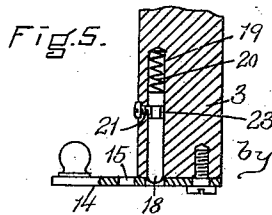
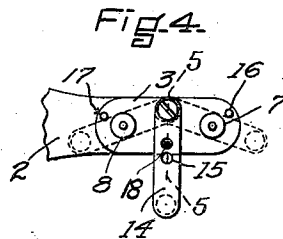
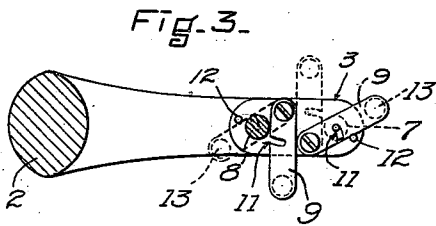
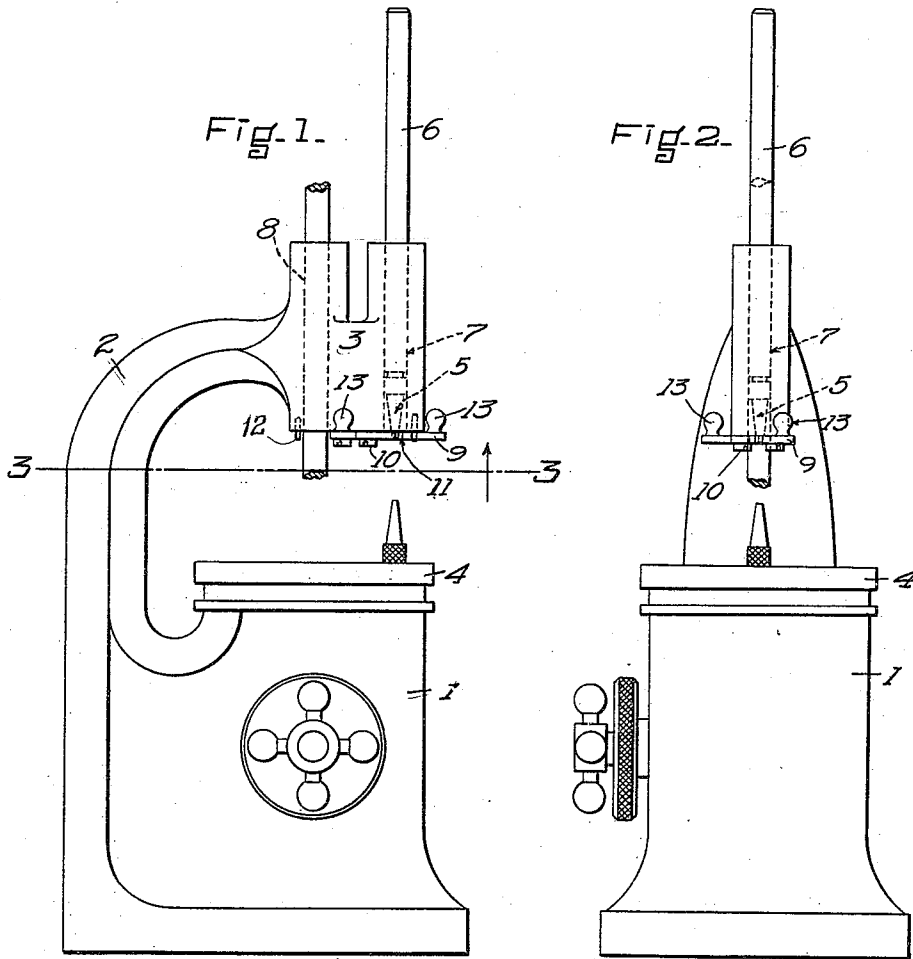


G. W. BOWERS.
STAKING TOOL.
APPLICATION FILED JULY 13, 1910.

990,422.

Patented Apr. 25, 1911.



WITNESSES.
McGowan
P. H. Poyette

INVENTOR.
George W. Bowers
by *Highnam Smith May*
Attys.

UNITED STATES PATENT OFFICE.

