

H. J. Rickard

Hollow Auger.

Nº 90,195.

Patented May 18, 1869.

Fig 1

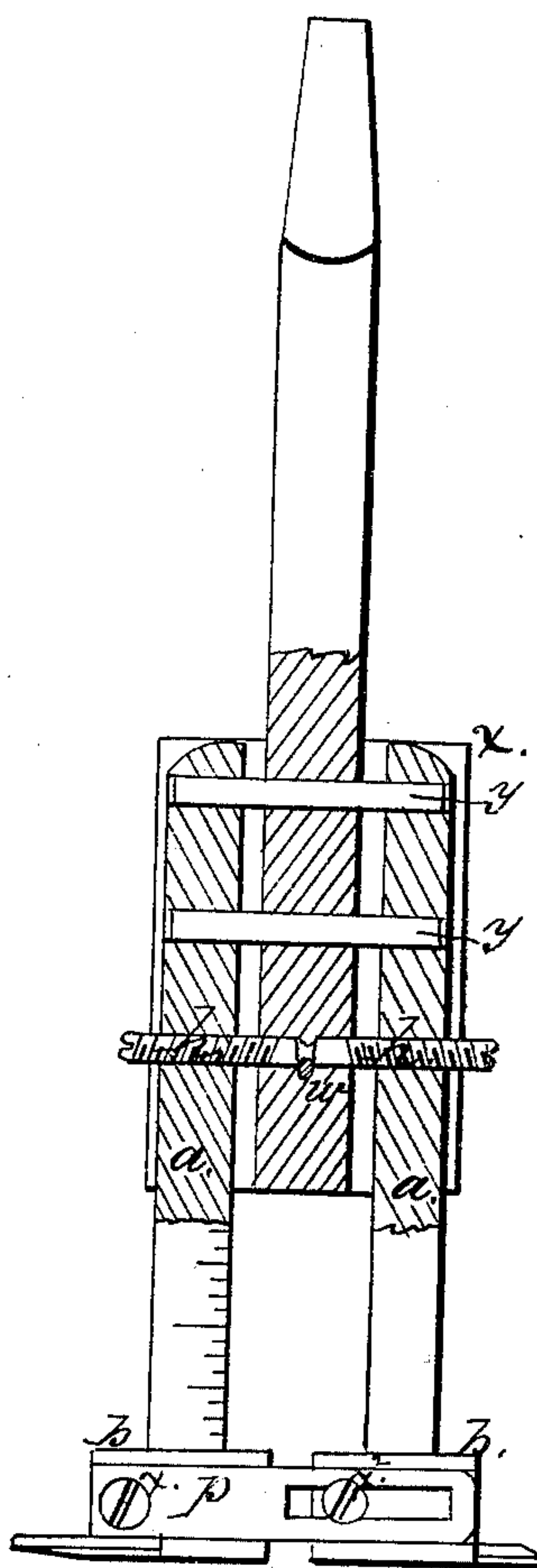
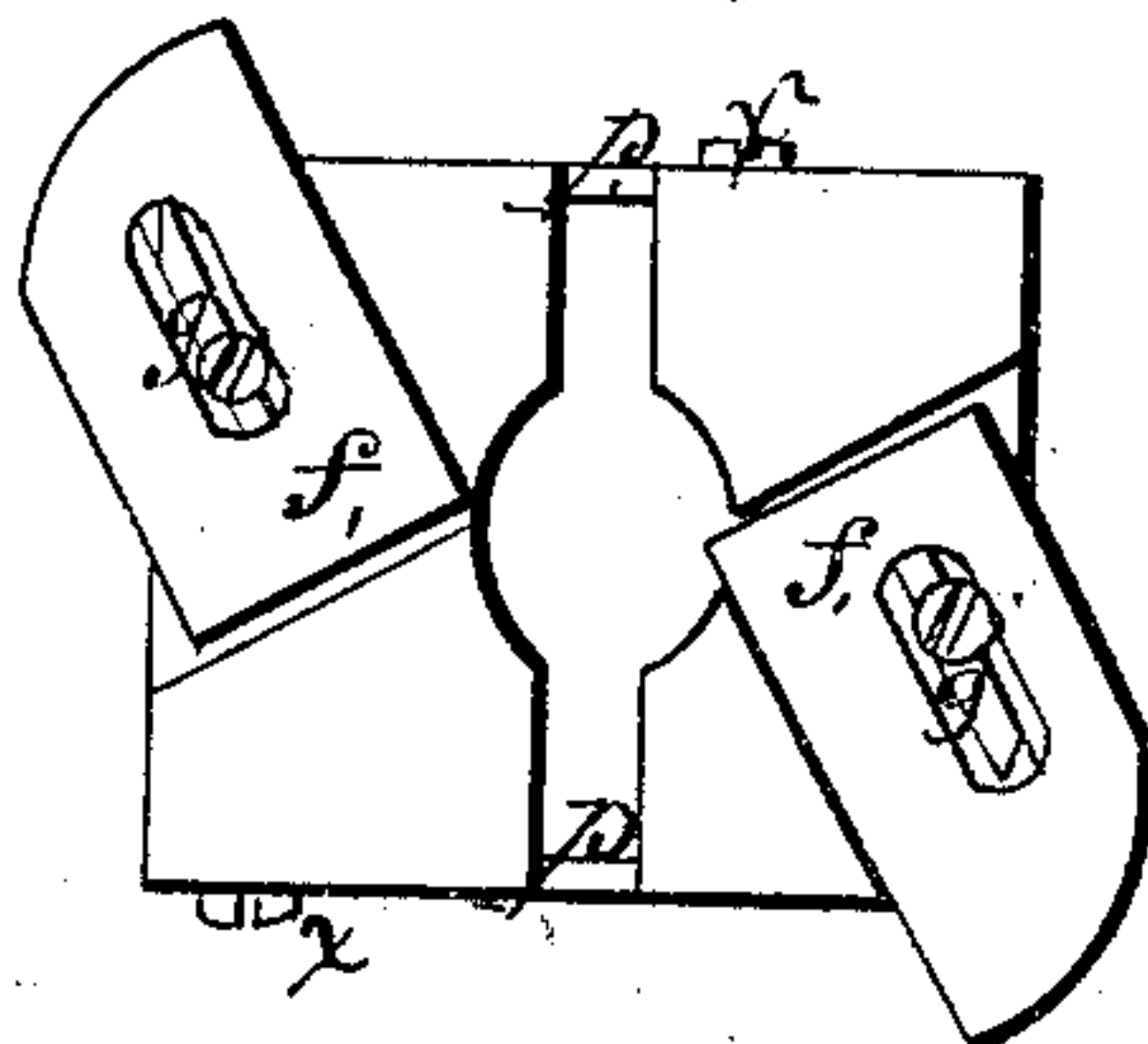


