

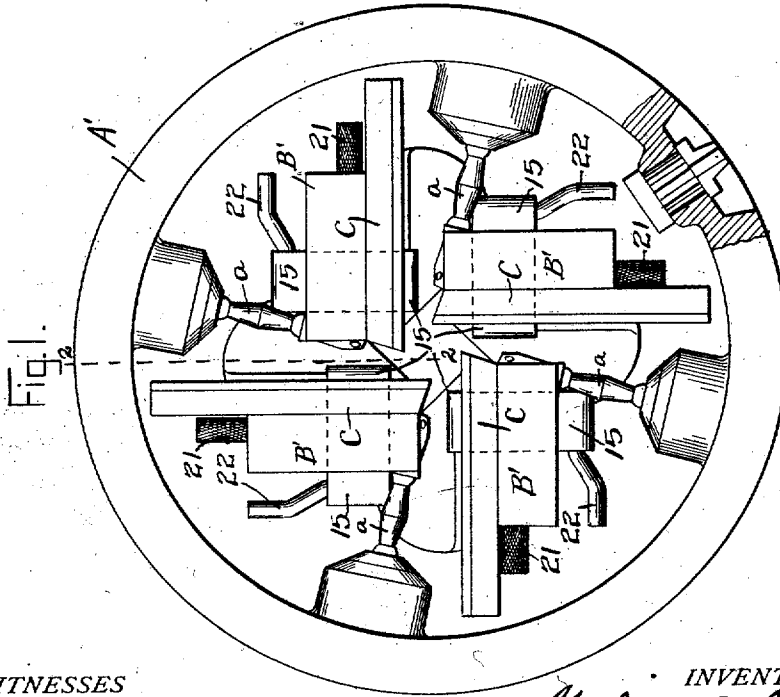
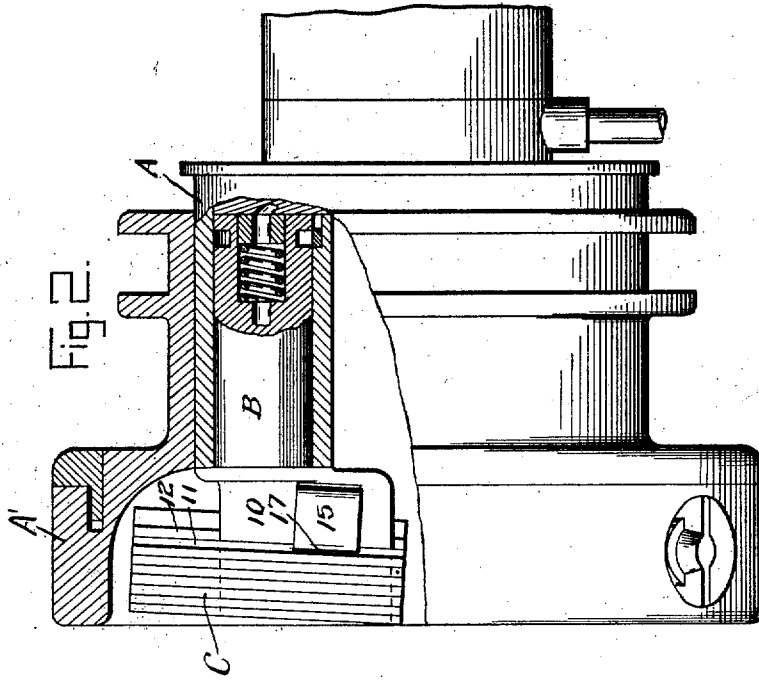
A. B. LANDIS.
CUTTER HEAD.

APPLICATION FILED DEC. 20, 1909.

Patented Feb. 20, 1912.

3 SHEETS—SHEET 1.

1,017,884.