GEORGE W. BOWERS, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR TO HAMMEL, RIGLANDER & COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

STAKING-TOOL.

990,422.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed July 13, 1910. Serial No. 571,737.

To all whom it may concern:

Be it known that I, GEORGE W. BOWERS, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Staking-Tools, of which the following is a specification.

This invention relates to staking tools such as are used by jewelers and watch-makers, and has for its object to provide an improved and easily operated means for holding the punch or other operating tool in a positive manner at an elevation above the base or table of the staking tool when not in use and while the table or platen is adjusted or work is adjusted thereon.

The lock has the same object as, and is similar in principle to, that disclosed and originally claimed in an application for staking tools filed by me December 31, 1909, Serial No. 535,754, but contains improvements over such lock. The locking means which is essentially the subject matter of the present invention, is intended to serve the necessary purpose of holding the operating tool elevated, at certain times, and to be removed entirely clear of the operating tool so as to leave the latter absolutely free and sensitive to the touch. For instance, it is some times necessary to locate fine center points on the intersection of lines scratched on a piece of work exactly in line with the passage for the operating tool, and for doing this a pointed operating tool, the point of which rests on the work, is used. The work is moved until the point of the tool drops into a scratched line. It is then moved on that line until it drops into the intersection of the line. The delicacy of touch developed in persons skilled in the art enables this action of the operating tool to be detected when the fingers of the operator lightly rest against or upon the shank of the operating tool, but in order that it may be detected, the tool shank must be perfectly free in the passage provided for it in the staking tool head. The lock which I have devised is designed when not in use to leave the operating tool thus free, and is so arranged that it may be placed with the utmost readiness in the position where it holds the operating tool at an elevation.

The manner in which I propose to carry the present invention into effect is illustrated in the accompanying drawings, which show the embodiment of the invention now preferred by me.

In these drawings, Figure 1 represents a side elevation of a staking tool equipped with the lock. Fig. 2 is a front elevation of the same. Fig. 3 is a sectional view on line 3—3 of Fig. 1, showing the under side of the staking tool head in plan. Fig. 4 is a view similar to Fig. 3, showing a modification. Fig. 5 is a detailed sectional view on line 5—5 of Fig. 4.

The same reference characters indicate the same parts in all the figures.

In the drawings, 1 represents the base portion of the tool, 2 a gooseneck rising from one side of the base, 3 a head formed upon the gooseneck and overhanging the base, and 4 a platen or table resting upon the top of the base. The platen is provided with the usual circular series of orifices of different sizes, and is rotarily adjustable. As the platen and the means for adjusting and securing it form no part of the present invention, they need not be herein described, it being sufficient to state that these elements and means may be the same as shown and described in the application hereinbefore referred to, or of any other suitable type.

The head is provided with a passage, or if desired, with two or more passages, through either of which an operating tool may be passed, and by which said tool is accurately guided. One such operating tool is shown at 5 and the shank thereof is represented by 6. The head of the tool herein illustrated is provided with two passages 7 and 8, either of which is adapted to contain and guide the shank of any standard operating tool.

It is frequently necessary to hold the operating tool at an elevation above the base, without removing it from the head, and without requiring the employment of one of the operator's hands for that purpose, and for so holding the tool I provide a lock which is preferably similar in principle to the lock shown in Figs. 1, 2 and 3. This lock is a bar 9 pivoted to the under side of the head by means of a stud 10, which may

conveniently be a pin or screw tapped into the head. The lock when not in use lies at one side of the passage 7 so that the tool may freely pass it, but is so mounted that it may
 5 be moved across the lower end of the passage when the tool is elevated or removed, to obstruct such passage, and thereby prevent descent of the operating tool upon the table. In that part of the lock which under-
 10 lies the center of the passage is a recess which may be a notch 11 as here shown, or a perforation, which receives the point of a pointed operating tool and the sides of which engage the tool above the point so as
 15 to accomplish the desired result of holding the tool at an elevation, without, however, touching or marring its point. A stop pin 12 is located at such a point as to arrest the lock when its recess is centrally aligned with
 20 the passage, and to prevent carrying of the lock so far as to bring its surface under the point of the operating tool.

