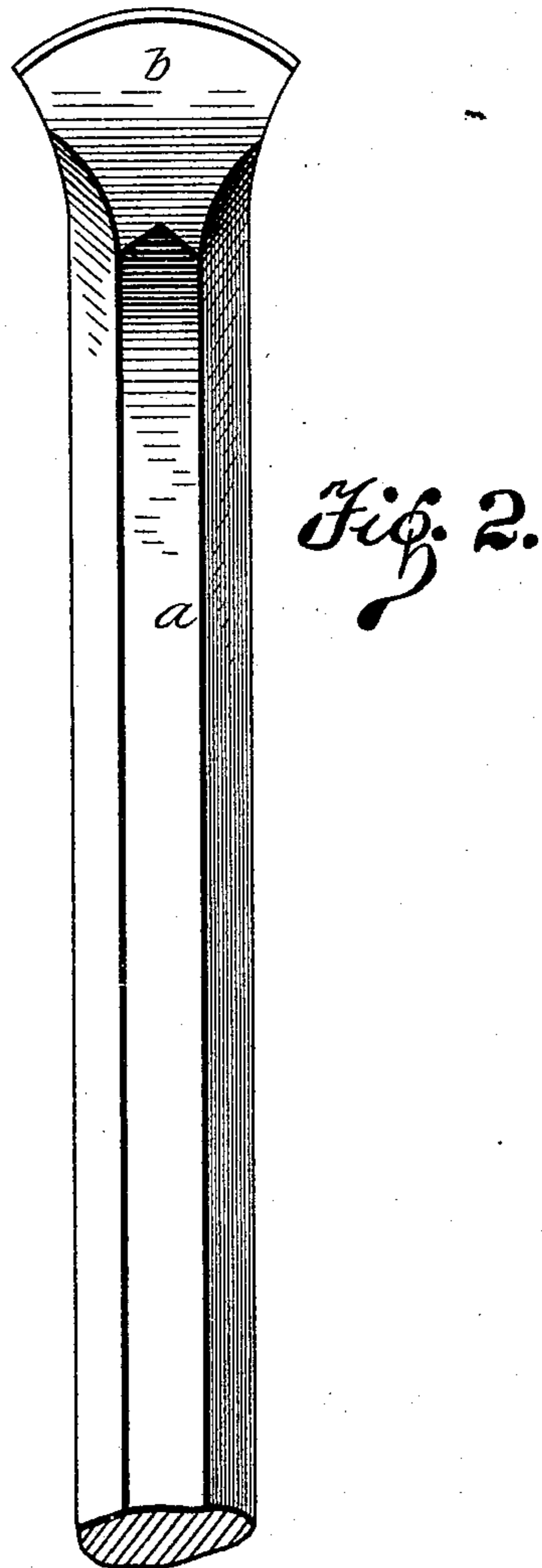
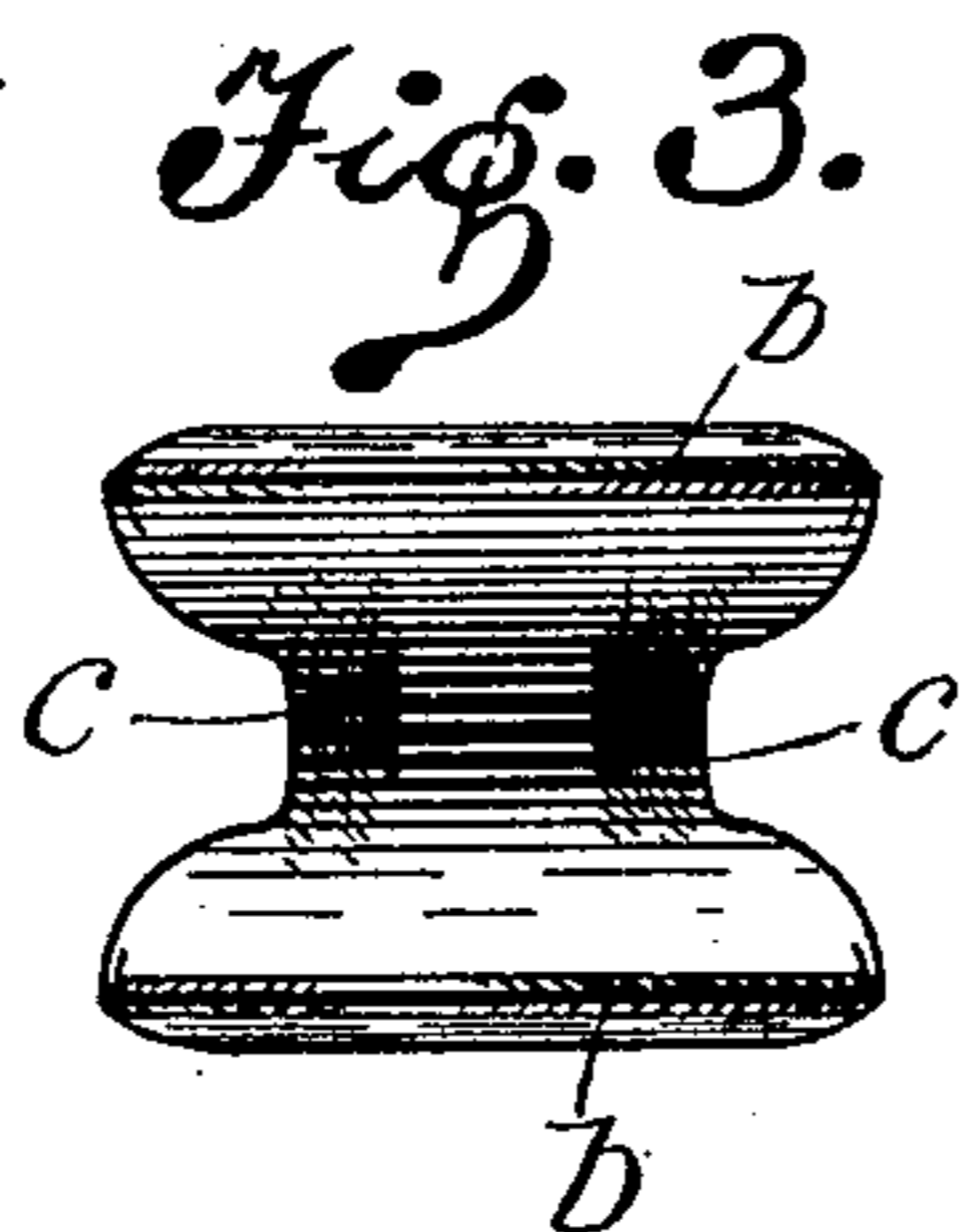
