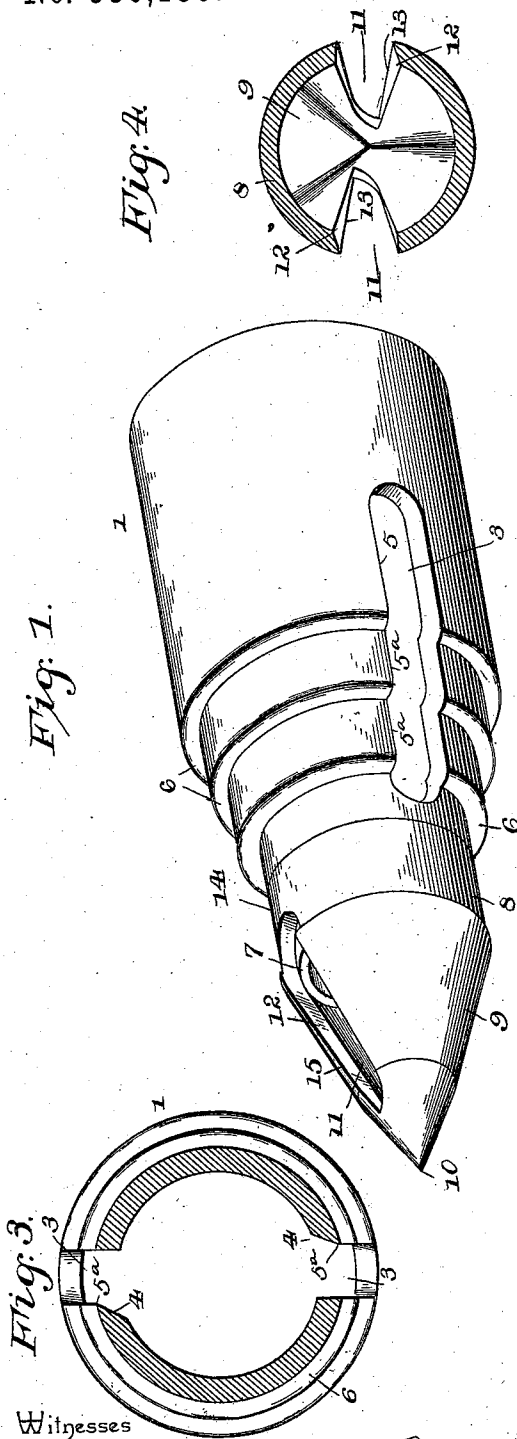


(No Model.)

L. MYERS.
REAMER BIT.

No. 550,190.

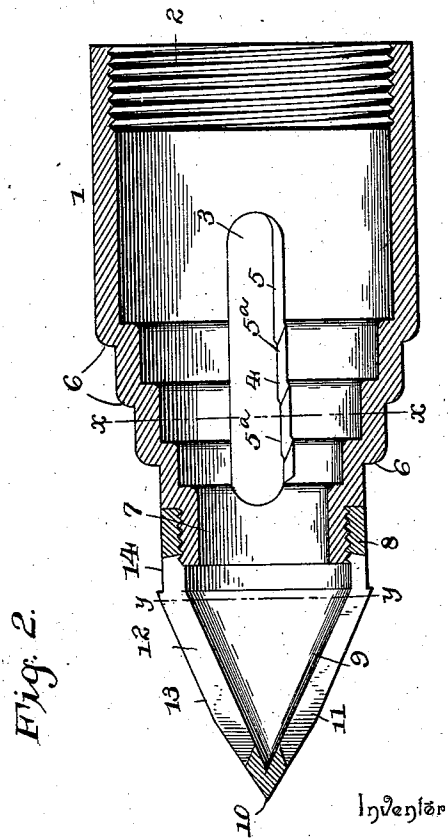
Patented Nov. 19, 1895.



Witnesses

Charles Ford.
S. P. Hollander.

By his Attorneys.



Luther Myers,

Cashnow & Co.

UNITED STATES PATENT OFFICE.

LUTHER MYERS, OF WILLIAMSPORT, PENNSYLVANIA.

REAMER-BIT.

SPECIFICATION forming part of Letters Patent No. 550,190, dated November 19, 1895.

Application filed October 5, 1894. Serial No. 525,034. (No model.)

To all whom it may concern:

Be it known that I, LUTHER MYERS, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Reamer-Bit, of which the following is a specification.

This invention relates to reamer-bits; and it has for its object to provide a new and useful bit of this character designed for reaming or boring out wooden pipes or conduits of comparatively large internal diameter—such, for instance, as underground wooden casings, wooden water-pipes, pump-stocks, and the like.

