

J. COOK.
Screw-Taps.

No. 156,137.

Patented Oct. 20, 1874.

Fig.1.

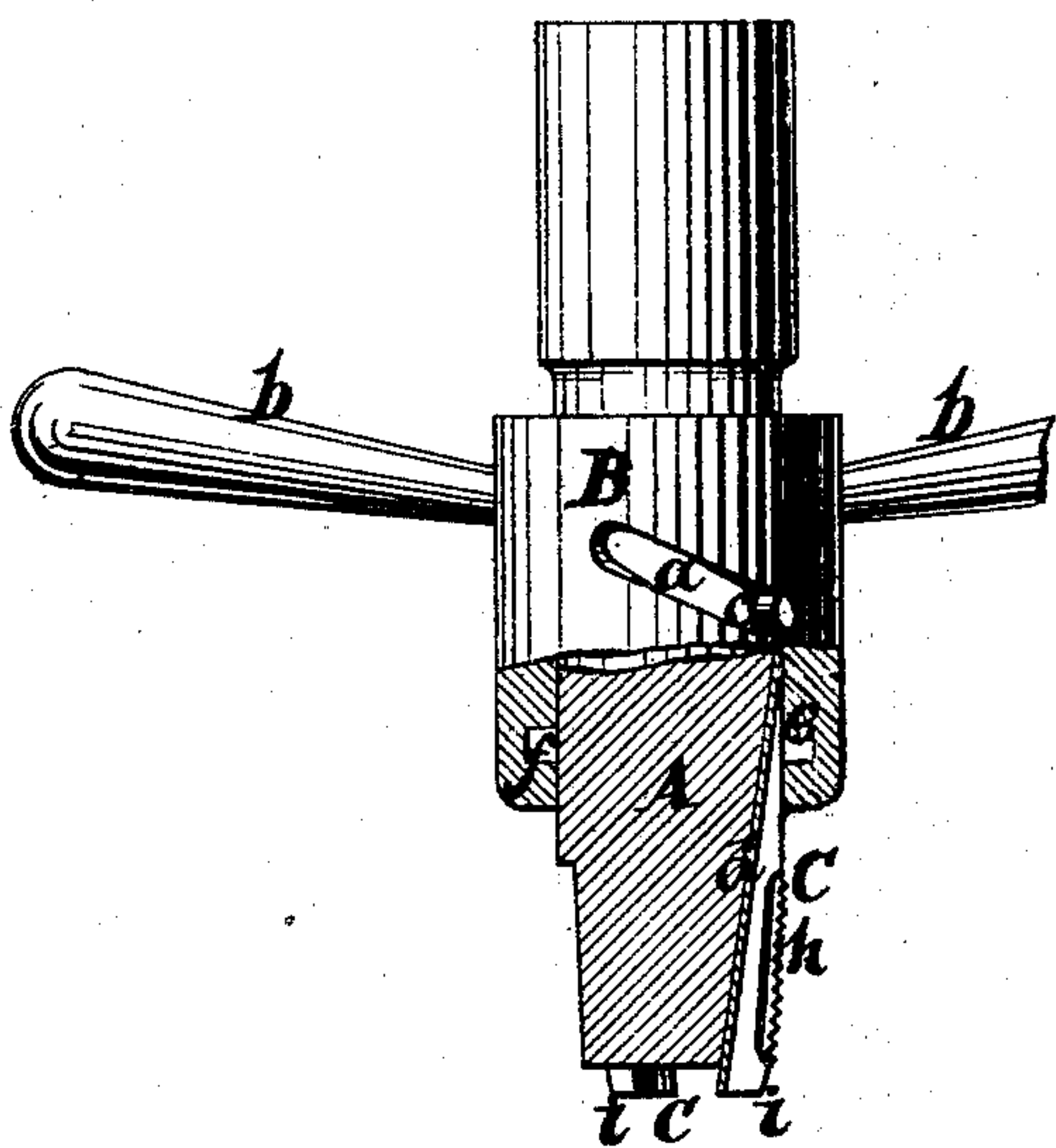


Fig.2.

