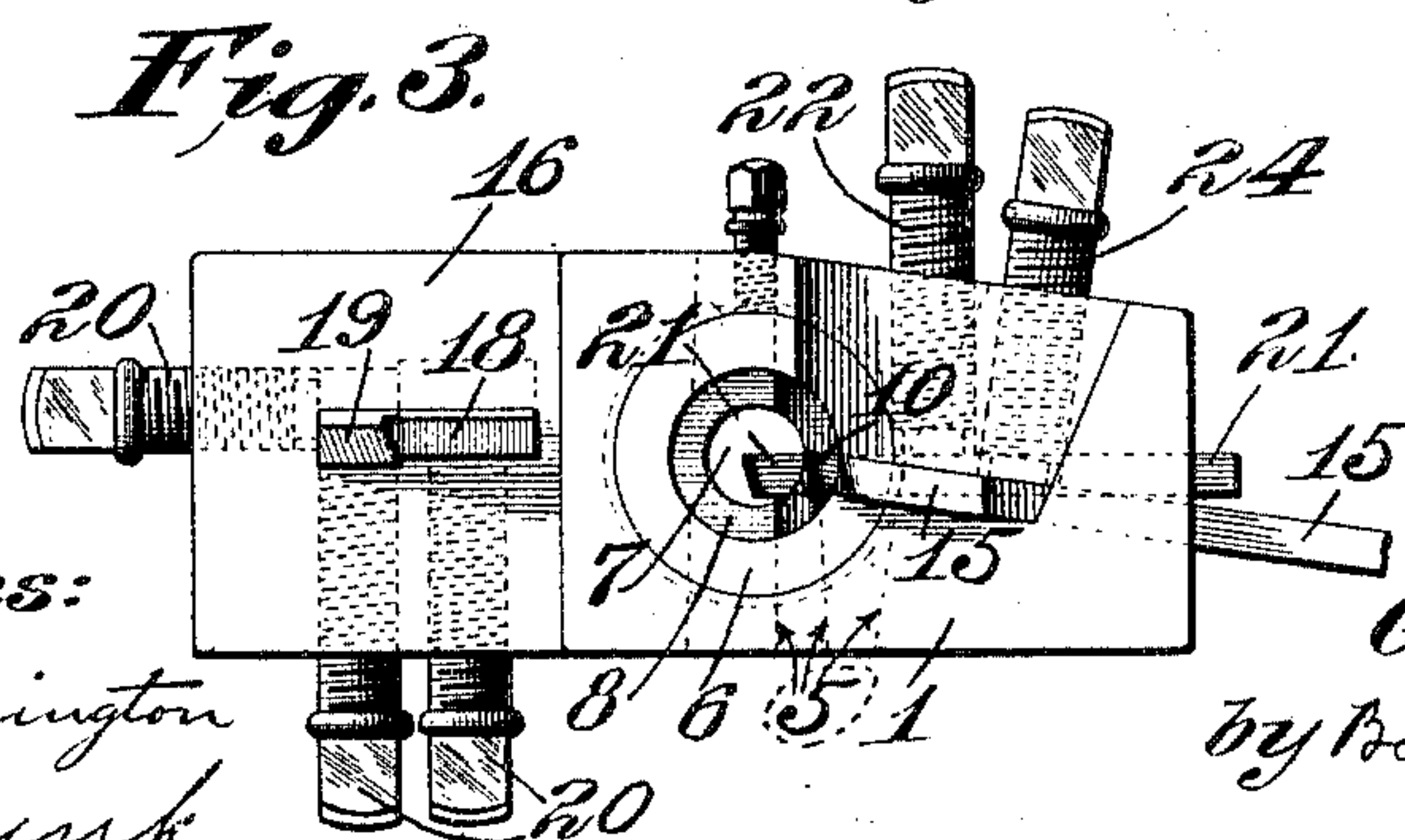
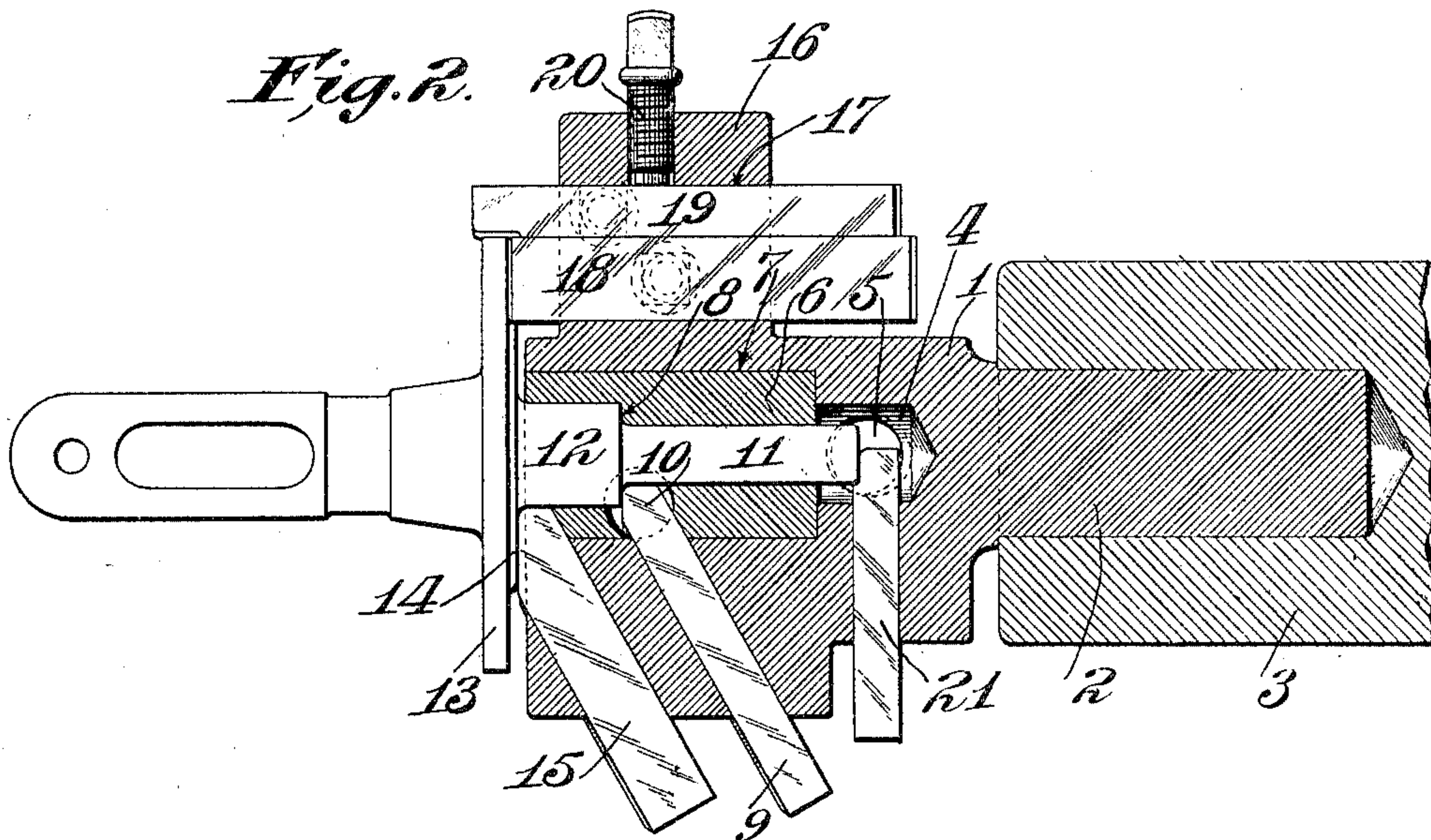
