

(No Model.)

W. T. BEARD, Dec'd.

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EXPANDING REAMER.

No. 589,067.

Patented Aug. 31, 1897.

Fig. 1.

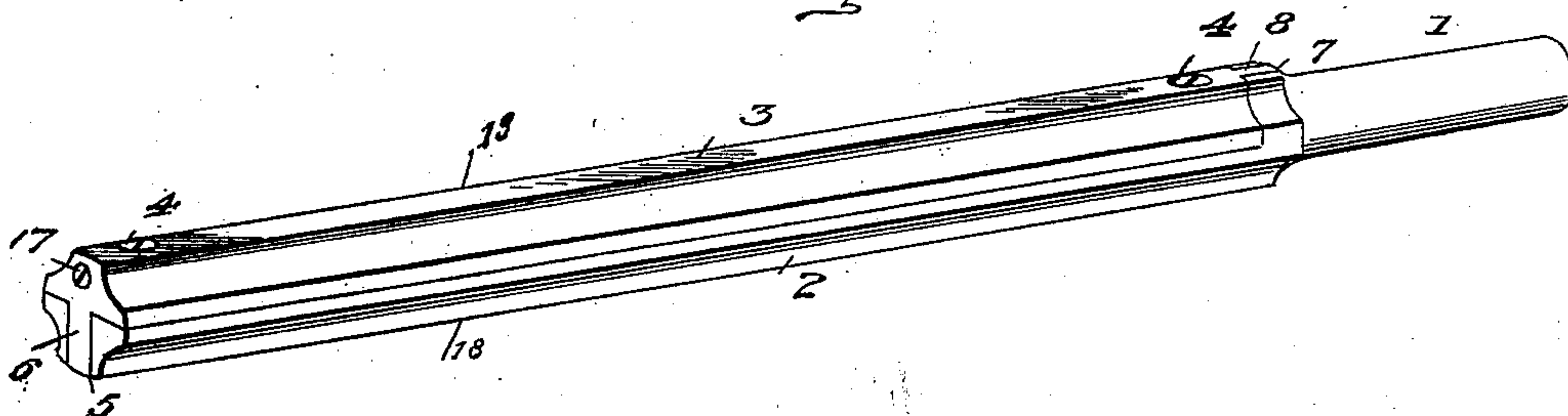


Fig. 2.

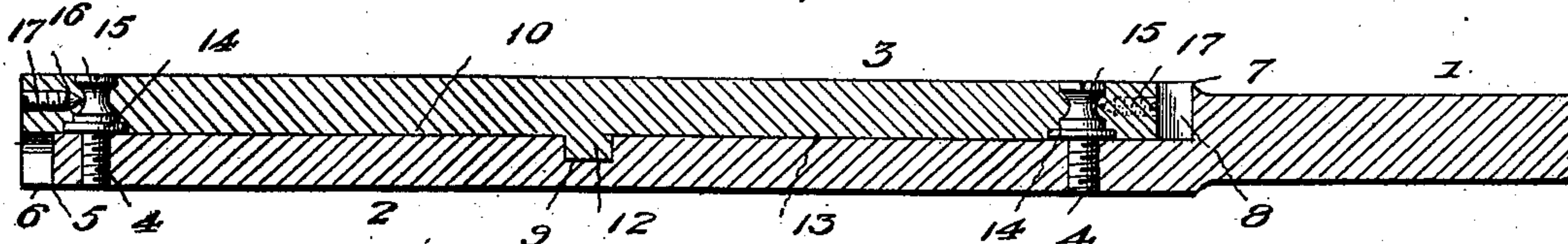


Fig. 3.