To this end, therefore, the invention contemplates a construction of reamer-bit providing simple and efficient means for quickly and smoothly boring out a perfectly straight and smooth hole in the object being operated upon.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists of the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a perspective view of a reamer-bit constructed in accordance with this invention. Fig. 2 is a central longitudinal sectional view thereof. Fig. 3 is a detail cross-sectional view on the line xx of Fig. 2. Fig. 4 is a similar view on the line yy of Fig. 2. Fig. 5 is an end view of the bit.

Referring to the accompanying drawings, 1 designates the main cylindrical body of the reamer-bit, that is provided at its large end with an interiorly-threaded portion 2, which provides means for securing the body to the ordinary mandrel or stock, such as ordinarily employed for operating reamers. The said cylindrical body 1 is provided in diametrically-opposite sides with longitudinally-disposed slots 3, which extend at one end near to the end of the body opposite the interiorly-threaded portion thereof, and said longitudinally-disposed slots 3 are beveled at one side edge, as at 4, to form the longitudinally-disposed cutting-edges 5 at the periphery of the body.

The main cylindrical body 1 of the reamer is reduced or tapered toward the end oppo-

site the interiorly-threaded portion, and such reduced or tapered end portion of the body 1 is provided with a concentric series of circular shoulders 6, regularly decreasing in diameter toward the small end of the body, and where the said circular shoulders are interrupted by the slots 3 are formed separate and distinct cutting-edges 5^a at the beveled slot edges of such shoulders, so that along the beveled cutting-edges of the slots are formed a series of separate cutting-edges in different circular planes, in order to provide means for regularly increasing the size of the hole being bored or reamed out, and consequently lessening the strain upon the wood being bored and tending to make a perfectly straight and smooth hole. At its small end the main body 1 of the reamer is further provided with the reduced exteriorly-threaded attaching-neck 7, the threads of which neck are left-handed and are adapted to receive the interiorly-threaded large end 8 of the hollow conical leader or nose 9. The leader or nose 9 tapers to a sharp point 10 at the extreme end and is hollowed out up to such point, in order that the worm or conveyer ordinarily used in connection with reamers can be inserted into the reamer up to the very point thereof, in order that the cuttings or borings may be entirely freed therefrom. The hollow conical leader or nose 9 is also provided in the tapered portion thereof with the diametrically-opposite longitudinally-disposed slots 11, that are beveled at one side edge, as at 12, to form the longitudinally-disposed cutting-edges 13, and the said slots 11, when the leader or nose 9 is attached to the body of the reamer, alternate with or are disposed out of alignment with the slots in the body 1, so that the strain upon the wood being bored or reamed is equally distributed in all directions during the operating of the reamer, as will be readily understood by those skilled in the art.

Beyond the inner ends of the slots 11 in the leader or nose 9 the said leader or nose is untapered, to form with the corresponding part of the small end of the body 1 a smooth circular blank portion 14, that is neither slotted nor provided with cutting-edges, and the length of said blank portion between the innermost point of the cutting-edges 13 and

the outermost point of the cutting-edge of the slots 3 is designed to be about one inch, and the diameter of the blank portion 14 is slightly less than the diameter of the leader or nose 9 at the innermost point of the cutting-edges 13, thereby preventing overheating and consequent drawing of the temper of the reamer-bit. Furthermore, the non-cutting blank space 14, following the lead of the larger part of the nose or leader, will serve the additional function of holding the wood or material being bored perfectly steady, and thereby assisting in the boring of a perfectly-straight hole.

From the above it is thought that the construction and operation of the herein described reamer-bit will be readily understood, and changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

A reamer bit consisting of a hollow cylindrical body provided with diametrically opposite longitudinally disposed slots having

cutting edges, and with a tapered end portion having a series of concentric shoulders interrupted by said slots and regularly decreasing in diameter toward the small end of the body, and a hollow conical leader detachably secured to the small end of the body and provided with diametrically opposite longitudinally disposed slots having cutting edges disposed out of alignment with those of the body, said leader being provided with a smooth circular blank portion agreeing with a corresponding portion at the small end of the body, the aligned blank portions of the leader and the body forming an elongated non-cutting portion between the uppermost cutting point of the leader and the lowermost cutting point of the body, said elongated non-cutting portion being less in diameter than the leader at its uppermost cutting point, substantially as and for the purposes described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LUTHER MYERS.

Witnesses:

W. C. GILMORE,
CARL TEWELL.