WITNESSES

C. K. Reichenbach.
L. A. Price.

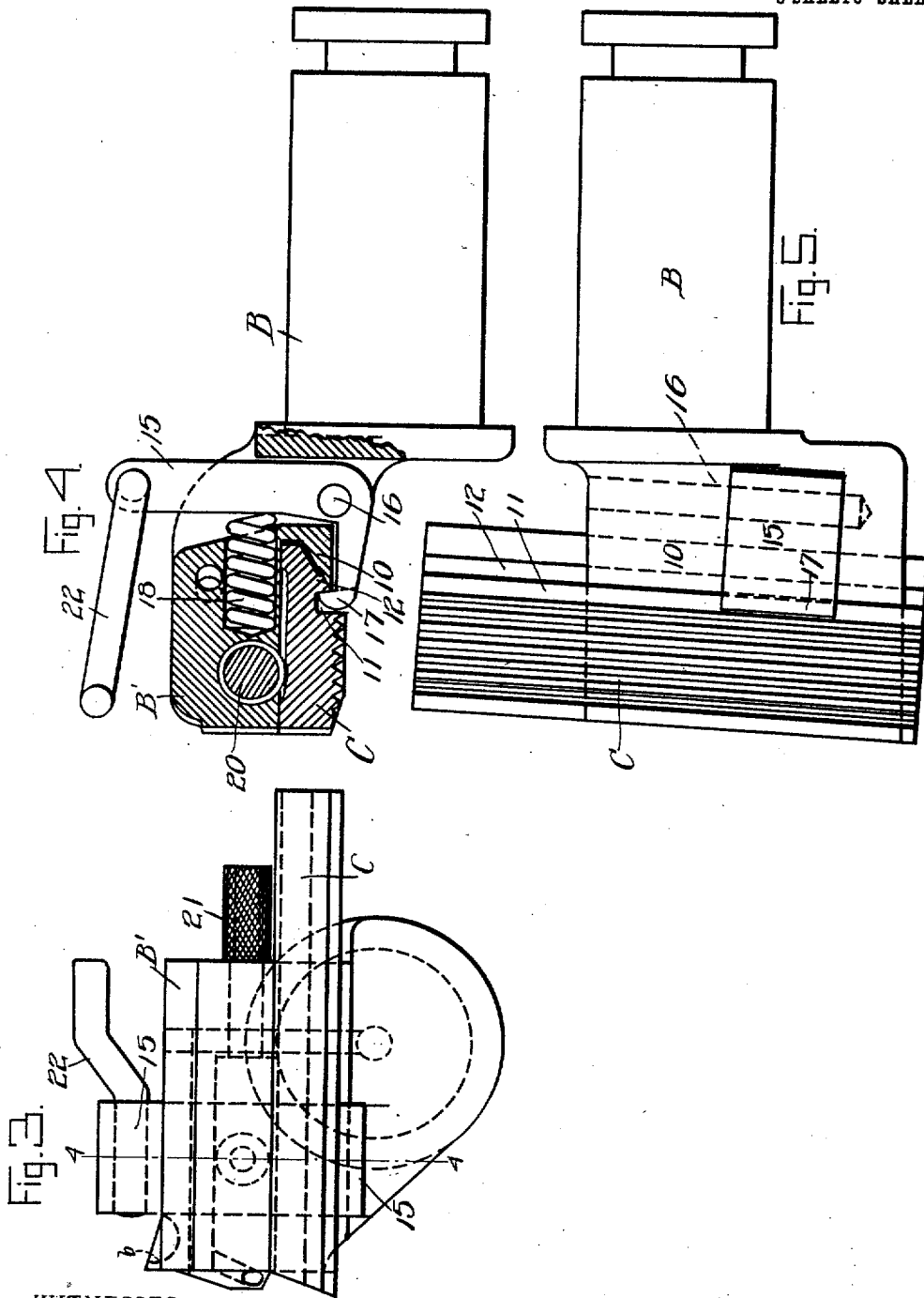
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1,017,884.

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2 SHEETS—SHEET 2.



