

No. 813,167.

PATENTED FEB. 20, 1906.

L. H. OLMSTED.  
GRINDING APPARATUS.  
APPLICATION FILED JULY 28, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

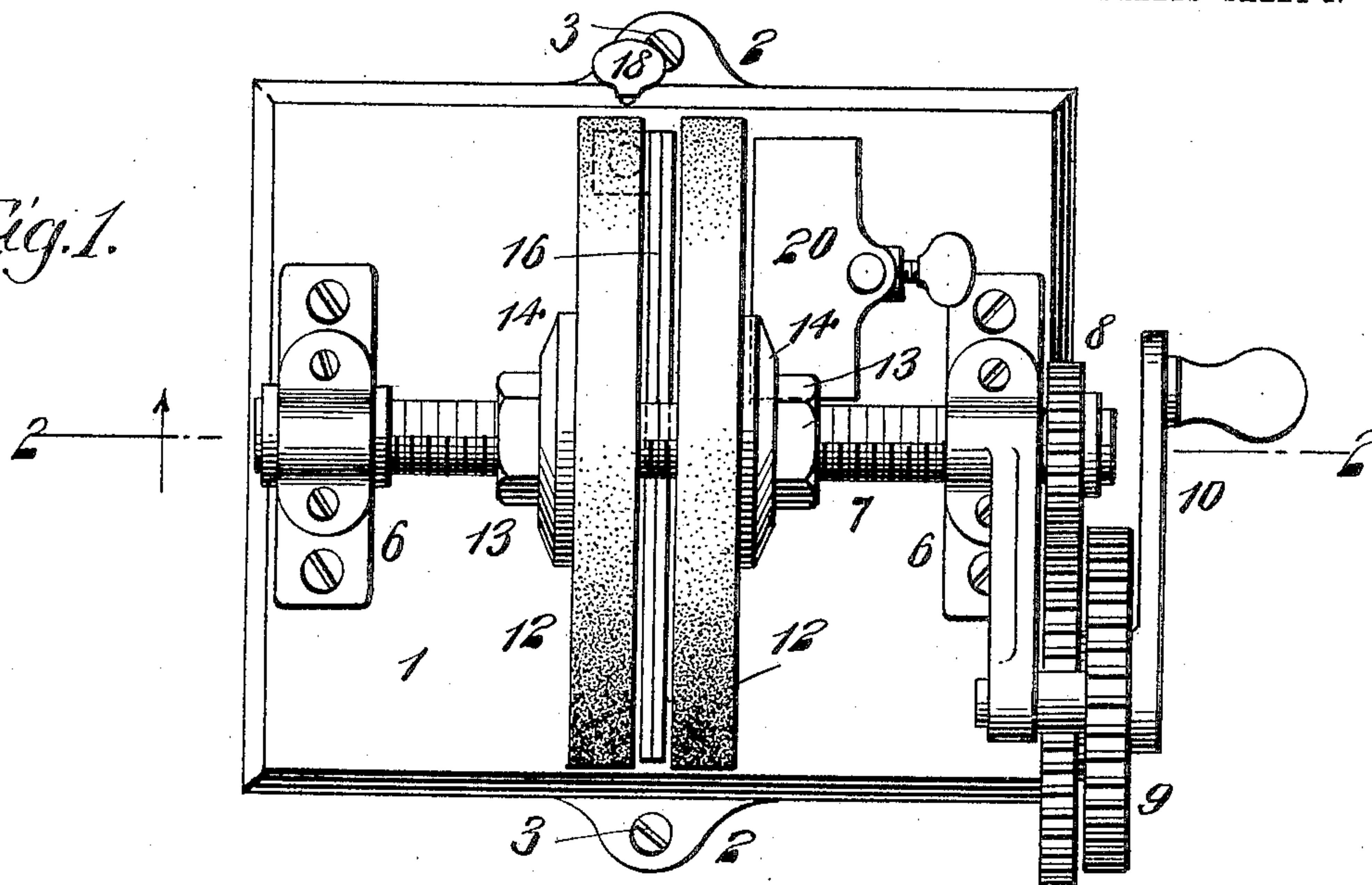
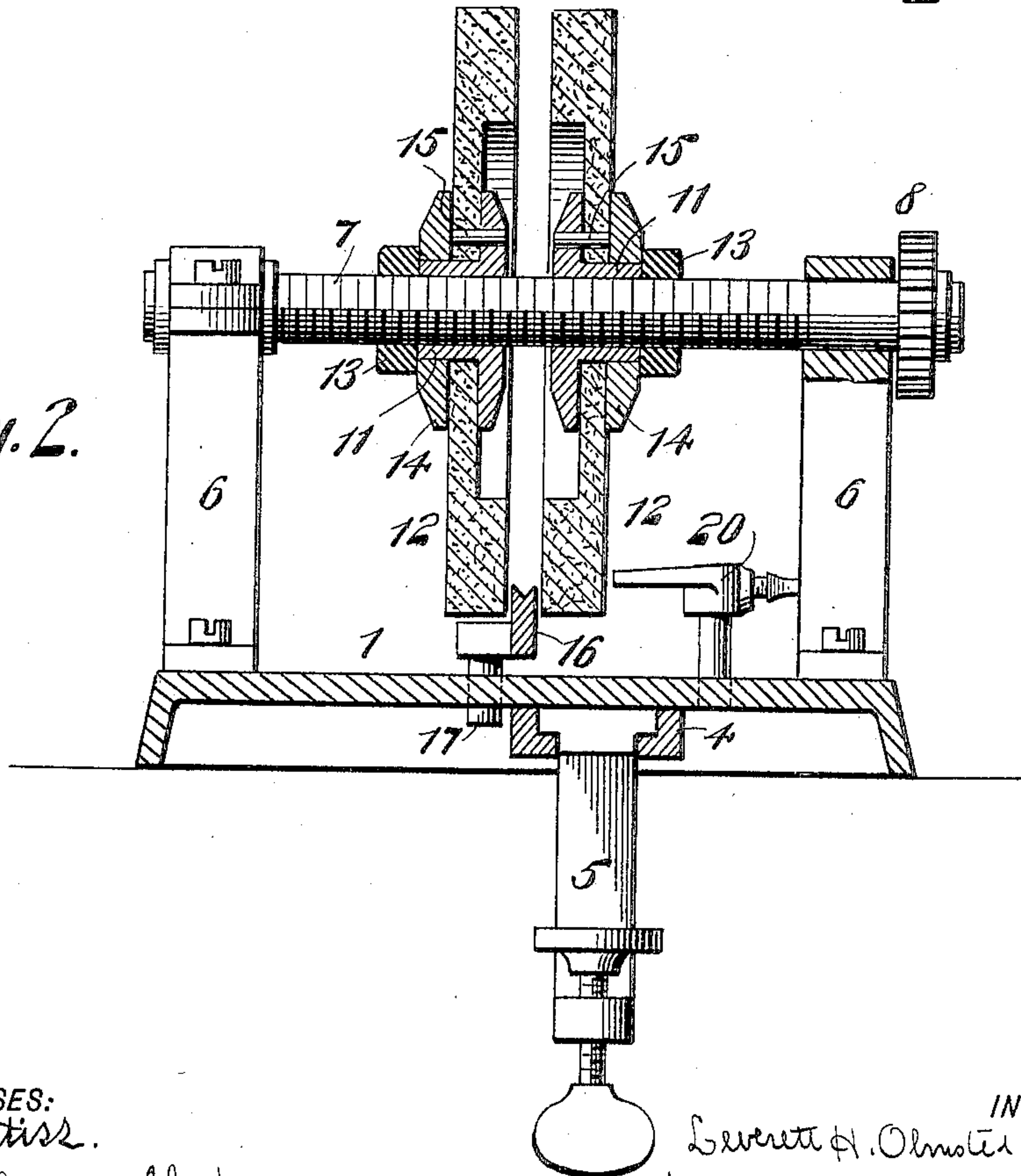


