

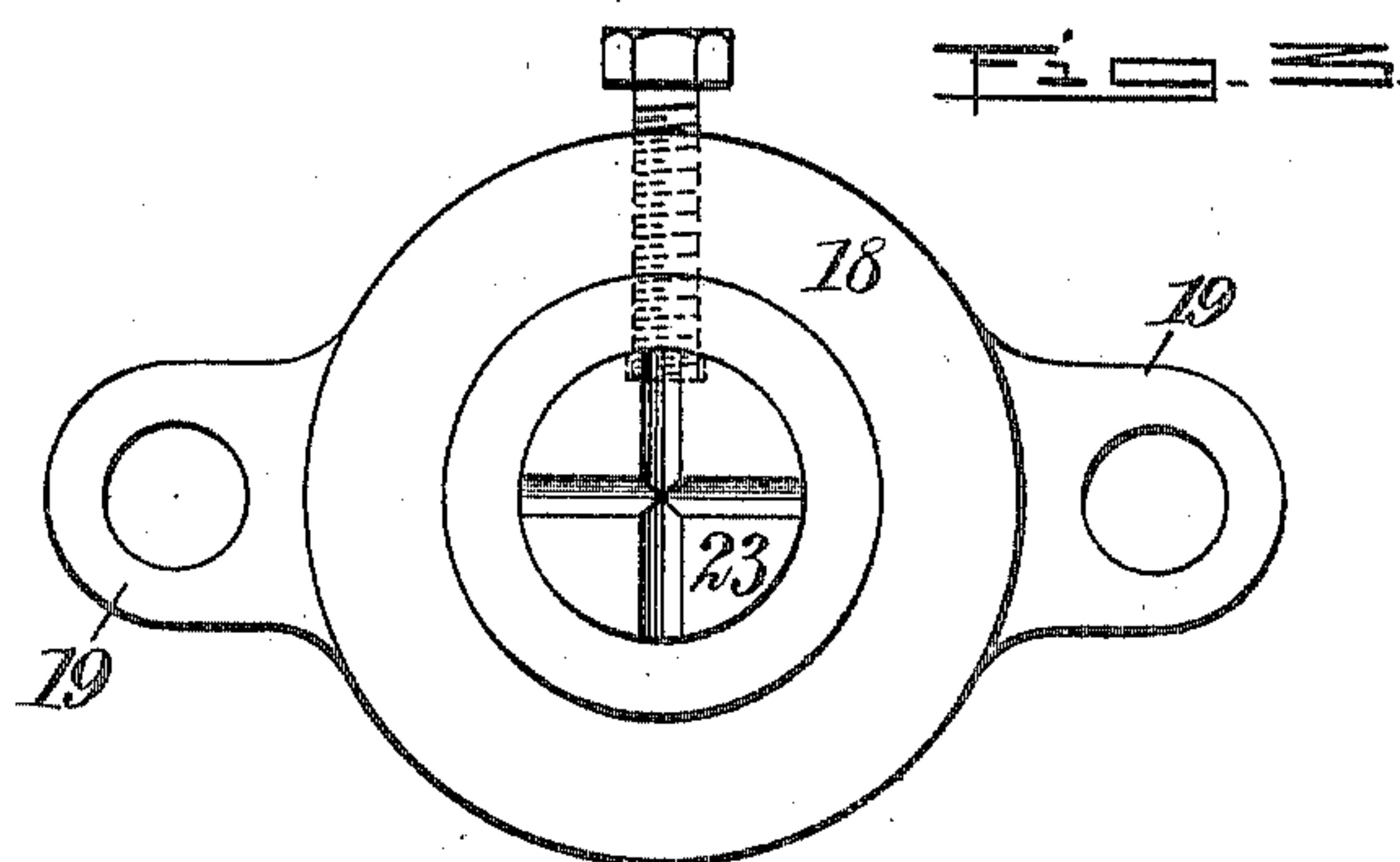