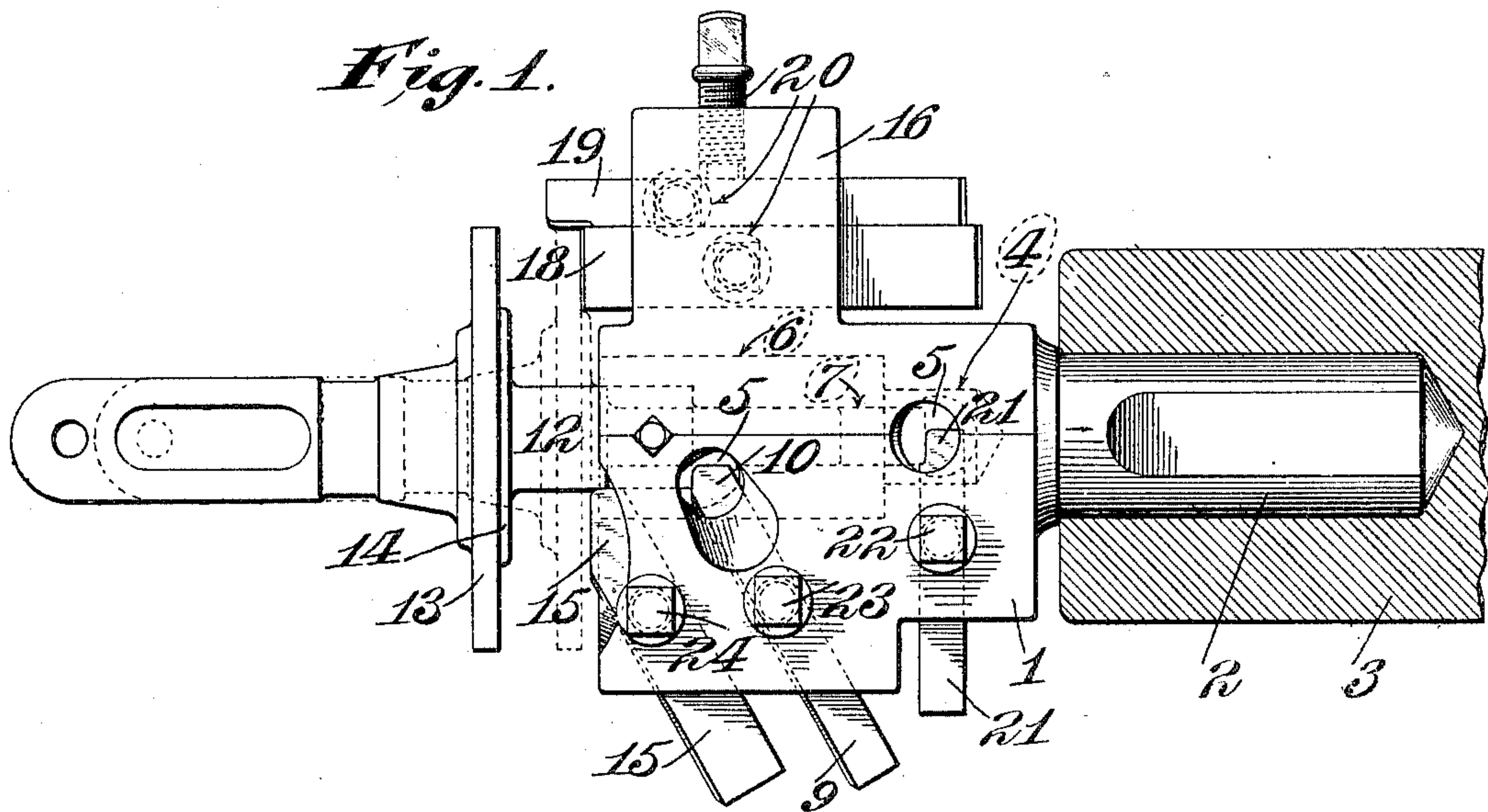