Fig. 2.



WITNESSES:  
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2 SHEETS—SHEET 2.

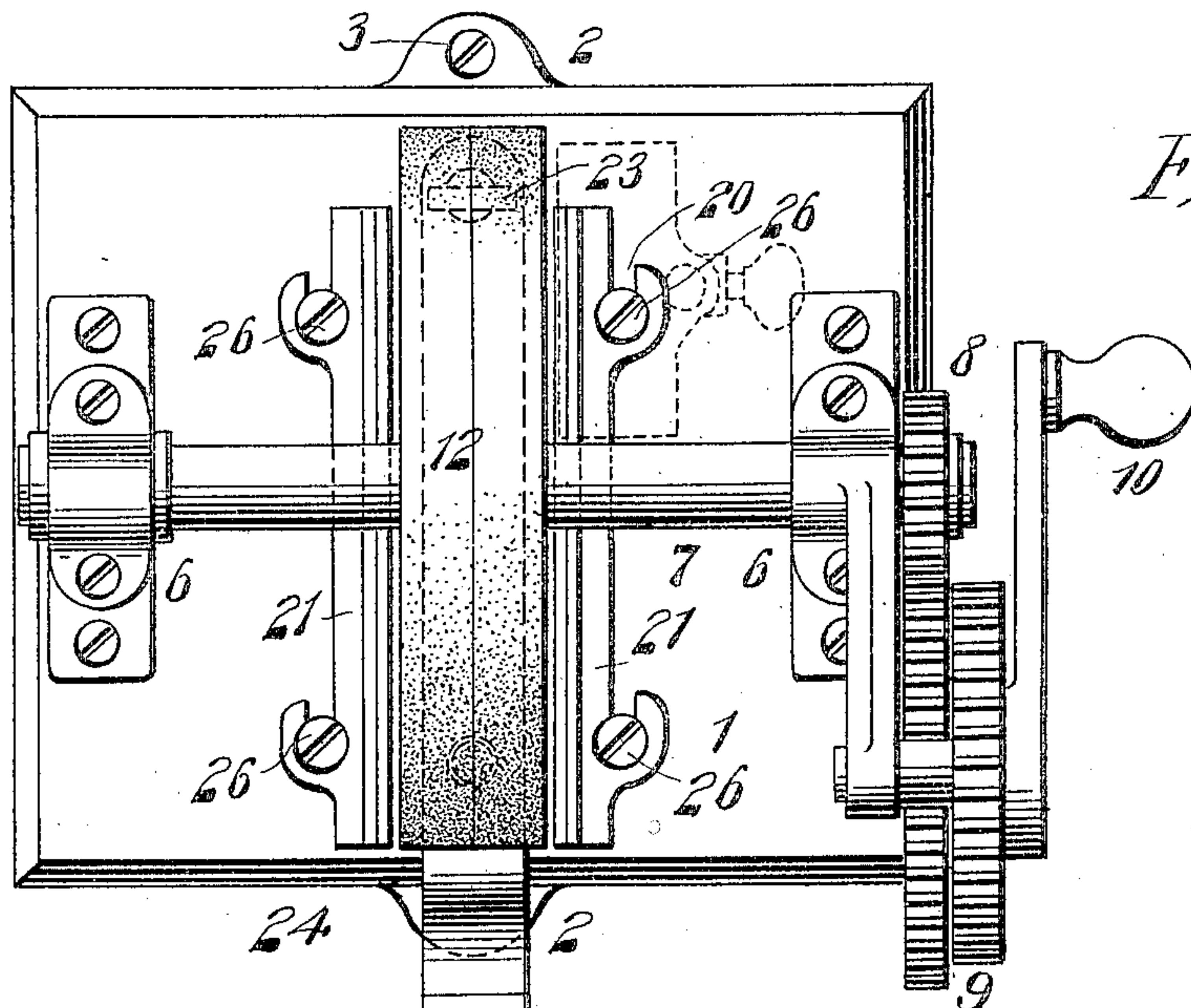


Fig. 3.