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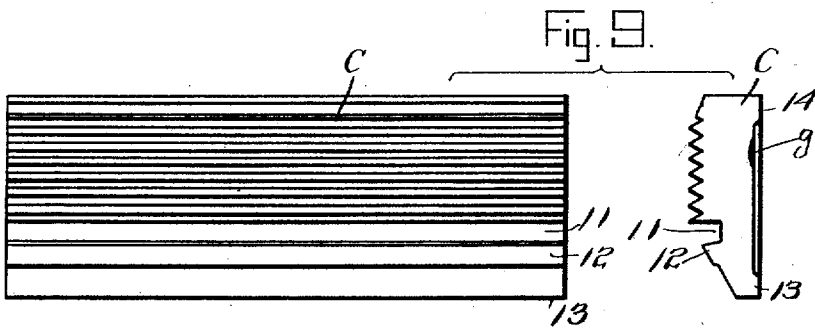
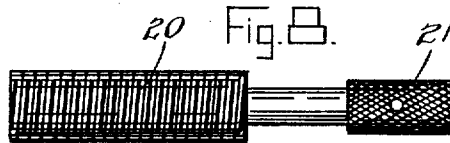
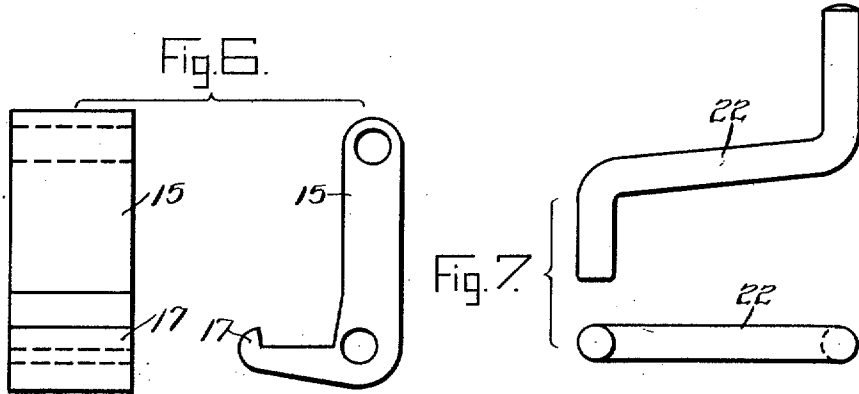
OUTTER HEAD.

APPLICATION FILED DEC. 20, 1909.

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3 SHEETS—SHEET 3.

1,017,884.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ABRAHAM B. LANDIS, OF WAYNESBORO, PENNSYLVANIA.

CUTTER-HEAD.

1,017,884.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed December 20, 1909. Serial No. 534,229.

To all whom it may concern:

Be it known that I, ABRAHAM B. LANDIS, a citizen of the United States, residing at Waynesboro, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Cutter-Heads, of which the following is a specification.

My said invention consists in various improvements in the details of construction and arrangement of parts of cutter-heads for cutting threads on bolts, screws, etc., said invention relating principally to the means for securing the cutter in the cutter-holder, whereby said cutter may be readily secured in a rigid manner and easily and conveniently released and adjusted, all as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a front elevation of the cutter-head embodying my said improvements, Fig. 2 a longitudinal section through the same on the dotted line 2—2 in Fig. 1, except that part of the rim is shown in elevation, Fig. 3 a front elevation of one of the cutter-heads, separate, Fig. 4 a cross section on the dotted line 4—4 in Fig. 3, Fig. 5 an underside plan view of the cutter-holder and cutter as shown in Figs. 3 and 4, and Figs. 5, 6, 7, 8 and 9 detail views showing several of the parts separately.

In said drawings the portions marked A represent the body, or frame, of the cutter-head, B the cutter-holders and C the cutters.

The body or frame A is, or may be, of any approved construction, preferably of the form more fully illustrated and described in my application No. 529,152, filed November 20, 1909. It is formed with the bearings for the cutter-holders located equidistant around a central aperture and is adapted to be secured to the spindle of the machine in any approved manner. It is provided with a part A' surrounding the body and adapted to have a limited longitudinal movement thereon between which and the outer ends of the cutter-holders are interposed suitable toggle pins a.

The construction and operation of the adjusting mechanism for regulating the size of the die and for opening and closing the die may be the same as shown and described

in my above named application, or of any other construction found appropriate.

The cutter-holders B are each of the form best shown in Figs. 3, 4 and 5 and consist of a trunnion adapted to be mounted in one of the bearings provided therefor in the body A, said trunnion carrying on its forward end a part B' which projects to one side of the axis of said trunnion and is formed with a recessed face to receive the cutter. It is also formed on one side with a bearing b for the inner end of the toggle pin a. The inner edge of the recess formed to receive the cutter C is formed with an overhanging flange 10 having a face extending at an angle with the main bearing face for the back of the cutter.