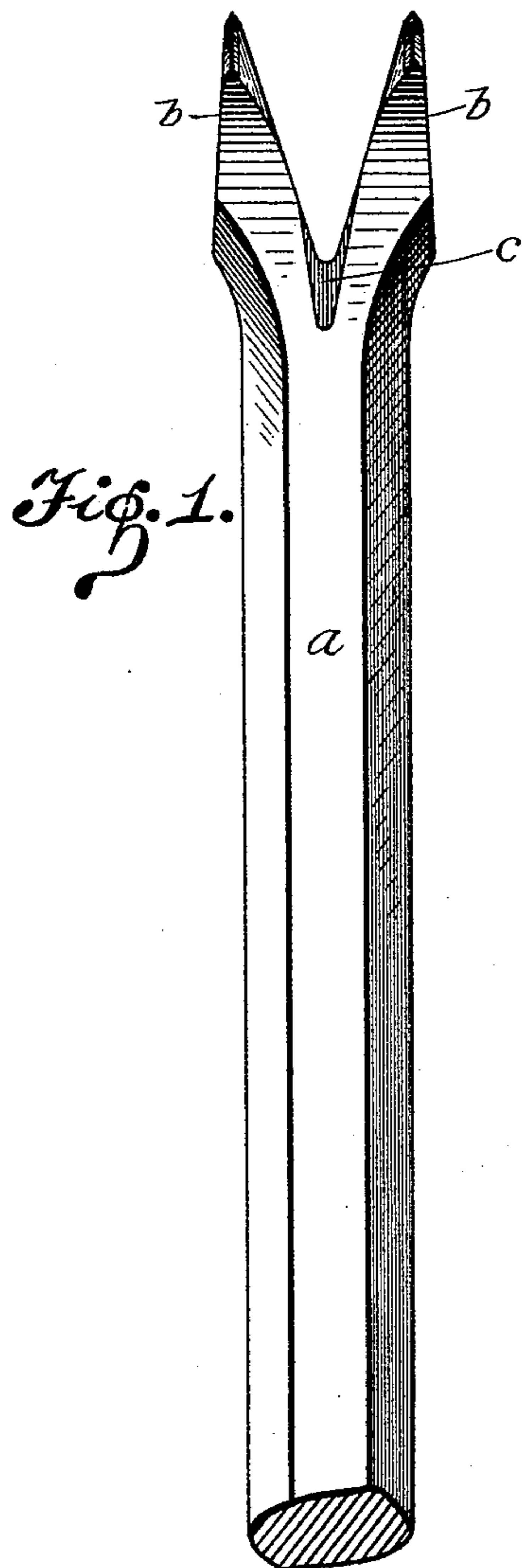