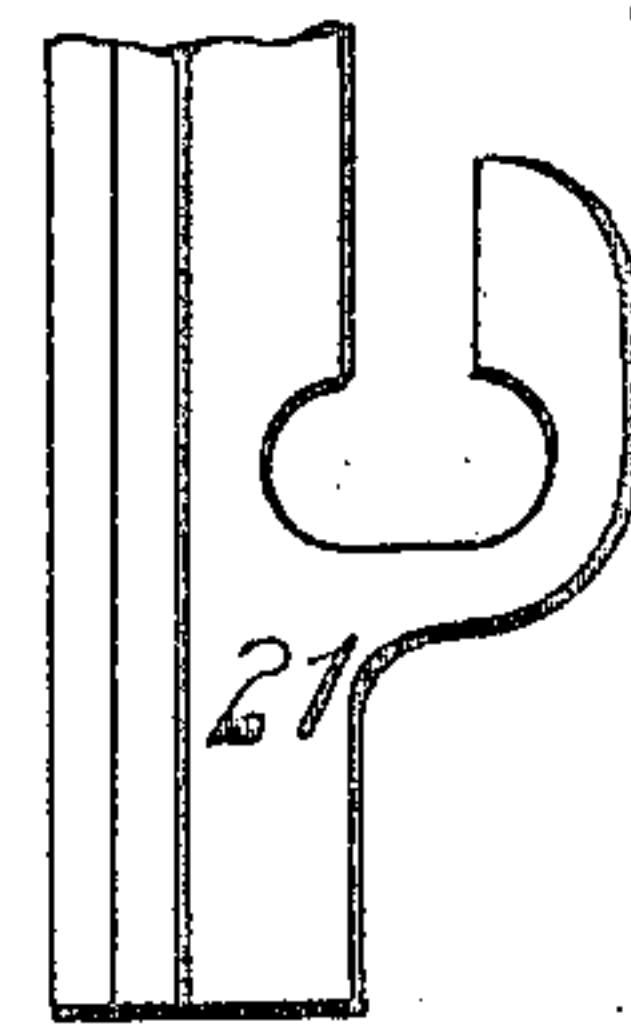


Fig. 5.