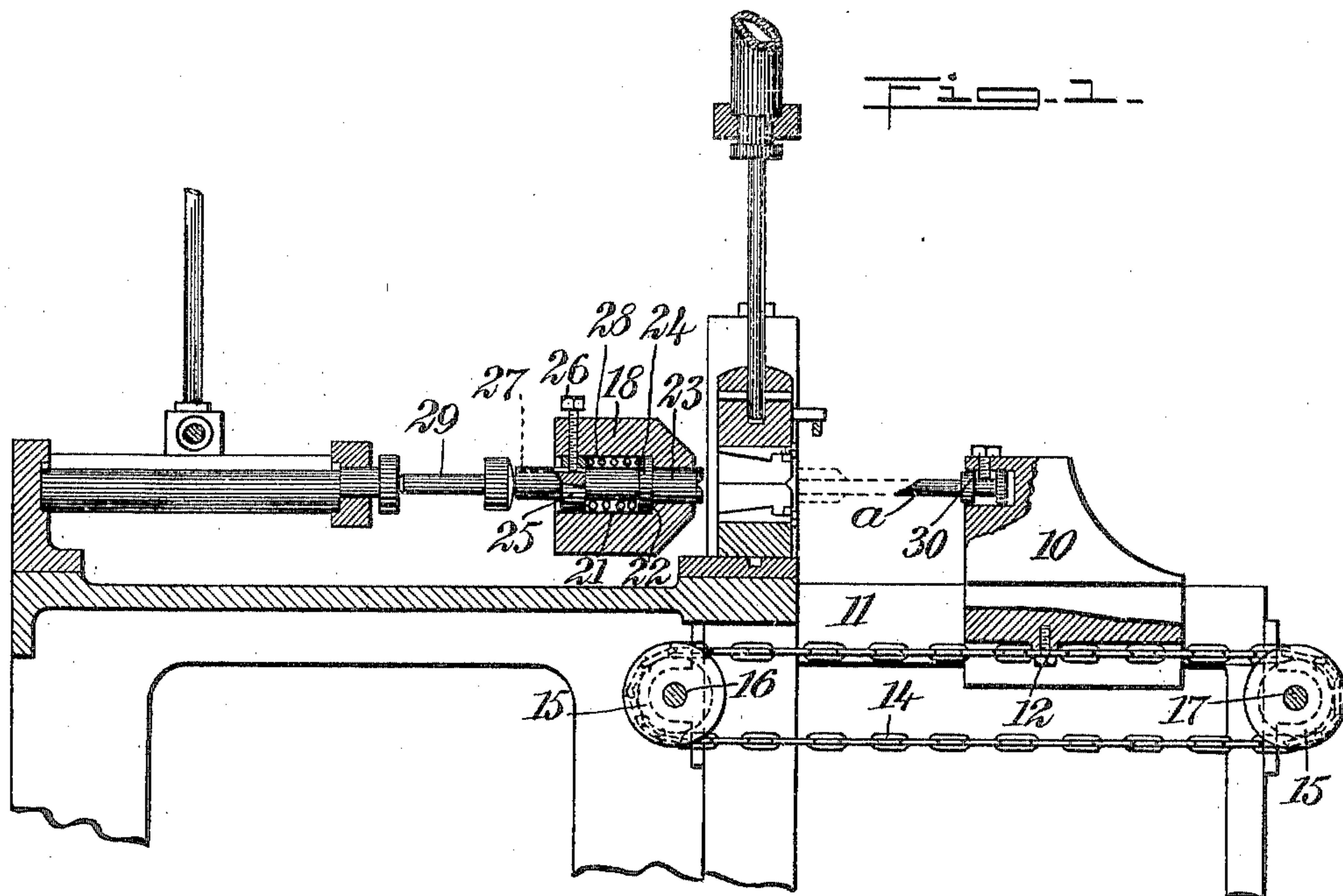
No. 816,961.

