

No. 842,481.

PATENTED JAN. 29, 1907.

C. E. MARTIN.

REAMER.

APPLICATION FILED MAY 15, 1906.

FIG. 1.

FIG. 2.

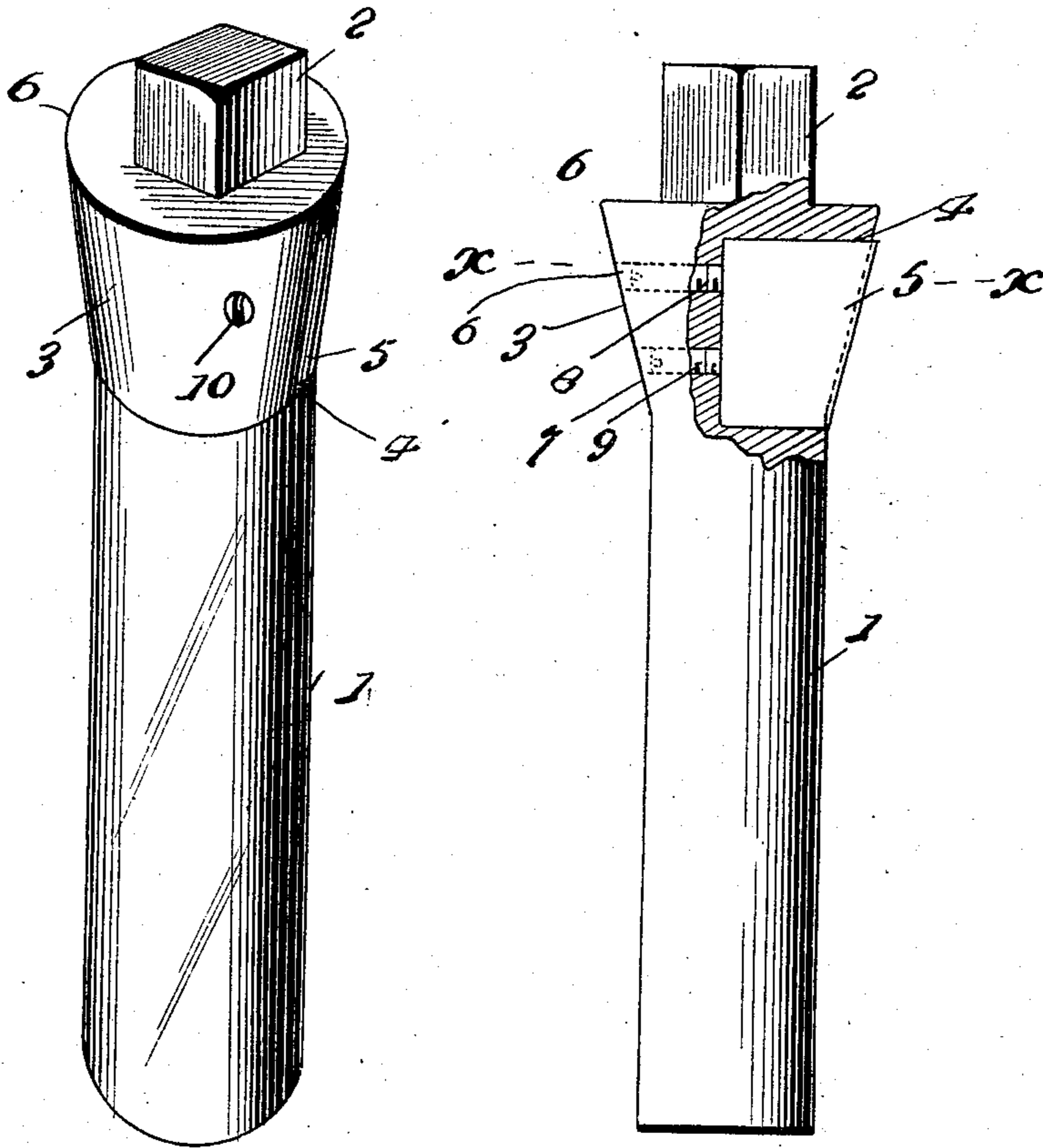
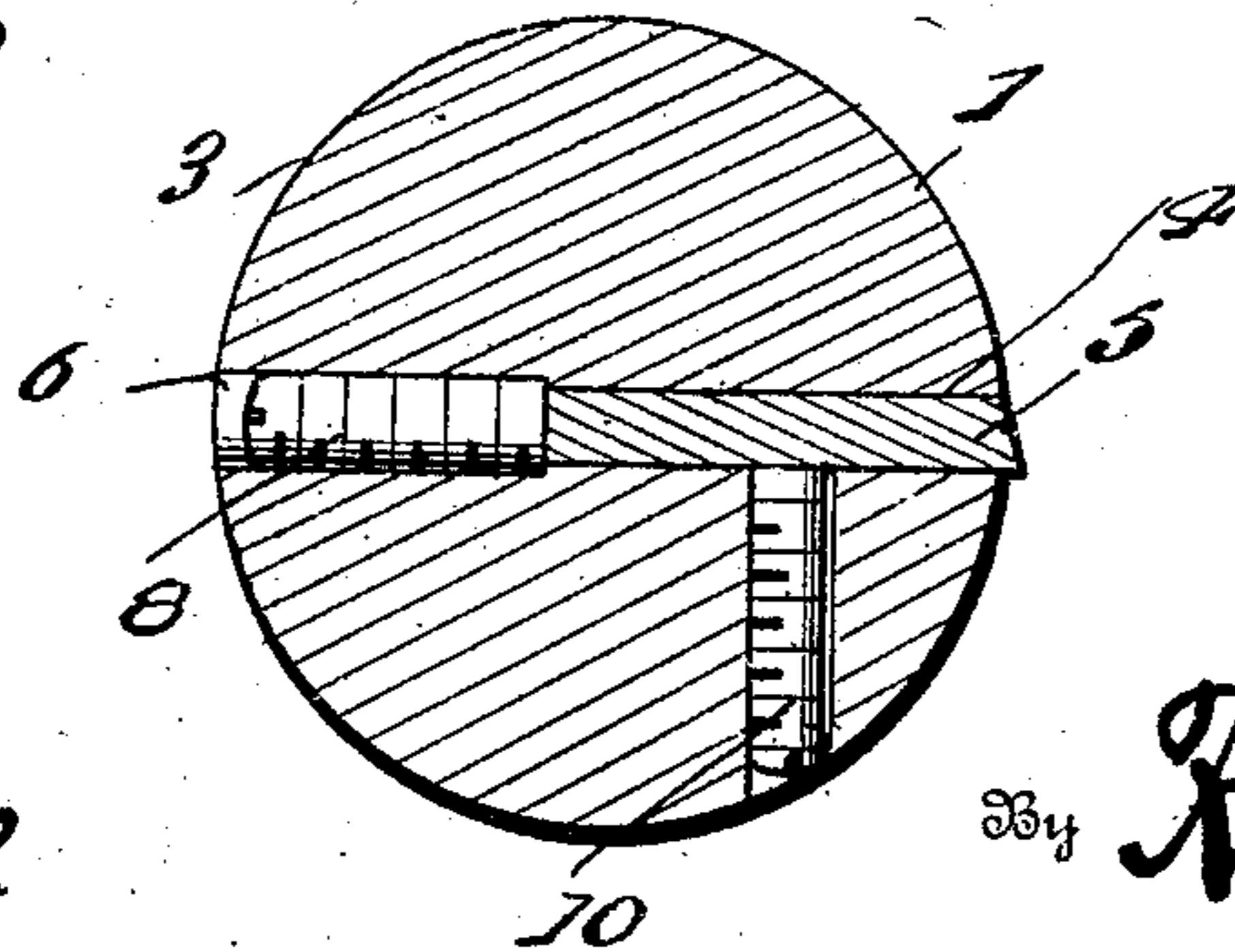