No. 811,027.

PATENTED JAN. 30, 1906.

G. D. BARLOW.
TURNING TOOL.

APPLICATION FILED JUNE 5, 1905.



Witnesses:

G. A. Pennington
O. J. Frank

Inventor:
Geo. D. Barlow,
by Bakewell Cornwall
Attys.

UNITED STATES PATENT OFFICE.

GEORGE D. BARLOW, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE
AMERICAN BRAKE COMPANY, OF ST. LOUIS, MISSOURI, A COR-
PORATION OF MISSOURI.

TURNING-TOOL.

No. 811,027.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed June 5, 1905. Serial No. 263,853.

To all whom it may concern:

Be it known that I, GEORGE D. BARLOW, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Turning-Tools, of which the following is a full, clear, and exact description, 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, forming part of this specification, in which—

Figure 1 is a side elevational view of a rotary cutter-head constructed in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view through the same, and Fig. 3 is an end view of the rotary cutter.

This invention relates to rotary cutter-heads; and one of the objects thereof is to provide means for dressing work which has been previously roughly formed, and to do this in an expeditious and efficient manner requires the utilization of several cutters, all of which may operate upon the work, some of them having initial contact with the work, and finally all of them simultaneously operating thereon.

It is the purpose of my invention to so arrange the several cutters that each will do its work at the proper time, and so that the rough casting will be properly dressed for the specific purpose to which it is to be applied.

Other objects and advantages as well as the novel details of construction of my invention will be more specifically referred to hereinafter, it being understood that minor changes in the form, proportion, and details of construction may be resorted to without departing from the spirit of my invention or sacrificing any of the advantages thereof.