(No Model.)

T. CARRIGG.
DRILL.

No. 583,358.

Patented May 25, 1897.



Witnesses:-

A. R. Appleman
A. Wilson

Inventor.
Thomas Carrigg.

By Henry C. Evert
Atty.

UNITED STATES PATENT OFFICE.

THOMAS CARRIGG, OF WALKER'S MILLS, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO PATRICK FEENEY, OF SAME PLACE.

DRILL.

SPECIFICATION forming part of Letters Patent No. 583,358, dated May 25, 1897.

Application filed December 12, 1895. Serial No. 571,900. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CARRIGG, a citizen of the United States of America, residing at Walker's Mills, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Drills, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to certain new and useful improvements in drills in general, and relates more particularly to that class known as "churn-drills," used for drilling in rock and the like, although my form of construction may be used in making a bit for a power-drill or as a hammer-drill.

15 The invention has for its object to construct a drill of the above-referred-to class whereby a perfectly round hole may be made, which is not obtainable with the ordinary forms of construction.

20 A further object of my invention is to provide a drill of the above-referred-to class that will be more easily operated than the ordinary construction, inasmuch as it will not be as liable to bind in the hole.

25 A further object of my invention is to construct a drill as above described that will be extremely simple in its construction, strong, durable, effectual in its operation, and comparatively inexpensive to manufacture.

30 With the above and other objects in view the invention finally consists in the novel construction and arrangement to be hereinafter more particularly described, and specifically pointed out in the claim.

35 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like letters of reference indicate similar parts throughout the different views, in which—

40 Figure 1 is a front elevation of my improved drill, Fig. 2 is a side elevation of same. Fig. 3 is a top view of same.

In the drawings, *a* represents the body or handle portion of the drill, which is divided or serrated on its lower end, thus forming lips *b b*. The ends of these lips or jaws are rounded in a semicircular shape and sharpened on their edges, as shown in figures of the drawings. At the base of the V-shaped opening formed by the lips or jaws are grooves *c c*, which extend a short distance into the metal.

55 My improved drill is operated in the usual manner.

The drill is lifted upward and plunged downward into the rock or other material it is being used upon. As the bits or jaws cut the hole into the rock the drill is revolved in the hands, thus bringing the bits or jaws on the opposite side of the drill-hole from that on which they descended at the preceding stroke. As this operation is continued throughout the operation of cutting the drill-hole, a perfectly round hole will be formed by reason of the shape of the bits or jaws. This shape of the bits or jaws will also make the drill easy to operate, as it will allow of the same to be turned easily in the drill-hole, and the shape of the jaws will cause them to cut rapidly into the rock by reason of the faces of the bits or jaws being beveled and the formation of the grooves *c c* allowing the chipped pieces of rock to be forced readily out of the way of the cutting edges of the bits or jaws. This will be readily apparent by reference to the drawings, as it will be noted that by this construction a larger space is formed for the chipped or cut-away portions.

80 It will be noted that various changes may be made in the details of construction of my improved drill without departing from the general spirit of my invention, and I therefore do not wish to limit myself to the specific construction as shown herein. For instance, some minor changes might be desired should the drill be used for power-bits or as a hammer-drill.

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

5 A drill having two rounded cutting edges, each of which is flared or widest at its lower edge, the two edges extending in a line with each other, but separated by a V-shaped groove which has its ends terminated in short grooves *c*, which extend a short distance into

the metal; the inner side of each cutting edge 10 being slightly rounded, while its outer side or face is nearly vertical, substantially as shown.

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

THOMAS CARRIGG.

Witnesses:

ALFRED M. WILSON,
H. C. EVERT.