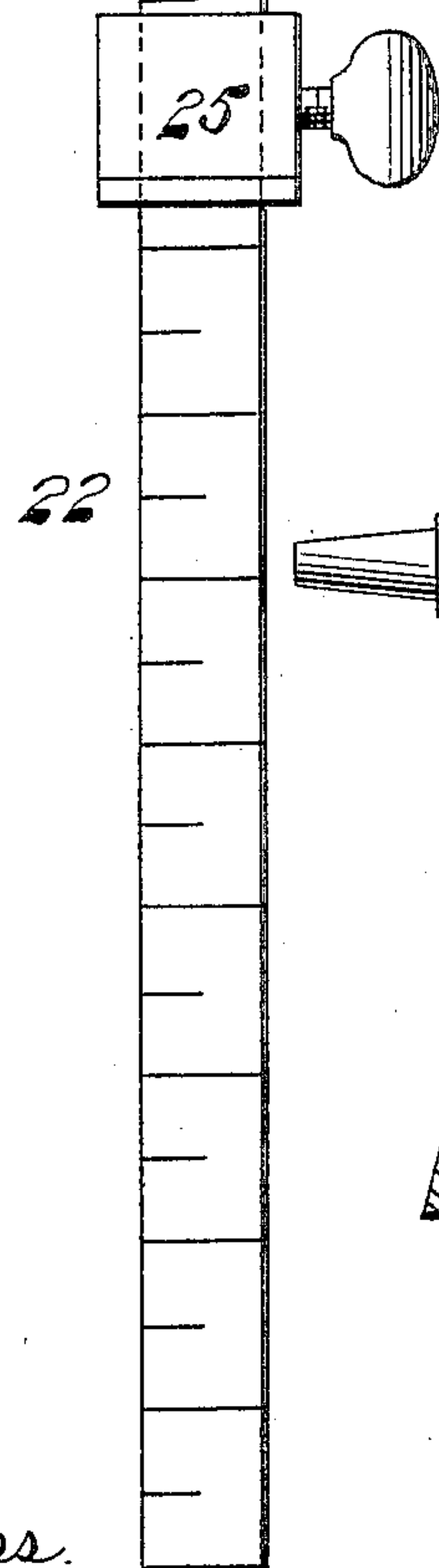
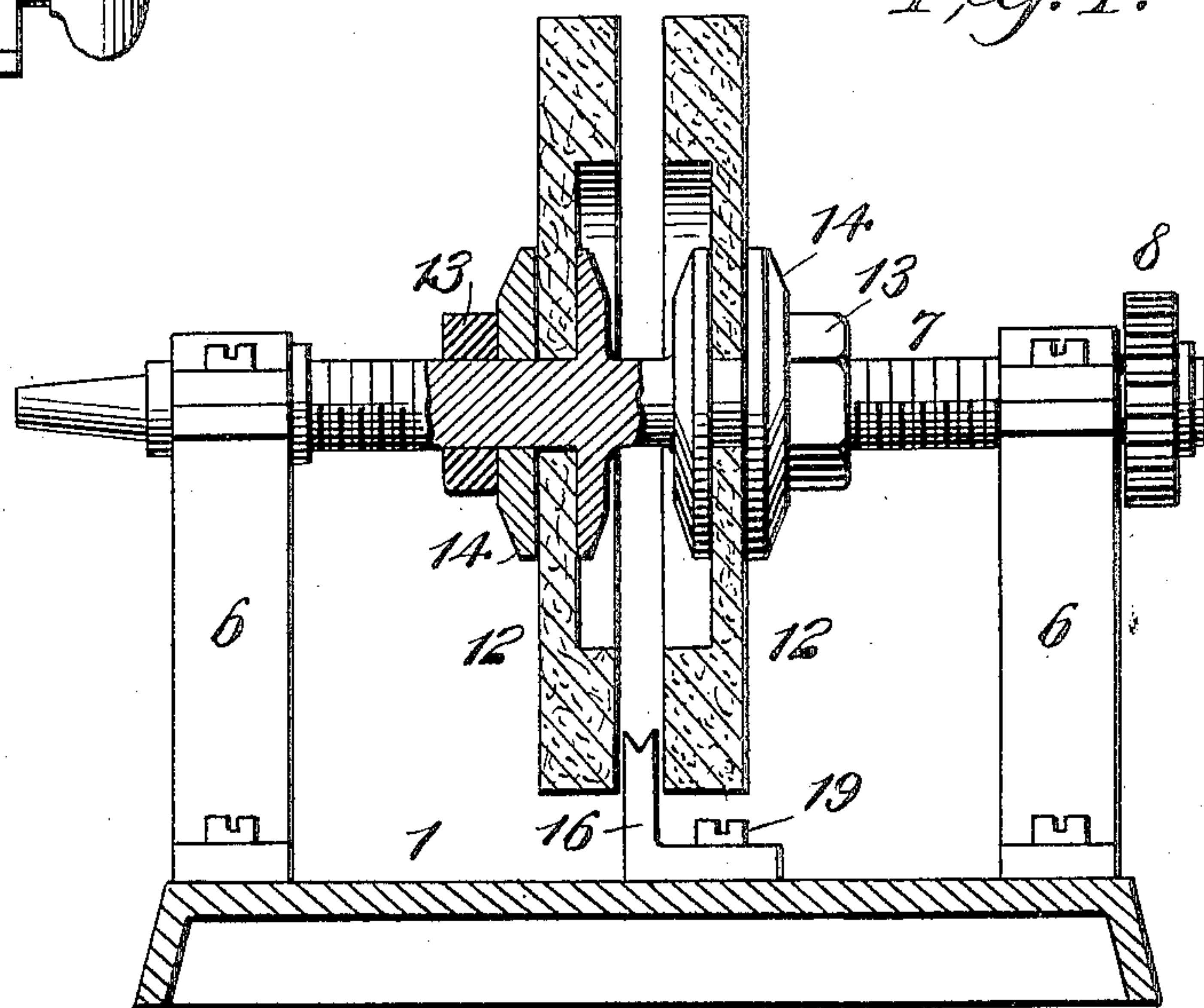


Fig. 4.



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L. H. Olmsted, INVENTOR  
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# UNITED STATES PATENT OFFICE.

LEVERETT H. OLMSTED, OF HACKENSACK, NEW JERSEY.

## GRINDING APPARATUS.

No. 813,167.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed July 28, 1905. Serial No. 271,621.

*To all whom it may concern:*

Be it known that I, LEVERETT H. OLMSTED, a citizen of the United States, residing at Hackensack, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Grinding Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates especially to machines and mechanisms employed for grinding knives, implements, and tools of various kinds, and has for its object the provision of a simple and effective grinding apparatus.

To attain the desired end, my invention consists in certain novel and useful combinations or arrangements of parts and peculiarities of construction and operation, all of which will be hereinafter first fully described and then pointed out in the claims.

