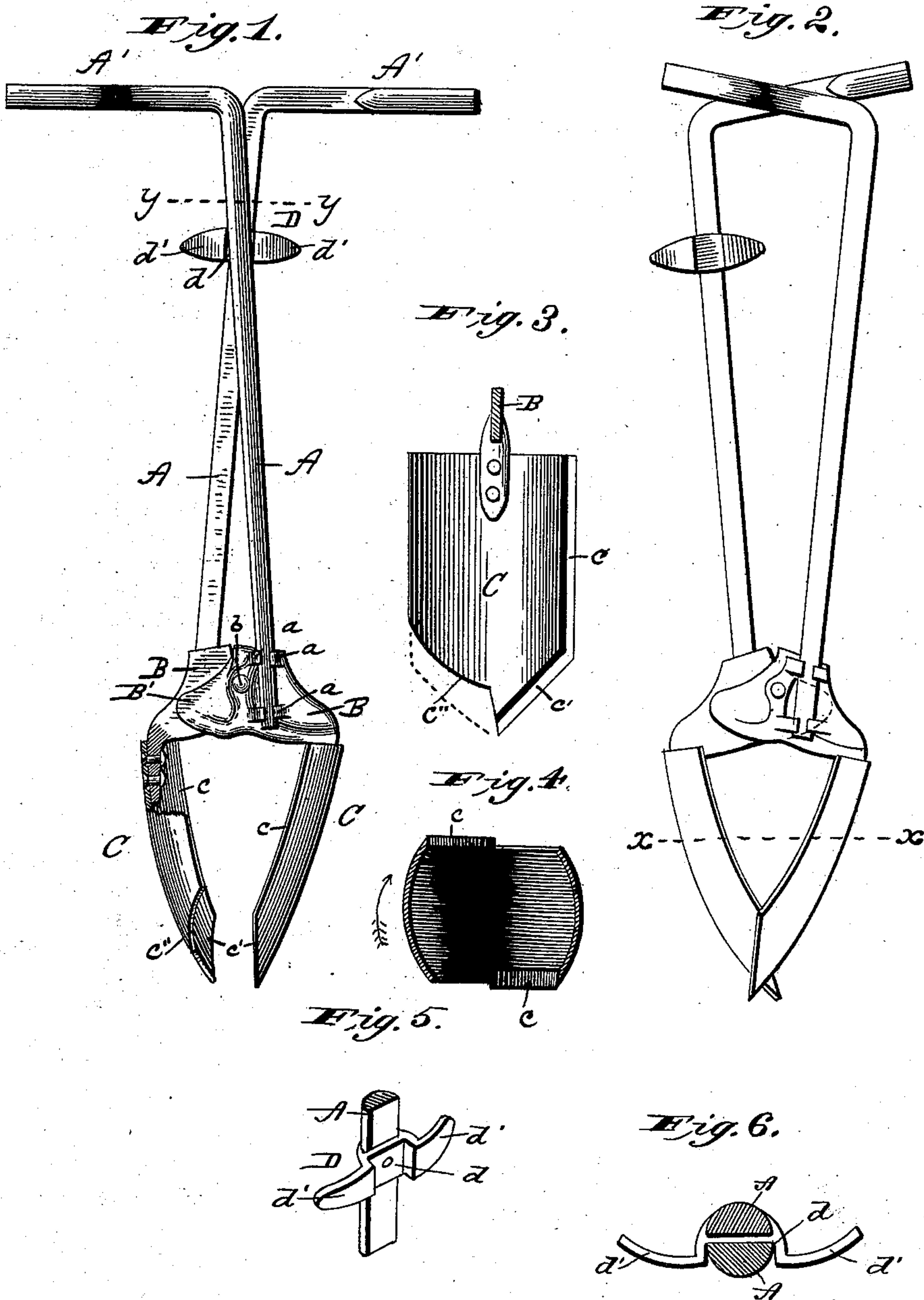


(No Model.)

H. C. CLOYD.
POST HOLE AUGER.

No. 401,999.

Patented Apr. 23, 1889.



WITNESSES.
Jno. S. Finch Jr.
C. H. Davis

INVENTOR,
H. C. Cloyd
By C. M. Alexander
Attorney.

UNITED STATES PATENT OFFICE.

HENRY C. CLOYD, OF UNION CITY, INDIANA.

POST-HOLE AUGER.

SPECIFICATION forming part of Letters Patent No. 401,999, dated April 23, 1889.

Application filed August 23, 1888. Serial No. 283,517. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. CLOYD, a citizen of the United States, residing at Union City, in the county of Randolph and State of Indiana, have invented certain new and useful Improvements in Post-Hole Augers, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

10 Figure 1 represents a side elevation of my auger set for boring a hole; Fig. 2, a similar view showing the auger-blades "closed" ready for lifting out of the completed hole; Fig. 3, a detail view of one of the auger-blades; Fig. 15 4, a horizontal sectional view on the line $x x$ of Fig. 2; Fig. 5, a detail sectional view of catch for holding operating-bars and blades in proper relative position while boring, and Fig. 6 a horizontal sectional view on line $y y$ 20 of Fig. 1.