Fig 2



Witnesses:
W. Loring Gage
J. Chase.

Inventor:
H. J. Rickard,

United States Patent Office.

H. J. RICKARD, OF ROCHESTER, NEW YORK.

Letters Patent No. 90,195, dated May 18, 1869.

IMPROVEMENT IN HOLLOW AUGER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, H. J. RICKARD, of the city of Rochester, in the State of New York, have invented a new and useful Hollow Tenoning-Bit; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is side elevation, with a portion of the head x cut away, to show the arrangement of screws h and pins y .

Figure 2 is an inverted view of the face of cutter-heads.

The nature of this invention consists in arranging the several parts composing the expansive cutter-heads, in the manner hereinafter described.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

The shank of this auger is made as others of this class, and can be used in a carpenter's brace.

The head x is provided with a groove in its edges to receive transversely-moving arms a .

These arms have T-shaped heads, b , which have on their inner edges circular recesses, which, when the heads are together, form an opening as large as the smallest tenon required.

The face of the T-heads is slightly convex, so that the knives will make their cut as other hollow bits.

A cavity is formed in the face of each T, to receive the cutter-knives f , fig. 2.

This cavity is inclined from the centre of the head to the outside, so that the knives will be in an inclined position as to the face, so that the cutting-edge will be presented to the wood.

The knives are attached to the heads by the screws g passing through countersunk slots, fig. 2.

At the cutting-edge of the knives f , proper throats are provided in the T-heads, to allow for the passage of chips.

These knives f may be inserted in slots in the edge of the T-heads.

The arms a are held in the grooves of the heads by means of the right-and-left screws h , fig. 1, and are operated thereby.

These screws h are formed by passing a rod through

the head, and making on its ends a right-and-left thread.

In the centre, a groove is cut, and a pin, w , is put through the head, and passes through the groove, and allows the rod to turn, but prevents end movement. I also, in rear of the screw h , insert and fix rigidly guide-pins y , which serve to sustain the arms.

In the edge of the ends of the T-heads, I make a square groove, and fit therein a sustaining-bar, p , fig. 1, one end of which is rigidly fastened to each T by a screw, and the other end has a slotted hole in it, through which a clamping-screw, x^2 , is inserted into the T.

By this arrangement, when the arms are set at the desired distance apart by the screw h , the sustaining-bars p are fastened by the clamping-screws x^2 , and sustain the heads of the arms a in position.

On one or both arms a graduated scale or a movable set may be made to indicate the length of the tenon.

The object of this invention is to make an adjustable hollow tenon-bit, so that small as well as large tenons may be cut with the same.

Another object is, this hollow bit can be used with any common boring-bit, whereas, with the common hollow auger, it is necessary to have the boring-bit made to fit.

This is accomplished in this auger by having the knives adjustable, that being done by turning the screw h , which will cause them to approach or recede, as desired, and make a tenon to fit any-sized boring-bit. Two screws may be put in the bars p , to hold the tenon while being cut.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The head x , screws h , in combination with the movable T-headed arms a , all being constructed and arranged to operate substantially as and for the purpose set forth.

2. In combination with the above, the sustaining-bars p and clamping-screws x^2 , as and for the purpose set forth.

H. J. RICKARD.

Witnesses:

JAS. LORENZO GAGE,
J. CHASE.