PATENTED APR. 3, 1906.

J. J. BROSSOIT.
DRILL SHARPENING MACHINE.

APPLICATION FILED DEC. 20, 1904.

2 SHEETS—SHEET 1.



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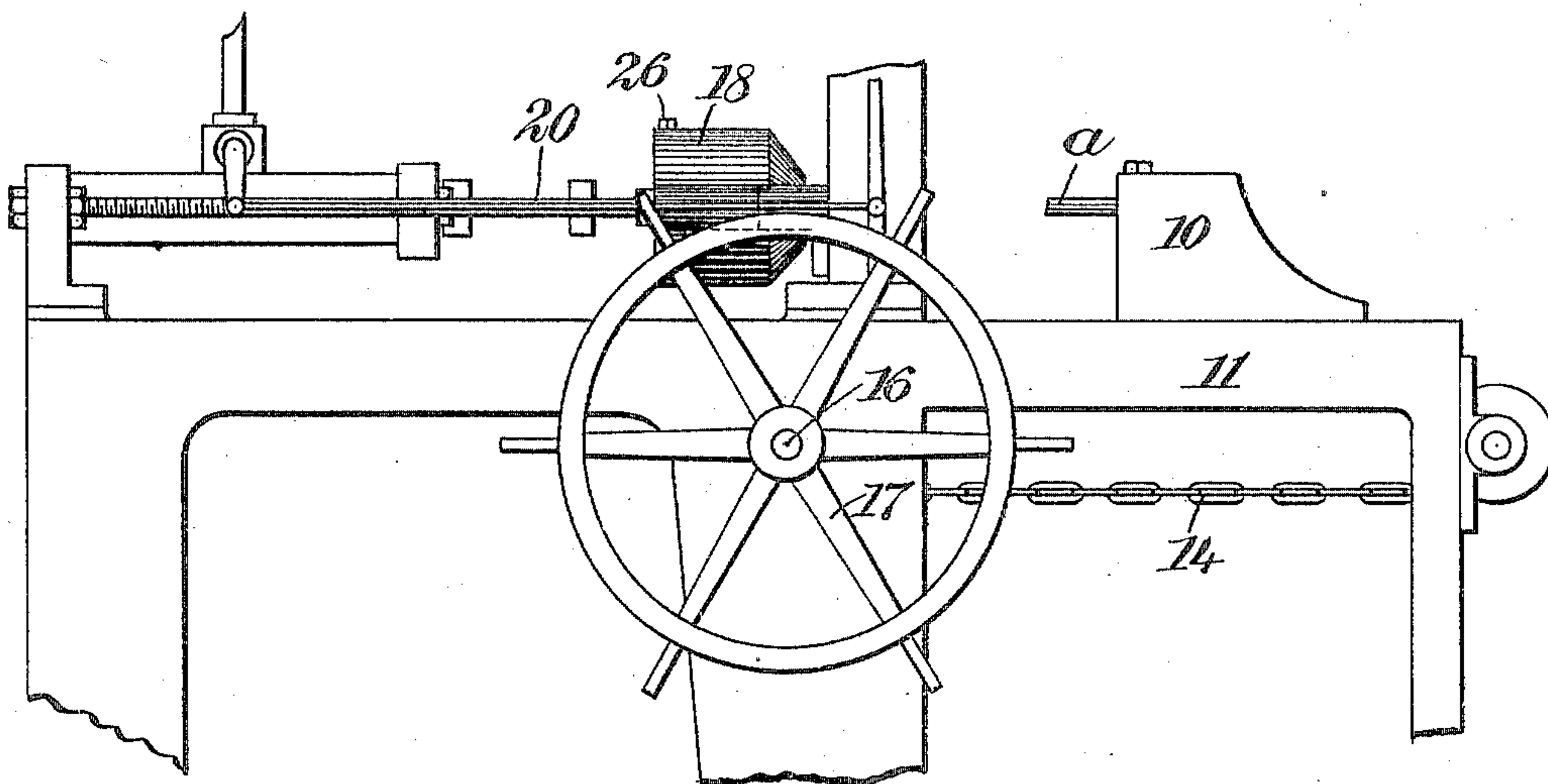
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2 SHEETS—SHEET 2.

Fig. 2.



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JAMES J. BROSSOIT, OF GRAND RAPIDS, WISCONSIN.

DRILL-SHARPENING MACHINE.

No. 816,961.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed December 20, 1904. Serial No. 237,599.