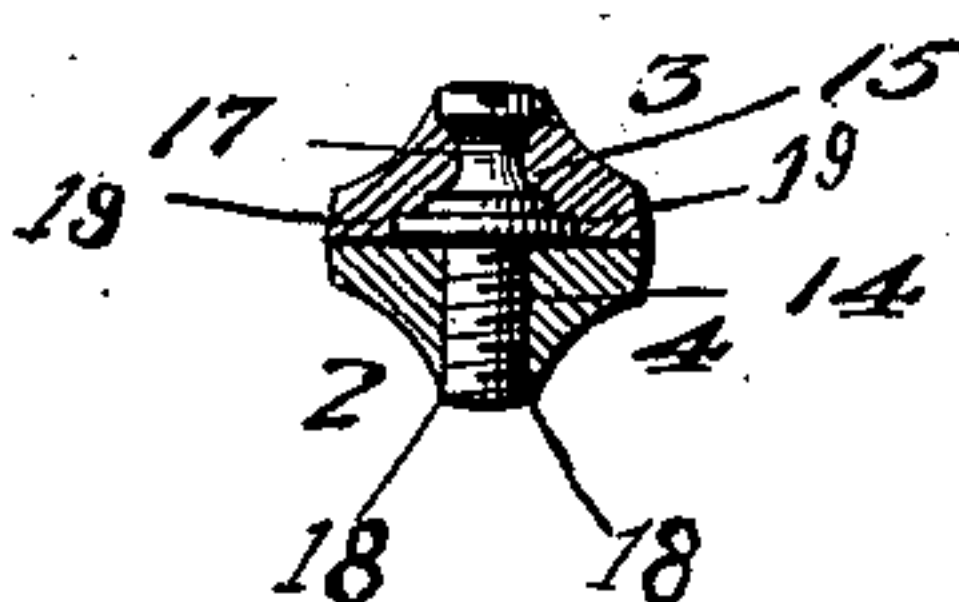
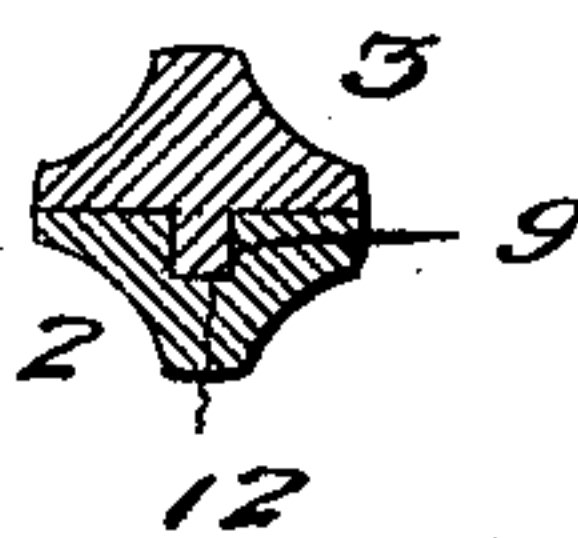


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM THOMAS BEARD, OF BOISE, IDAHO; JOHN MALONEY ADMINISTRATOR OF SAID BEARD, DECEASED.

EXPANDING REAMER.

SPECIFICATION forming part of Letters Patent No. 589,067, dated August 31, 1897.

Application filed April 6, 1897. Serial No. 631,007. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM THOMAS BEARD, a citizen of the United States, residing at Boise city, in the county of Ada and State of Idaho, have invented certain new and useful Improvements in Expanding Reamers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in expanding reamers, and while primarily intended for re boring shotguns is likewise adapted for use wherever a reamer of this class is needed; and the object is to provide a simple, efficient, and durable tool of this class.

To this end the novelty consists in the construction, combination, and arrangement of the same, as will be more fully described hereinafter, and particularly pointed out in the claims.

In the accompanying drawings the same reference-characters indicate the same parts of the invention.

Figure 1 is a perspective view of my improved expanding reamer. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section on the line of one of the adjusting-screws, and Fig. 4 is a similar view through the central guide-lug.

1 represents the cylindrical shank, formed integral with the longitudinal and approximately semicircular fluted bar 2.

3 represents the movable or adjustable semicircular fluted bar, secured to the bar 2 by the adjusting-screws 4 4.

5 represents a radial rectangular guide-slot formed in the shank 1, which receives the correspondingly-formed tongue 6 on the end of the adjustable bar 3, and 7 represents a rectangular guide-slot formed in the end of the bar 2, which receives the integral guide-tongue 8 on the contiguous end of the adjustable bar 3.

9 represents a longitudinal guide-recess formed about midway in the plane face 10 of the bar 2, and 12 represents an integral guide-lug on the contiguous plane face 13 of the bar 3.

The adjusting-screws 4 4 are each provided with a collar 14 and an annular groove 15, into

which projects the conical end 16 of the retaining-screws 17 to secure said adjusting-screws in place in the movable bar 3 and at the same time permit their free rotation without allowing any end play. As will be seen, these screws 4 4 provide for the parallel adjustment of the movable bar 3 with reference to the fixed bar 2.

It will be understood by those familiar with this art that the fluted bar 2 and the adjustable fluted bar 3 are formed with the usual longitudinal cutting edges 18 and 19, which conform to the corresponding cutting edges of the solid fluted reamer.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

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

1. An expanding reamer comprising the solid cylindrical shank 1, the integral fluted bar 2, provided with the guide-slots 5 and 7, in combination with the movable fluted bar 3, formed with the integral guide-tongues 6 and 8, and adjusting-screws 4 4 adapted to adjustably secure said bar 3 to the stationary bar 2, substantially as shown and described.

2. An expanding reamer, comprising the cylindrical shank 1, provided with the integral fluted bar 2, having the guide-slots 5 and 7 and the central guide-recess 9, and the parallel fluted bar 3, formed with the integral guide-tongues 6 and 8 on its outer ends and with the central guide-lug 10, in combination with the adjusting-screws 4 4, provided with the integral collars 14 and grooves 15, and the retaining-screws 17 formed with conical ends 16 projecting radially into the groove in said adjusting-screws, substantially as shown and described.

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

WILLIAM THOMAS BEARD.

Witnesses:

T. D. CAHALAN,
JONAS W. BROWN.