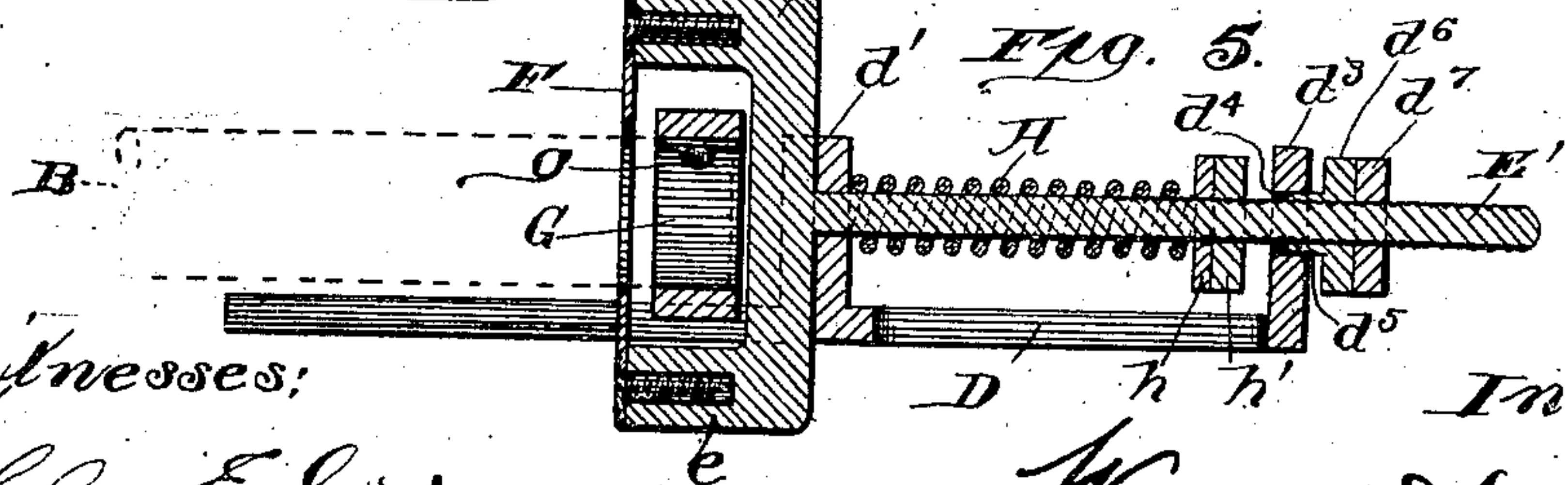
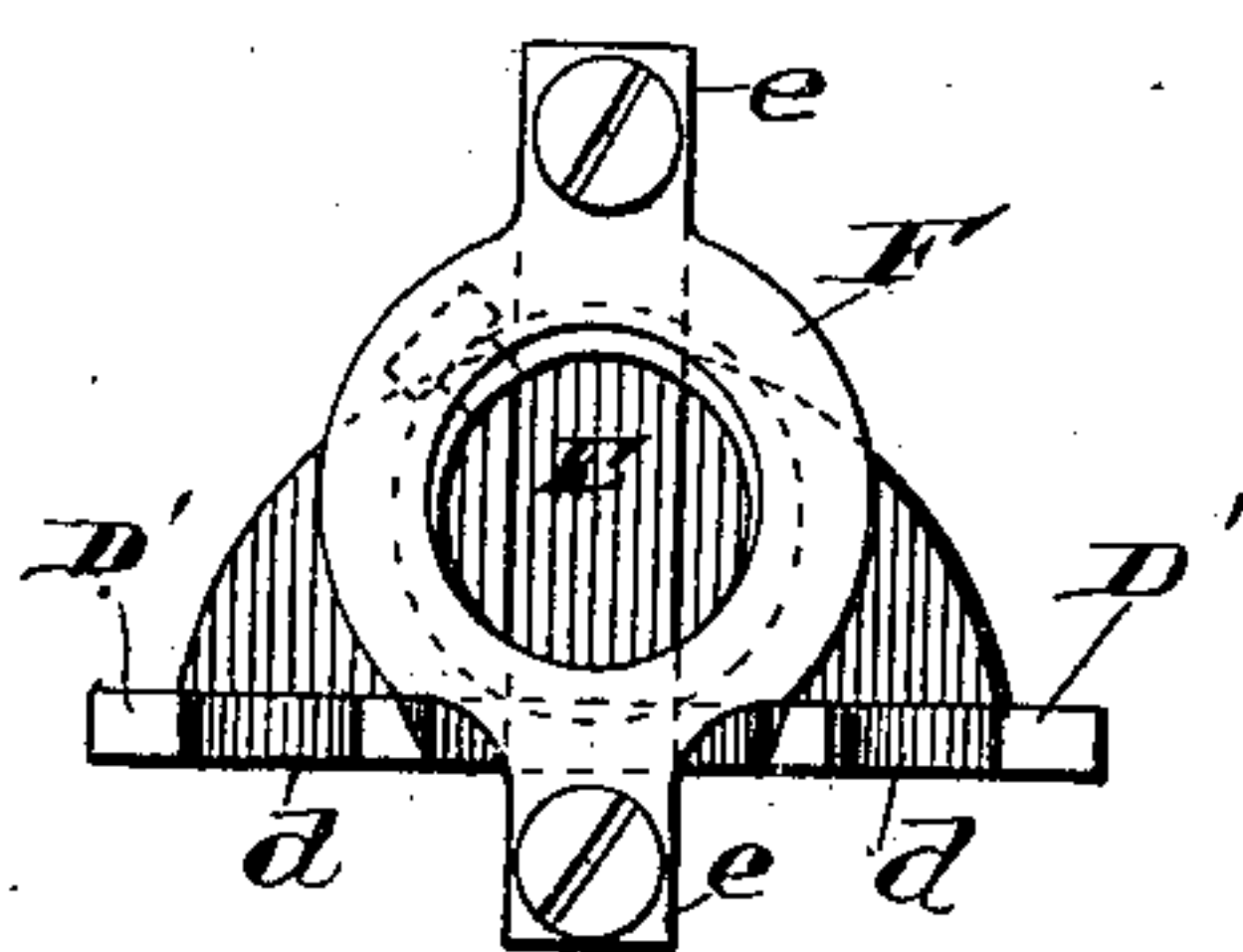