The cutter, or chaser, C is a block of steel of suitable dimensions formed with its inner edge adapted to fit under the overhanging flange 10 and is correspondingly tapered. It is formed with a groove 11 in its face extending longitudinally thereof and adjacent to the tapered edge. The face of said tapered edge is cut back to leave a projecting point 12 adjacent to said groove which will serve as the bearing face for the front of the cutter. On its back it is centrally recessed to leave bearing faces 13 and 14 near its edges. The three faces 12, 13, and 14 constitute the bearing faces of the cutter against the cutter-holder. An angle lever 15 is pivoted at its angle on a pivot 16 in a recess in the part B' of the cutter-holder adjacent to the inner edge thereof. The lower arm of said lever is of a length to project across the overhanging flange 10 and has an in-turned point 17 which is adapted to engage with the longitudinal groove 11 in the cutter. The rear side of said groove and the engaging face of said point are slightly tapered, as shown. A stiff coiled spring 18 is mounted in a recess in the part B', extending at right angles with the recess in which the lever 15 is mounted, its tapered end being adapted to bear against the adjacent edge of said lever, the tension of said spring being to expand and force the upper end of said lever backward and the lower end with its clamping jaw or point 17 upward (when the parts are in the position shown in Fig. 4), or into, the groove 11 against the tapered rear edge thereof, which operates to force the tapered edge of said cutter back into the recess under the overhanging flange 10 forcing the tapered

face 12 back on the incline and throwing the bearing faces 13 and 14 tightly against the main face of the recess in the cutter-holder. Said cutter is also formed with a threaded groove *g* extending longitudinally of its back with which a screw 20, mounted in a longitudinal perforation in the part B', is adapted to engage. The outer end of said screw 20 is formed with a knurled thumb piece 21 on the outer end of its shank, which extends beyond the part B' of the cutter-holder. Said shank is formed of a smaller diameter than the part carrying the threads and a neck portion is thus formed between the threaded portion and said knurled portion which serves as a bearing and turns in a perforation provided therefor in the cutter-holder. A handle 22 is mounted in the top of lever 15 and projects forward to a position convenient to be seized by the hand, as shown in Figs. 3 and 4. By pulling upon the same spring 18 may be compressed and the point 17 released from engagement with the cutter, permitting said cutter to be adjusted in the way, or recess, by the turning of said screw 20, all as will be readily understood. The inner arm of lever 15 with the engaging point 17 is formed of sufficient width to afford a firm engagement with said cutter and provide a secure support therefor.

Under the rules of practice a cross reference is made to my co-pending application No. 529,152.

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

1. A cutter-holder for cutter-heads comprising a body formed with a recess, a chaser mounted in said recess and formed with a longitudinal groove in its face, an angle lever formed with a projecting point adapted to engage with said groove and a spring for normally holding said point into engagement with said groove, substantially as set forth.

2. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter, the inner edge of said recess being formed with an overhanging flange with a tapered inner face, a cutter formed with a tapered outer face adapted to fit under said overhanging flange, and with a longitudinal groove adjacent to said face, a spring pressed pivoted lever carrying a clamping jaw engaging with said groove, and means for holding said cutter longitudinally, substantially as set forth.

3. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter, the inner edge of said recess being formed with an overhanging tapered flange,

a cutter mounted in said recess and formed with its outer face tapered to fit under said flange and also formed with a groove adjacent to said tapered face, a pivoted lever formed with an engaging point adapted to engage with said groove, a spring for holding said point in engagement with said groove, and means for disengaging said point, substantially as set forth.

4. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter, said cutter and recess being formed with tapered engaging faces engaging a short distance from the inner edge of said cutter, another bearing face between the back of the cutter and the main bearing face of the cutter-holder at its inner corner, and another bearing face between the cutter and the cutter-holder at its outer corner, and means for holding said cutter in position, substantially as set forth.

5. A cutter-head comprising a cutter-holder formed with a recess for the cutter, a cutter mounted in said recess, said cutter and cutter-holder being formed to have three bearing faces two of which are at the outer corners on the back of said cutter and one of which is between an overhanging flange on the holder and a bearing face on the face of said cutter at a point inside of the bearing face on the back of said cutter, substantially as set forth.

6. A cutter for thread forming cutter-heads formed with three bearing faces two of which are on its back and adjacent to its outer corners and the other of which is on its front adjacent to the cutting grooves and between its outer edges, substantially as set forth.

7. A cutter for thread forming cutter-heads having thread forming grooves on its face, a beveled surface on its face adjacent to its inner edge, and a clamp groove in its face adjacent to said beveled surface, substantially as set forth.

8. A cutter for thread forming cutter-heads having thread forming grooves on its face, a beveled surface on its face adjacent to its inner edge, a groove in its face adjacent to said beveled surface for engagement with a securing device, and a threaded groove on its back, substantially as set forth.

In witness whereof, I, have hereunto set my hand and seal at Washington, District of Columbia, this 17th day of December, A. D. nineteen hundred and nine.

ABRAHAM B. LANDIS. [L. S.]

Witnesses:

E. W. BRADFORD,
L. A. PRICE.