Where the head is provided with two or more passages I consider it desirable to provide an equivalent number of locks, one for
 25 each passage, as shown in Fig. 3, although this is not absolutely necessary, for the same lock may be made to serve for both passages in such a manner as shown in Fig. 4. Where
 30 two distinct locks are used, they may conveniently be arranged as shown in Fig. 3, their points of pivotal attachment being near opposite sides of the head. By virtue of this arrangement the pivoted end of each
 35 serves as a stop or abutment for the other, arresting, when it is moved clear of the passage which it guards, and preventing it from being moved across the other passage. Each lock has the recess 11 and in connection with
 40 each a stop pin 12, for limiting its outward swing, is provided. For convenient manipulation of the locks I find it desirable to provide on the outer end of each a knob or handle 13.

It may be desirable in some instances to make the same lock do double duty, and in carrying out this object I construct and arrange a modified form of locking bar 14, somewhat as shown in Fig. 4. This lock is
 50 pivoted between the two passages in such a manner that it may move across either, and is provided with a recess in the form of a perforation 15 adapted to be brought into alinement with the axis of either passage.
 55 Stop pins 16 and 17 are provided for arresting the lock when it is central under the respective passages. A stop 18 arrests the lock between the passages. Such stop is conveniently a pin set into a socket 19 in the
 60 head 3 and yieldingly pressed outward by a spring 20. A stop pin 21 is set into the side of the head and enters a groove 23 in the side of the stop, thereby preventing the latter from being pressed out by the spring.
 65 The lock constructed and arranged as

herein described and shown, or in an equivalent manner, is exceedingly simple, while being effective to the desired degree. When moved aside from the passage in the head, it leaves the operating tool free for the most
 70 delicate manipulation, so that slight movements, as when it drops into a light scratch in the face of the work piece, may become evident to the touch of the operator, while
 75 by a touch of the finger it may be moved into the locking position. In this position it retains the operating tool at an elevation in a positive manner, making accidental descent of the tool impossible.

I claim,—

1. In a staking tool having a head provided with a passage to receive an operating tool, a locking member mounted on the head and movable to some extent across the passage, whereby to underlie a part of the operating tool when the latter is at an elevation and hold the same positively at such elevation.

2. A staking tool provided with an apertured head to contain and guide, an operating tool, and a rotating tool lock mounted on said head beside the line of the aperture therein, so as to intersect the line of the aperture when said lock is turned into certain positions.

3. In a staking tool having a head provided with a plurality of passages each adapted to contain a shank of an operating tool, a locking device mounted upon the head between such passages and movable in both directions so as to intersect either passage, said locking device being constructed to engage and support an operating tool in either passage.

4. In a staking tool having a base and a head overhanging such base, with a passage for an operating tool, a lock pivotally mounted on the under side of the head and normally lying at one side of the passage, but movable across the passage to obstruct the same and prevent descent of an operating tool elevated above the base.

5. In a staking tool having a base a head overhanging said base and a passage in said head for an operating tool, a locking device pivotally mounted upon the head and movable thereon across such passage, whereby to obstruct the same and prevent descent of an elevated operating tool, the lock having an aperture to admit the point of a pointed operating tool and to avoid marring such point.

6. In a staking tool having a base a head overhanging said base and a passage in said head for an operating tool, a locking device pivotally mounted upon the head and movable thereon across such passage, whereby to obstruct the same and prevent descent of an elevated operating tool, the lock having an aperture to admit the point of a pointed

operating tool and to avoid marring the point, and a stop for arresting the lock when moved across the passage, in such position that its aperture is alined with the axis of
5 the passage.

7. A staking tool comprising a base, a platen supported on said base, a head overhanging said platen and having a plurality of passages for operating tools, and a lock-

ing device adapted to engage tools in either 10 of said passages.

In testimony whereof I have affixed my signature, in presence of two witnesses.

GEORGE W. BOWERS.

Witnesses:

E. BATCHELDER,

P. W. PEZZETTI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents
Washington, D. C."