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM A. HUFF, OF CHICAGO, ILLINOIS.

ADJUSTING ATTACHMENT FOR SAW-GRINDERS.

SPECIFICATION forming part of Letters Patent No. 685,609, dated October 29, 1901.

Application filed July 15, 1901. Serial No. 68,371. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. HUFF, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Adjusting Attachments for Saw-Grinders, of which the following is a specification.

This invention relates to improvements in attachments for machines in which a rotary emery-wheel is used for sharpening tools, and while it is more especially intended for saw-grinders for either circular or gang or blade saws, yet it is applicable for use on grinders for other tools; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of the invention are to provide an attachment for automatically controlling the longitudinal movement of the mandrel or shaft of machines of the above-described character, so that the emery-wheel thereon will be adjusted with respect to the saw or tool regardless of irregularities in the face of the wheel or in the tool, to provide means for regulating the pressure of the emery-wheel against the saw or tool, and to afford such an attachment which shall be simple in construction, and easily operated and attached to the machine.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a perspective view of the upper portion of a circular-saw sharpener of the "Covel" type, showing my attachment secured thereto. Fig. 2 is a plan view of a portion of a saw-grinder with my attachment in position for operating the mandrel or shaft on which the emery-wheel is mounted. Fig. 3 is a detached plan view of the attachment. Fig. 4 is a front end view thereof. Fig. 5 is a central longitudinal sectional view of the attachment, showing the mandrel by dotted lines connected thereto. Fig. 6 is a front end view of the attachment with the face or front plate thereof removed. Fig. 7 is a de-

tail view of a collar to be secured to the mandrel or shaft.

Similar letters refer to like parts throughout the different views of the drawings.