My invention has relation to that class of augers wherein two adjustable concavo-convex blades are employed for boring a cylindrical hole in the ground for the reception of 25 fence or other posts, these blades being so attached to two pivoted operating rods or levers that as soon as a hole of the required depth is obtained they may be closed or moved toward each other and utilized to lift the loosened earth out of the excavation, as will be 30 more fully hereinafter set forth.

The essential objects of this invention are, first, to provide the auger with blades of such a shape that when they are closed to lift the 35 loosened earth out of the bored hole they will come close together and completely close the space between the lower ends of the blades, whereby all the fine dirt and loose sand may be lifted out of the completed hole, and, secondly, to provide an improved catch for automatically locking and securing the pivoted 40 operating-rods when adjusted for boring, as will be fully hereinafter described.

I will now proceed to describe the construction of my improved auger, referring to the 45 accompanying drawings by letters.

A A designate the two vertical operating-rods, provided at their upper ends with oppositely-turned handles or arms A' A'. The 50 lower ends of these rods are rigidly attached, by means of clamping-lugs a , respectively, to

two angular plates or castings, B B, which are pivoted together by the pivotal bolt or pin b , the said lugs or ears a being formed on the outer faces of the plates and bent down over 55 the rods, as clearly shown. Instead of this method of securing the rods A A to the angular plates, it is evident that I may bolt or rivet them thereto should I so desire. Each plate B has formed on it a lateral continuation or 60 extension, B', which rests against the adjacent face of the other plate, as shown in Figs. 1 and 2. These continuations B' serve to relieve the pivotal bolt from any undue strain 65 while boring, and also to guide the blades in their lateral movements and keep them in perfect alignment with each other. To the downward extensions of the plates B B are riveted the curved shovels or blades C C, each of which have one of their vertical edges c sharpened, the blades being so attached to the 70 plates that the sharpened edges come upon opposite sides of the auger, as is usual with this class of devices. The lower ends of the blades are pointed in order to enter the ground, 75 and on one side these pointed ends are sharpened, as at c' , these latter cutting-edges forming continuations of the vertical cutting-edges c . On the opposite side from the inclined cutting-edge c' of each blade a portion of the 80 lower pointed end of the blade is cut away, as at c'' , the notch thus formed extending from the vertical center line of the blade to its edge, as most clearly shown in Fig. 3.

The notches or recesses c'' are upon opposite sides of the auger, so that when the two blades are brought together, after boring, the sharpened pointed portion c' of one blade will project a little beyond the opposite blade, 85 permitting the lower curved edges of the cut-out portions to come close up and rest against the curved interior face of the opposite blade, as shown in Figs. 2 and 4, and thus completely close the space between the lower ends of the blades. By this means all the loose sand and 90 dirt in the excavation may be lifted out. In this class of augers it has heretofore been impossible, on account of the formation of the blades, to remove all the fine sand and dirt from a hole by means of the auger. 100

Riveted or otherwise fastened to one of the rods A, at the point where they intersect each

other, is a catch, D, provided with a notch, *d*, in its face for the reception of the free rod A, and with oppositely-projecting and rearwardly-inclined lips *d' d''*, which serve to guide the
 5 said free bar into the notch *d*. This catch serves to hold the operating-rods in position during the operation of boring, and when it is desired to open or close the blades all the
 10 operator has to do is to spring the operating-rods a short distance apart, when they are free to be moved in either direction.

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

15 1. The combination of the operating-rods, the angular plates secured to the said operating-rods by means of malleable lugs *a*, formed integral with the said plates, the bolt *b* for pivoting these plates together, and the blades
 20 secured to downward extensions of the plates, substantially as described.

2. The combination of the pivoted angular plates, the operating-handles secured thereto, and the two concavo-convex blades C C, these
 25 blades being each pointed at its lower end and sharpened upon one of its vertical edges, each blade also having a portion of its lower pointed end cut away, as at *c''*, the cut-away portions being upon opposite sides of the auger, where-
 30 by, when the blades are brought together after boring, the space between their lower ends

will be entirely closed, as and for the purpose set forth.

3. The combination of the blades, the angular arms or plates pivoted together, the op- 35 erating-rods attached to the said arms or plates, and provided with oppositely-projecting handles, and the catch D, attached to one of the said rods, and provided with a notch in its face and oppositely-projecting inclined 40 or beveled lips, as and for the purpose herein set forth.

4. The combination of the operating-rods A A, provided with the handles A' A', pro- 45 jecting in opposite directions, the catch D, secured to one of the said rods, and provided with oppositely-projecting inclined lips *d' d''*, the angular plates B B, secured, respectively, to the lower ends of the operating-rods and pivoted together, each of these plates being 50 provided with oppositely-projecting extensions or guides B' B', and the blades C C, curved and pointed, as described, and provided with notches *c''* at their lower ends 55 upon opposite sides of the auger, all arranged as and for the purpose described.

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

HENRY C. CLOYD.

Witnesses:

WEBSTER LAMBERT,
 RUDY FRICK.