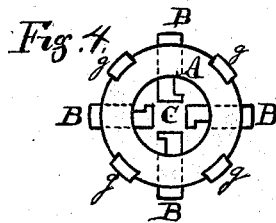
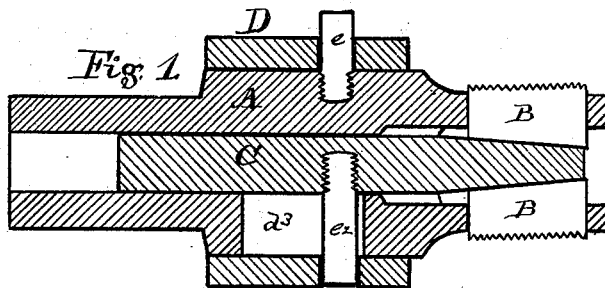
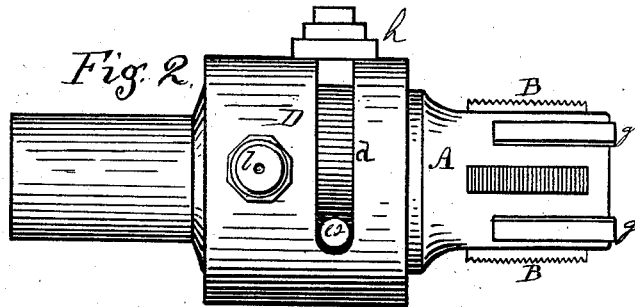
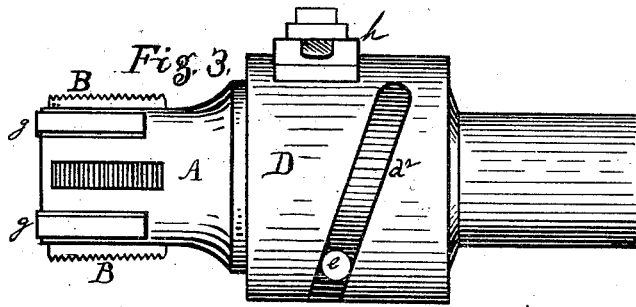


J. M. JOHNSON
Collapsible Screw-Tap.

No. 198,945.

Patented Jan. 8, 1878.



Witness
B. S. DeBorah
for Mahan.

Inventor
J. M. Johnson
By Geo. W. Gibbitts, atty.

UNITED STATES PATENT OFFICE.

JAMES M. JOHNSON, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF HIS
RIGHT TO ANDREW PARKER, OF SAME PLACE.

IMPROVEMENT IN COLLAPSIBLE SCREW-TAPS.

Specification forming part of Letters Patent No. **198,945**, dated January 8, 1878; application filed
September 21, 1877.

To all whom it may concern:

Be it known that I, JAMES M. JOHNSON, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Collapsible Screw-Tap, which is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a longitudinal section, Fig. 2, a side elevation; Fig. 3, a side elevation, reverse of Fig. 2; and Fig. 4, an end view.

The object of my invention is to furnish a device by which to collapse the cutting-dies in a screw-thread cutting-tap, so that when the screw-thread has been cut the dies may be closed up to enable the tap to be withdrawn without the necessity of a reverse rotary motion.

In the drawing, A is a hollow mandrel, provided at the cutting end with slots or seats for the cutting-dies B B. C is a sliding rod, fitted within the said mandrel A. Its forward end is enlarged, and is provided with slots whose bottom surfaces are made at an inclination from the center line. Surrounding the enlarged portion of the mandrel A is a sleeve, D, in which is made one straight circumferential slot, d , and one diagonal circumferential slot, d^2 . Through the slot d is placed a pin, e^2 , which is fixed in the mandrel A, and through the slot d^2 is placed a pin, e , which also passes through a longitudinal slot, d^3 , in the mandrel, and is fixed in the rod C.

B B are the cutting-dies, lower edge of which is made inclined correspondingly with the bottoms of their seats in the end of the rod C. The said dies also have a slot cut in one side near their lower inclined edge, in which a feather at one side of the slots in the said rod C fits, and is for the purpose of preventing the dies from slipping out.

In the sides of the mandrel, at the forward

end, are placed reaming-dies $g g$. To the side of the sleeve D is placed an adjustable stop, h , to adjust the throw of the sleeve. To move the sleeve, a short lever, l , is used.

It will be seen from the foregoing that when the rod C is in the position seen in the drawing the dies B are pushed out, that their cutting-edges project beyond the circumference of the mandrel, in which position they are designed to do their work. When they have done their cutting, by turning the sleeve D the diagonal slot d^2 carries the pin e and draws the rod C backward, by which means the dies B B are closed together. Then the tap can be withdrawn without making revolutions, thus saving time and wear of machinery.

These taps can be made in a variety of sizes, from half-inch to eight inches, and are found to be exceedingly convenient for tapping gas and water pipes and their connections.

It will also be observed that the stop h also serves as a gage for the depth of cut, which can be adjusted more or less, as may be required.

Having described my invention, I claim—

The hollow mandrel A, having the longitudinal slot d^3 and the pin e , the dies B B, having inclined bottoms and slots, the sliding rod C, having the inclined slots with feather for holding the dies B, and the pin e^2 , the sleeve D, having the slots d d^2 , and the adjustable stop h , when the several parts are constructed, combined, arranged, and operated substantially as shown and described, and for the purpose set forth.

J. M. JOHNSON.

Witnesses:

F. W. CADWELL,
GEO. W. TIBBETTS.