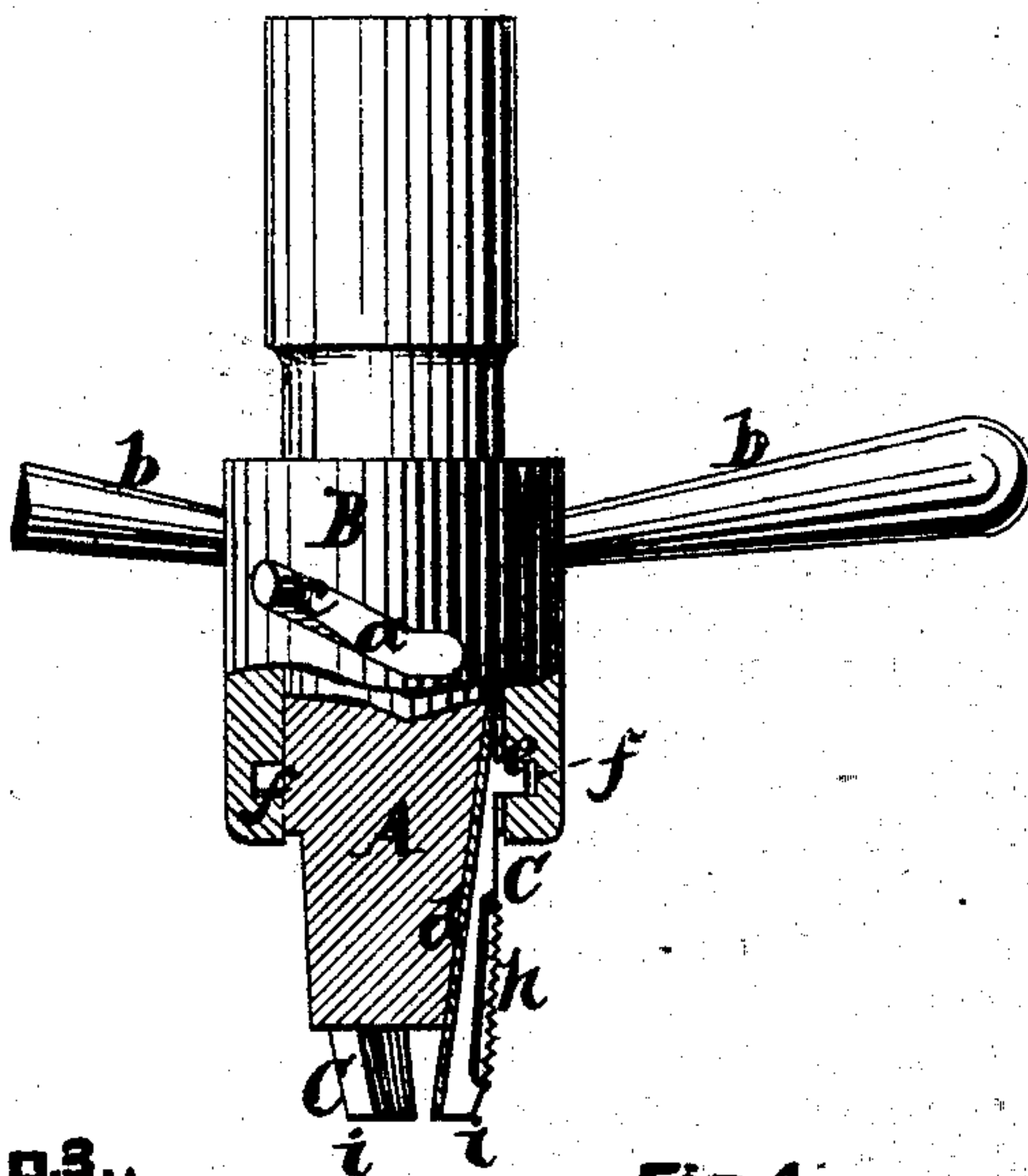
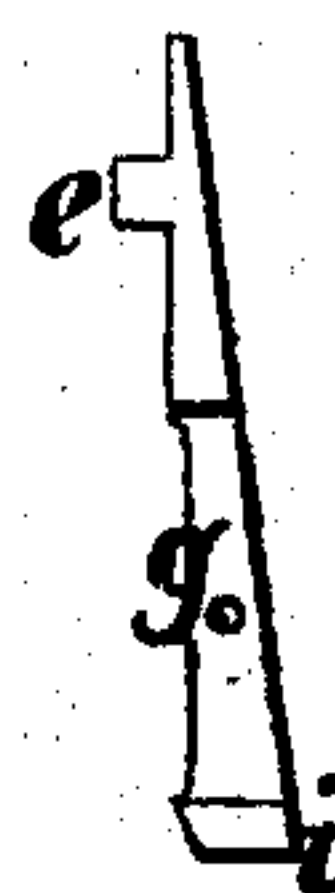


Fig.3..