To all whom it may concern:

Be it known that I, JAMES J. BROSSOIT, a citizen of the United States, and a resident of Grand Rapids, in the county of Wood and State of Wisconsin, have invented a new and Improved Drill-Sharpener Machine, of which the following is a full, clear, and exact description.

The invention relates to a machine for repairing drills—such, for example, as those disclosed in my prior patents, No. 625,140, filed May 16, 1899, and No. 755,351, filed March 22, 1904.

The present invention relates to an improved means for moving the carriage which holds the drill and also to an improvement in the dies which are employed for striking the V-point on the drill during the process of sharpening the same.

Reference is to be had to the accompanying drawings, forming a part of this specification and illustrating as an example the preferred embodiment of my invention, in which drawings like characters of reference indicate like parts in the several views, and in which—

Figure 1 is a longitudinal sectional view showing parts of the machine, but particularly illustrating the novel means for moving the carriage and the die for striking up the point of the drill. Fig. 2 is a side elevation showing the same parts and also illustrating the hand-wheel for operating the carriage. Fig. 3 is an enlarged front view of the die and housing therefor.

10 indicates the carriage, which supports the drill, (indicated at *a* in Figs. 1 and 2.) This carriage is arranged to slide on the frame 11. Attached to the under side of the carriage by means of a bolt 12 or the like is an endless chain 14, which runs around drums or sprockets 15, mounted on shafts 16 and 17, respectively, at the ends of the movement of the carriage. The shaft 16 is extended to one side of the frame and, as shown in Fig. 2, carries a hand-wheel 17, by means of which the drum may be operated and the chain given a backward and forward movement, bringing with it the carriage. By these means the carriage may be operated, these devices taking the place of the rack and pinion disclosed in my prior patent.

18 indicates the housing for the die. This is provided, as shown best in Fig. 3, with ears 19, which are attached to tie-rods 20, supporting the housing in position. (See Fig. 2.) The housing 18 is provided with a cavity 21,

extending through it, this cavity having a shoulder 22, as shown in Fig. 1. In the cavity is arranged a die 23, which has its face grooved, as shown in Fig. 3, the grooved face corresponding to the cross-sectional form of the drill and serving to strike up the edge of the drill, as will be understood from the prior art. Said die 23 has a collar 24, arranged to engage the shoulder 22, and secured in the rear end of the cavity 21 is a collar 25, held by a screw 26, which projects through the collar into a groove 27 in the die. Between the collars 24 and 25 a spring 28 operates, this spring 28 tending to push the die to the position shown in Fig. 1.

29 indicates the hammer for driving the die 22.

In the operation of the parts the handle of the drill *a* is engaged in a chuck 30 on the carriage 10, and the hand-wheel 17 is operated to advance the carriage until the point of the drill is engaged with the die 23, pushing the die backward from the position shown in the drawings and bringing the shoulder 24 out of contact with the shoulder 22. The hammer 29 should then be operated to impart to the die a forward impulse, the die then acting on the drill to sharpen and true the edges thereof. During this operation the die slides through the collar 25, and the pin or screw 26 prevents the die from turning, so as to avoid disturbing the proper relation between the die and drill.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the terms of my claims.

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

1. In a machine for sharpening drills, the combination of a housing having a passage therethrough and a shoulder in the passage, a die arranged to move in the passage and having a shoulder coacting with the shoulder thereof, a collar secured in the housing, through which collar the die moves, a spring bearing between the shoulder on the die and said collar, and means for operating the die.

2. A machine for sharpening drills comprising a housing having an opening therein, a die movable in the opening, a collar located in the opening, through which collar the die passes, a spring bearing between the collar

and die, and a pin engaged in the housing and projected through the collar, and engaged in a longitudinal groove in the die, for the purpose specified.

- 5 3. A machine for sharpening drills comprising a housing having an opening therein, and an interior shoulder, a die movable in the opening and having a shoulder coacting with the shoulder of the housing, a collar lo-
10 cated in the housing and through which collar the die is movable, a spring acting be-

tween the collar and the shoulder on the die, a pin passed through the housing and through the collar and entered into a longitudinal groove in the die, for the purpose specified. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES J. BROSSOIT.

Witnesses:

W. J. CONWAY,
KATIE KAMMERER.