FIG. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

CLIFFORD E. MARTIN, OF GREENFIELD, MASSACHUSETTS.

## REAMER.

No. 842,481.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed May 15, 1906. Serial No. 317,036.

*To all whom it may concern:*

Be it known that I, CLIFFORD E. MARTIN, a citizen of the United States, residing at Greenfield, in the county of Franklin and State of Massachusetts, have invented certain new and useful Improvements in Reamers, of which the following is a specification.

This invention provides a tool of novel formation for removing the bur from the inside of pipes or tubes after being severed into required lengths by the usual cutters.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a reamer embodying the invention. Fig. 2 is a side view of the reamer, a portion of the tapered part being broken away to show more clearly the relation of the bit and the adjusting means therefor. Fig. 3 is a horizontal section of the reamer on the line *xx* of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The reamer stock or body comprises a guide-stem 1 of uniform cylindrical formation throughout, angular portion 2, and a tapered part 3, the latter receiving the bit and the bit adjusting and securing means. The angular portion 2 is adapted to receive a spanner, wrench, or other tool, by means of which the reamer is adapted to be rotated. The guide-stem 1 is designed to enter the pipe or tube to steady the reamer when in operation and admit of a new grip or hold being obtained upon the wrench or like tool employed for turning the reamer when in service. The tapered part 3 is adapted to enter the end of the pipe or tube and conform with the same as enlarged by the action of the bit in removing the bur and a portion of the pipe or tube to enlarge the same, if needs be.

The tapered part 3 is provided in one side with a slot 4, having a radial arrangement and adapted to receive the bit 5, which latter is of tempered tool-steel. Threaded openings 6 and 7 lead from the slot 4 and extend through the opposite side of the tapered part 3 and receive set-screws 8 and 9, which are adapted to obtain a bearing at their inner ends upon opposite end portions of the bit to admit of proper adjustment of said bit and

preventing inward movement thereof when the tool is in operation. The set-screws 8 and 9 are let into the tapered part 3, so as not to project beyond the same and interfere with the free operation of the tool. A clamp-screw 10 is fitted into a threaded opening leading from a side of the slot 4 and is adapted to bear against a side of the bit 5 and hold the same fast after being properly adjusted. The slot 4 projects slightly into the end of the guide-stem adjacent to the tapered part 3, and the bit 5 is of a length to project across the line separating the tapered part 3 from the guide-stem to facilitate the initial operation of the reamer when placed in position to remove a bur or to enlarge the outer end of the bore of a pipe, tube, or like object having an opening formed therein.

Each reamer is of a given size, according to the diameter of the pipe or tube to be reamed, and the guide-stem 1 of the stock or body is of a length to enter the pipe or tube a sufficient distance to properly steady the reamer when in operation. The tapered part 3 conforms to the end of the pipe and obtains a bearing upon the inner side thereof, so as to prevent clattering or wobbling of the tool, and in conjunction with the guide-stem enables a fresh hold being obtained upon the wrench, spanner, or like implement employed for rotating the reamer.

It is to be particularly noted that the slot which receives the bit or cutter 5 projects across the point of juncture between the cylindrical stem 1 and the conical or tapered portion 3 and that the adjusting means for said bit is located in the conical portion alone. Hence in the practical operation of the device to remove a bit from the cut-off end of the pipe the bit may have its cutting edge entirely withdrawn into conical or tapered portion 3 at the time the device is being inserted in the end of the pipe, so that the lower edge of the bit will not project and form a shoulder to prevent the snug fit of the stem in the pipe, and then by means of a screw-driver or the like applied to the adjusting-screws 8 and 9 on the projecting tapered part of the device the cutter or bit may be projected from its retracted position wholly within the slot and adjusted to a nicety against the end of the pipe, so as to remove the bur.

Having thus described the invention, what is claimed as new is—

The herein-described reamer for removing

pipe-burs, consisting of a guide-stem of uniform formation throughout adapted to snugly fit the pipe to be reamed, a polygonal extremity 2 in longitudinal alinement with  
5 the guide-stem, and an intermediate tapered portion 3, the smaller end of which joins the stem, said intermediate tapering portion being provided in one side with a longitudinally-extending and radially-opening slot 4  
10 extending at one end across the juncture of

the tapering portion of the guide-stem, and a bit mounted in said slot, and also projecting at one end beyond the said point of juncture.

In testimony whereof I affix my signature 15  
in presence of two witnesses.

CLIFFORD E. MARTIN. [L. S.]

Witnesses:

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