The application of the device is illustrated in Figs. 1 and 2, the work in this particular instance being illustrated as a piston of an air-brake system. The cutter-head 1 is provided with a shank 2, which is adapted to be received by a rotating part 3 of the machine for driving said head. The head 1 is provided with a central longitudinal bore 4. Counterbores 5 intersect the bore 4 and are provided for the purpose of permitting the escape of the chips removed from the work. Within the bore 4 is a block or bushing 6, having a central bore 7 alining with the bore 4. The bushing 6 is formed with an enlarged

portion providing a shoulder 8, opposite which is an inclined cutter 9, which passes through an opening in the head 1 and is provided with an L-shaped end 10, having a vertical cutting edge and a horizontal cutting edge, the angle of the end being slightly rounded to form a fillet in the spindle of the work. The spindle is provided with a relatively constricted portion 11 and a relatively large portion 12. The larger portion 12 is provided with a circumferential flange 13 at the base thereof, which base is cast with an embossment or offset 14, the face of which is dressed by the L-shaped edge of the cutter 15, one portion of which is flush with the wall of the enlarged bore of the bushing 6, while the other cutting portion projects slightly beyond the end wall of the head. A slotted block 16 is formed as part of the head 1 and might properly be termed a "projection." The projection 16 is provided with an elongated slot 17, having parallel cutters 18 and 19. The cutter 18 is for dressing the face of the disk 13 beyond the periphery of the boss 14, and the cutter 19 is arranged to dress the periphery of the disk 13, and is therefore slightly in advance of the cutter 18. Both cutters may be secured in place by suitable fastening devices, illustrated as set-screws 20.

21 designates a transverse cutter, which might properly be termed the "initial" or "end" cutter, in that it is the first cutter which comes into close proximity with the work to be dressed, and this cutter is also secured in its proper relative position by means of a screw 22, the cutters 9 and 15 being secured in their proper positions by the set-screws and 24.

In Fig. 1 I have illustrated the position of the work preparatory to its being forced into contact with the several cutters. The first step in the operation is to move the end of the spindle into contact with the cutter 10, it being understood, of course, that all of the cutters have been previously secured in their proper relative positions. As the cutter 21 dresses off the end of the spindle the shoulder formed by the juncture of the constricted portion 11 and the relatively large portion 12 will come into contact with the cutter 9. At about the same time the cutter 15 will begin to act upon the boss 14, and the end of the cutter 18 will act upon the face of the flange 13,

while the edge of the flange will be turned by the cutter 19. These operations will continue until the work is properly dressed, when it may be removed. Each of the cutters may
5 be properly adjusted by loosening their particular securing device or set-screw, and after they are in their proper positions a number of the devices may be dressed without readjusting the cutters.

10 I have illustrated the cutter-head as being arranged for cutting a specifically-formed piece of work. However, I do not limit my invention to the exact relative arrangement of these tools, but reserve the right to modify
15 the head to suit varying conditions and different shapes of bodies to be dressed.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

20 1. A tool comprising a cutter-head having a longitudinal bore, a spindle-end-trimming cutter carried by the head and projecting into the bore, a bushing carried by and within the bore, said bushing being approximately cy-
25 lindrical and having a shoulder, a cutter projecting through the head and alining with the shoulder, a cutter having one edge within the bore and the other cutting edge extending slightly beyond the end of the head, and a face-
30 trimming cutter carried by the outer portion of said head; substantially as described.

2. A tool comprising a cutter-head having a longitudinal bore, a spindle-end-trimming

cutter carried by the head and projecting into the bore, a bushing carried by and within the 35 bore, said bushing being approximately cylindrical and having a shoulder, a cutter projecting through the head and alining with the shoulder, a cutter having one edge within the bore and the other cutting edge extending 40 slightly beyond the end of the head, a face-trimming cutter carried by the outer portion of said head, and an edge-trimming cutter carried by the said head; substantially as described. 45

3. In a tool of the class described, the combination with a head having a bore therein, a bushing in the bore having a longitudinal opening alining therewith and of relatively smaller diameter, the opening near the free 50 end of the bushing being larger than the remaining portion, a cutter 21 carried by said head and projecting into the bore, a cutter 9 having its cutting edge adjacent to the wall of the opening in the bushing, and a cutter 15 55 having one cutting edge adjacent to the wall of the larger portion of the opening in the bushing-block and another cutting edge at the end of the head; substantially as described.

In testimony whereof I hereunto affix my 60 signature, in the presence of two witnesses, this 3d day of June, 1905.

GEORGE D. BARLOW.

Witnesses:

CHAS. C. HIGHAM,
GEORGE BAKEWELL.