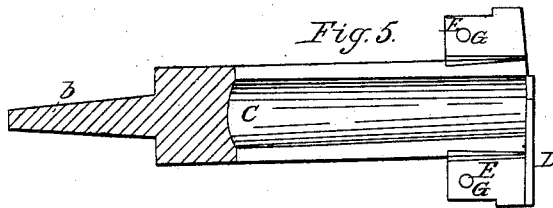
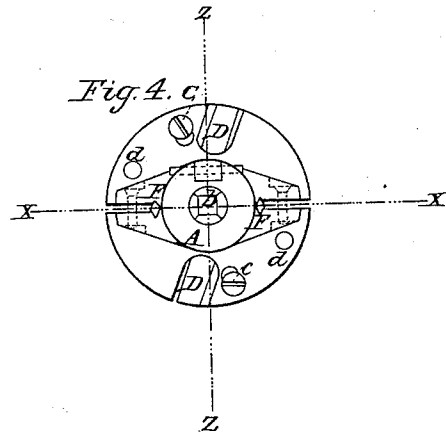
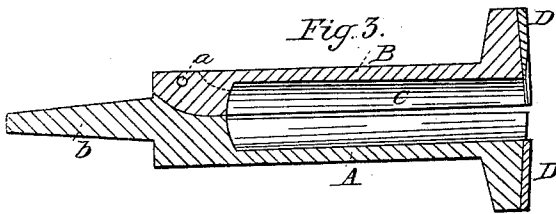
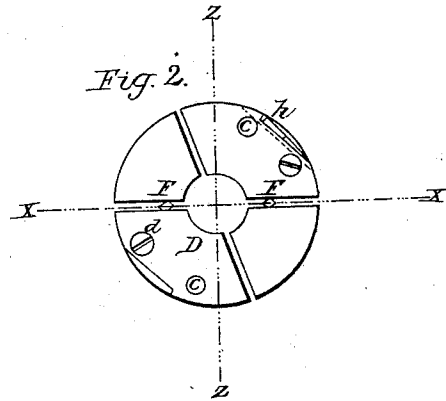
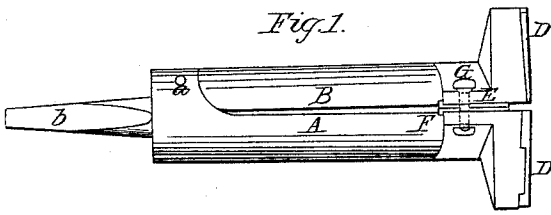


W. A. Clark,
Hollow Auger.

N^o 24,722.

Patented July 12, 1859.



Witnesses.
John A. Bridger.
James C. Gates.

Inventor.
Wm A Clark

UNITED STATES PATENT OFFICE.

WM. A. CLARK, OF BETHANY, CONNECTICUT.

HOLLOW AUGER.

Specification of Letters Patent No. 24,722, dated July 12, 1859.

To all whom it may concern:

Be it known that I, WILLIAM A. CLARK, of Bethany, in the county of New Haven and State of Connecticut, have invented certain
5 new and useful Improvements in Hollow Augers, the construction and operation of which I have described in the following specification and illustrated in its accompanying drawings with sufficient clearness to
10 enable competent and skilful workmen in the arts to which it pertains or is most nearly allied to make and use my invention.

My said invention consists in the device hereinafter described for securing the cut-
15 ters in position, said device being made up of an angle wedge resting against a shoulder upon the stock, and secured from getting out of place by the pressure of the cutter upon the portion of the wedge which passes be-
20 tween the cutter and the stock.

My invention is represented in the accompanying drawings as follows:—Figure 1 is a side elevation. Fig. 2 is a front elevation. Fig. 3 is a section taken through the
25 line X, X, on Fig. 4. Fig. 4 is a rear elevation. Fig. 5 is a section taken through the line Z, Z, on Fig. 4.

A is a part of the barrel of the auger, the shank *b* of which is made to fit the socket of
30 a common bit brace. The opposite side B of the barrel is hinged to the part A by a pin *a*, the parts being properly fitted together at that point to allow the necessary vibration. These parts are put together
35 and bored out in such a manner as to form between them a barrel *c*, which is intended to receive the tenon; care being taken to bore this aperture large enough to admit the largest tenon the auger is intended to make,
40 without binding it as it passes into the barrel. These barrels are adjusted to give the proper size of tenon by means of the set-screws *G* (which pass through the lips *E* for that purpose), and the wedges *F*, which
45 last are placed between the lips *E* for the purpose of keeping the parts *E* out against the screws, and also in connection with the manner of fitting them into these lips support the part B somewhat against torsional
50 strain. For this purpose these wedges *F* are made to fit into V-shaped grooves in the lips *E*. The wedges *F* are driven from the back side. The cutters *D*, *D*, are fitted to the faces of the parts A and B, and are so
55 hinged to them by the screw or pin *d* as to be capable of being swung inward so as to bring

the cutting edge inward and forward, or swung outward so as to throw the cutting edge outward and backward, and thereby supply the means of a convenient adjust- 60
ment of the cutters to compensate for their wear, or give the proper ease of clearance for the different kinds of wood. To secure the proper adjustment of these cutters for the purposes above stated, the angle wedge *e*, 65
so made as to fit between the cutter and the ledge *h*, and also so as to fit between the cutter and the stock, is inserted as shown in Fig. 2. This wedge is so fitted that a part of it extends under the cutter, and the screw 70
of the cutter down upon it, holds it in position. Each cutter is held in adjustment by a screw *c*, which passes through a slot in the face plate, and screws into the cutter. By loosening this screw *c*, the wedge *e* may be 75
adjusted in any position to throw the cutter outward or inward, and when this screw is driven home, it, by pressing upon that part of the angle wedge that goes under the cutter, secures it in position, so that it will support 80
the cutter firmly against pressure. The cutters are so set as to bring the cutting edge slightly nearer the center than the other, so as to give the necessary clearance to the
85 tenon.

I am aware that hollow augers or bits have been made in two parts which have been attached to a face plate, and slide bodily upon it to make the necessary adjustment. This, while it furnishes an adjustment, is 90
cumbersome and expensive, and as the adjustment required is very small, only to compensate for a very slight variation in the sizes of bits or for the wear of the same bit, does not answer the purpose of the wheelwright 95
as well as the one above described. Besides, if making parts to slide upon a face plate, made a really better and more efficient bit, the enormous expense of its construction, would be a ruinous objection against it. 100

The particular improvements which constitute my said invention, and which I claim as having been originally and first invented by me, are:

The angle wedge, in combination with the 105
cutters, face plate, screws *c*, and ledges *h*, substantially as described, and for the purposes set forth.

WM. A. CLARK.

Witnesses:

JAS. H. GRIDLEY,
JAS. CHAS. GATES.