Fig.4.



Witnesses.

Henry Lintner
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UNITED STATES PATENT OFFICE.

JAMES COOK, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SCREW-TAPS.

Specification forming part of Letters Patent No. **156,137**, dated October 20, 1874; application filed August 26, 1874.

To all whom it may concern:

Be it known that I, JAMES COOK, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Screw-Taps, of which the following is a specification:

This invention relates to an improvement on a screw-tap for which Letters Patent were granted to W. and R. Foster, December 20, 1859, No. 26,487, and extended for seven years from December 20, 1873, and which consists in the combination of oblique-backed taps and a slotted collar, with a tapering or conical stock, so that on turning the collar the cutting-threads of the taps will be released from the nuts, and thus allow the tool to be withdrawn from the work.

My improvement consists in combining suitable receivers with the taps or cutters, and with the tapering stock and slotted collar, in such a manner that said receivers engage with the slotted collar, and fit the guide-grooves in the tapering stock, while the cutters themselves are made of flat plates of steel, which are fastened to or in the receivers, and thereby much labor and expense in repairing the cutters are saved. Said receivers are provided at their ends with guides which fit the bore of the tap-hole, and cause the cutters to enter and to cut without an undue strain.

This invention is illustrated in the accompanying drawing, in which—

Figure 1 represents a sectional side view when the cutters are in. Fig. 2 is a similar view when the cutters are out. Fig. 3 is a transverse section. Fig. 4 is a detached view of one of my receivers.

Similar letters indicate corresponding parts.

In this drawing, the letter A designates the tapering stock of my screw-tap, on which is fitted a collar, B, provided with a cam-slot, *a*, and with arms *b*, by means of which the collar can be turned. The slot *a* engages with a stud, *c*, which is secured in the stock A, so that when the collar B is turned it receives a motion parallel to the axis of the stock. The tapering end of the stock A is provided with guide-grooves *d*, into which are fitted the receivers or cutter-supports C, and each of these receivers or cutter-supports is furnished with a nose, *e*, which engages with

a circular groove, *f*, in the inner surface of the collar B, so that when this collar is turned by the action of the cam-slot *a* and stud *c* the receivers are caused to move into the position shown in Fig. 1, or out to the position shown in Fig. 2. Said receivers are provided with recesses, *g*, Fig. 4, into which are fitted the cutters *h*. Said cutters are made of flat pieces of steel, and they are fastened to their receivers by rivets, or by any other suitable means.

By this arrangement I am enabled to use different cutters in the same receivers, and if one set of cutters has worn out, or if one of them breaks, new cutters can be substituted without disturbing the receivers. Furthermore, the cutters, being of uniform thickness throughout, can be hardened with the greatest accuracy, and without danger of cracking or warping, whereas the cutters, when made in one piece with the guides and with the noses *e*, are difficult to harden. They are liable to warp and to crack, and if one of them wears out much labor is required to replace it.

The ends *i* of the receivers form guides, which fit the bore of the tap-hole, and enable the cutters to enter straight and in the proper direction. Without such guides the first threads of the cutters are liable to become exposed to an undue strain, causing them to break off, whereby the cutters are spoiled.

By my improvement the valuable screw-tap of Foster is rendered much cheaper, and easier to handle, and it can be kept in repair without much trouble or loss of time.

I disclaim everything shown and described in the patent of Wm. and R. Foster, No. 26,487.

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

The combination of receivers or cutter-supports C, having guides *i*, with the cutters *h*, tapering stock A, and slotted collar B, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 22d day of August, 1874.

JAMES COOK. [L. S.]

Witnesses:

E. F. KASTENHUBER,
J. VAN SANTVOORD.