A represents a portion of the support or main frame of a saw-grinder or other tool-sharpening machine in which a rotary emery-wheel is employed for grinding the tool. On the support or main frame A and mounted in suitable bearings is a shaft or mandrel B, which carries the emery-wheel C, and also has a pulley C' mounted thereon, to which power may be applied by means of a belt to rotate the said shaft and wheel. The shaft B is so journaled in the boxes *a* therefor as to have a longitudinal movement. Secured astride of the end of the shaft B opposite from that on which the wheel C is mounted and usually by means of the cap-screws *b* of the journal-box is the main or supporting plate D of my attachment, which plate is provided with extensions D' on its front portion, each of which extensions is formed with an open-ended slot *d* to receive the cap-screws *b* or securing-bolts therefor. As shown in Figs. 2 and 3 of the drawings, the portions D' are a slight distance apart and are united at their rear or outer portions with an upwardly-extending bracket *d'*, which has on its front or inner surface a vertical groove *d''*, in which the rear portion of the head E on the adjusting-bar E' rests. The rear end of the plate D is provided with an upwardly-extending bracket *d'''*, which is provided with an opening *d''''* for the reception of the adjusting-rod E' and sleeve *d'''''* of a nut *d''''''*, located on the screw-threaded portion of said bar and on the outside of the bracket *d'''*, through which the bar passes. The head E on the adjusting-rod E' has at its upper and lower ends forwardly-extending projections *e*, to the front ends of which is secured, by means of screws, a guide or front plate F, having a central opening for the passage of the shaft or mandrel. The lower projection *e* extends through the opening between the prongs or portions D' of the main plate D of the attachment. Located between the plate F and the rear or outer portion of the head E is a collar G, which is provided with an opening *g* for the reception of a set-screw *g'*, used to secure

said collar to the mandrel or shaft. On the adjusting-rod E' is located a spiral spring H, one end of which rests against the outer surface of the bracket d', through which the rod E' passes, and the other end against a washer h on the rod E', which is held in place against the spring by means of a nut h' on said rod in front of the bracket d', as shown in the drawings. Surrounding the spring H is a piece of rubber tubing H', which also extends from the bracket d' to the washer h and assists in actuating the adjusting-rod and also in protecting the spring. It is apparent that I may use the spring H without the tubing H' or may use the tubing without the spring.

From the foregoing and by reference to the drawings it will be readily understood and clearly seen that the slots d in the front portion of the main plate D of the attachment will permit it to be adjustably secured with respect to the shaft or mandrel B and that the end of the mandrel will pass through the opening in the guide-plate F, when the collar G may be fixed thereon by means of the set-screw g', used for said purpose. The adjusting-rod may be adjusted and held against further forward movement by means of the nut d⁶ and jam-nut d⁷ and the tension of said rod regulated by means of the washer h and nut h', so that the desired pressure of the emery-wheel C against the saw or tool may be attained and in such a manner that the said wheel will yield from the saw or tool when irregularities thereon appear.

To cause the attachment to automatically actuate the mandrel or shaft, the nuts d⁶ and

d⁷ should be loosened sufficiently to allow of the longitudinal movement of the adjusting-rod E', which is actuated by the spring thereon.

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

1. In an adjusting attachment for saw-grinders and like machines, the combination with the main plate of the attachment having two forwardly-extending and slotted portions and upwardly-extending brackets, of a spring-actuated adjusting-rod located in openings in said brackets and carrying at its front end a head provided with forward extensions, an apertured front or guide plate secured to said extensions, a collar located between said plate and the head and having a set-screw to fix it to the mandrel, and means on the adjusting-rod to adjust it and to regulate the tension of the spring thereon, substantially as described.
2. An attachment for saw-grinders and like machines comprising a main plate having means to adjustably secure it on the machine, an adjusting-rod movably mounted in the upper surface of the said plate, a head on the front end of said rod, a guide-plate secured to said head, a collar located between the guide-plate and head, a spring encircling a portion of the rod, and means to adjust the rod and to regulate the tension of the spring, substantially as described.

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