In the drawings, Figure 1 is a plan view of a grinding apparatus embodying my invention. Fig. 2 is a cross-sectional view at line 2 2 of Fig. 1. Fig. 3 is a plan view of a grinder, showing the two grinding-wheels or stones placed in contact with each other, rests each side, and a rest with an adjustable gage thereon. Fig. 4 is a cross-sectional view of a modified method of holding the grinding-wheels on the shaft and a different form of knife-rest. Fig. 5 is an enlargement of a portion of one of the side rests shown in Fig. 3.

Similar numerals of reference wherever they occur indicate corresponding parts in all the figures.

1 is a base-piece provided with ears 2 for the reception of screws 3 when the grinder is to be secured to a wall, post, or similar support or to a bench and with a slideway 4 beneath the bed 1 for the reception of a removable clamp 5 when it is desired to removably secure the grinder to a table or the like.

6 represents standards wherein is journaled a shaft 7, provided with a gear 8, arranged to mesh with a train 9 for imparting rotary motion by means of a crank 10, as particularly illustrated in Figs. 1, 2, and 3 of the drawings. As shown in Figs. 1 and 2, the shafts 7 are screw-threaded for the reception of adjustable sleeves 11, carrying the grinding-wheels 12 and check-nuts 13.

14 represents washers, and 15 represents pins, which may be used to hold the flanges

of the sleeves 11 and the wheels 12 against displacement, as in Fig. 2 of the drawings.

16 is a grinding-rest arranged to project from the base 1 between the stones 2. This rest may be made adjustable and carried by a foot 17, extending into the perforation in the base, where it is held by a thumb-screw 18, as in Fig. 1, or it may be fixed as in Fig. 4 and removably held to the screw 19. This grinding-rest is made long and straight to constitute a positive guide for the back of the blade of a knife being ground, thus effectually preventing any rocking of the blade upon the rest either longitudinally or laterally, insuring the obtaining of a uniform even edge. I have shown a V-shaped groove in the longitudinal rest. (Illustrated in the drawings.)

20 is an adjustable side rest for grinding shears and the like.

21 represents adjustable grooved rests, which may be located in proximity to the outer faces of the wheels, as in Fig. 3.

22 is a graduated arm curved near its inner end and arranged to pass beneath the stones, (the rest 16 being first removed.) This arm 22 is held in place on the base by a thumb-screw 23 and a pin 24. (Illustrated in dotted lines in Fig. 3.)

25 is a movable gage upon the arm 22.

The operation of my grinder is as follows: The parts being arranged as in Figs. 1, 2, and 3, the knife to be ground is placed between the wheels 12, its back within the groove of the rest 16. The wheels are rotated and the edge of the knife-blade pressed against the wheel at one side and drawn backward and forward along the rest until the proper grinding has been accomplished. Then it is pressed against the opposite wheel. The rest may be adjusted vertically to suit the width of the blade being ground, so as to give the proper bevel, and the grinder is so accurate in its operation that little skill is required to obtain the true cutting edge. When required, either on account of the width of the blade to be ground or because of the wearing of the wheels, they may be adjusted toward or from each other upon the screw-threaded shaft by simply loosening the check-nuts and again tightening the same in the adjusted position of the wheels.

In Fig. 3 I have shown the two wheels as held together; but it is obvious that a single grinding-wheel might be substituted there-



for, and in Fig. 4 I have shown said wheels as non-adjustable. In Fig. 3 the grooved rests at the sides of the wheels may be adjusted to or from the same by means of the screws 26, 5 which hold them to the base 1.

In grinding chisels, plane-bits, or the like the gage 25 is so set as to form a guide for the end of the handle or the top of the bit, the edge to be ground resting at the proper angle, 10 and when once given the proper position the place on the arm 22 may be marked on the tool, and when it again requires grinding the edge can be instantly set in conformity with the first grinding.

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

1. In a grinding apparatus, the combination with a grinding-wheel and means for ro-

tating the same, of an elongated rest the top 20 whereof is arranged to engage the back of a knife-blade, preventing longitudinal rocking of the same while permitting the blade to be moved longitudinally upon the rest, substantially as shown and described.

2. In a grinding apparatus, the combination with a pair of grinding-wheels and means for rotating the same, of an elongated rest located between the opposite vertical faces of the wheels, the seat of such rest being angular. 25 30

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

LEVERETT H. OLMSTED.

Witnesses:

LOUIS F. BRAUN,  
NETTIE DREIMULLER.