

No. 778,776.

PATENTED DEC. 27, 1904.

J. A. EBERLE.

SNAP HOOK.

APPLICATION FILED JULY 15, 1904.

FIG. I.

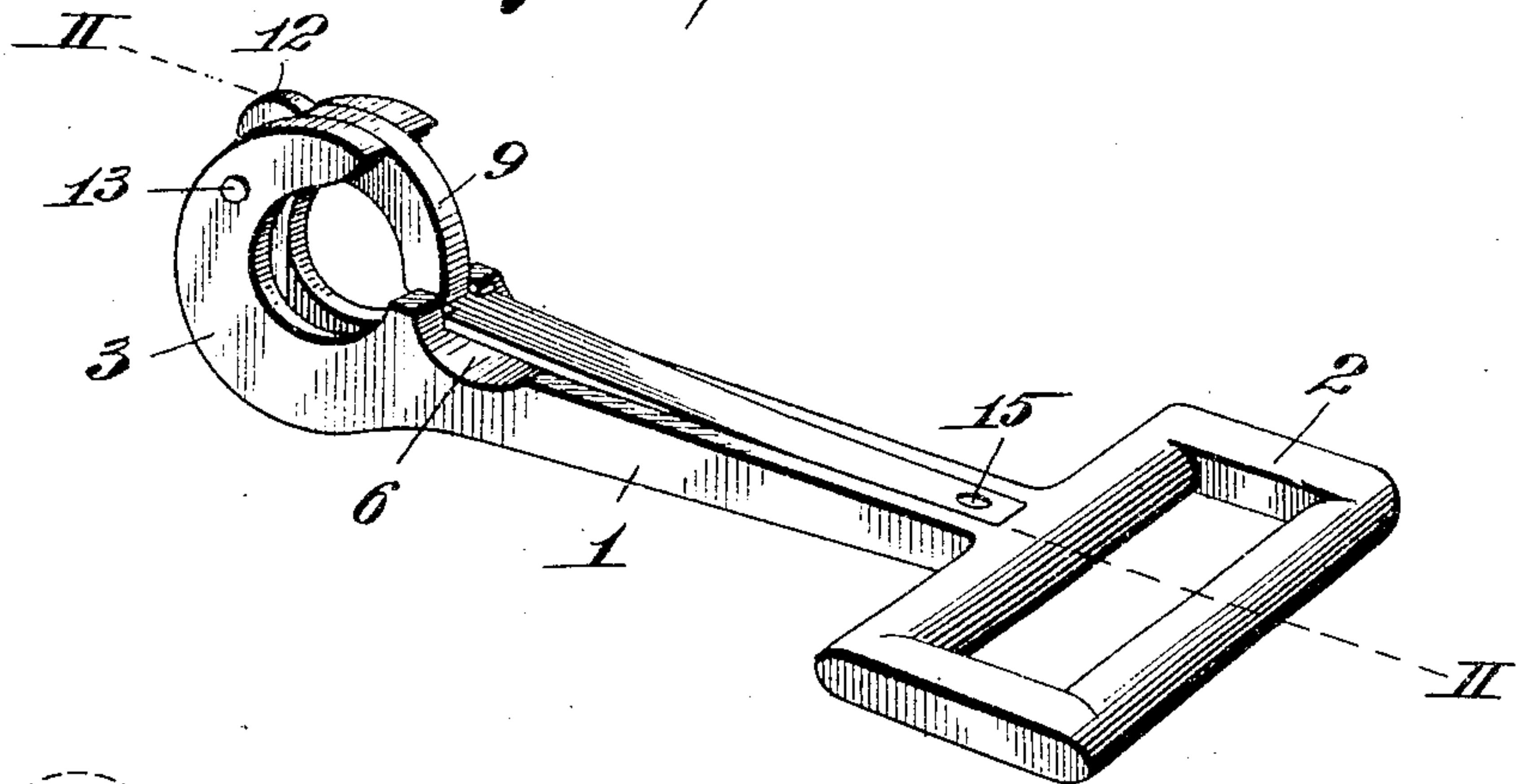


FIG. II.

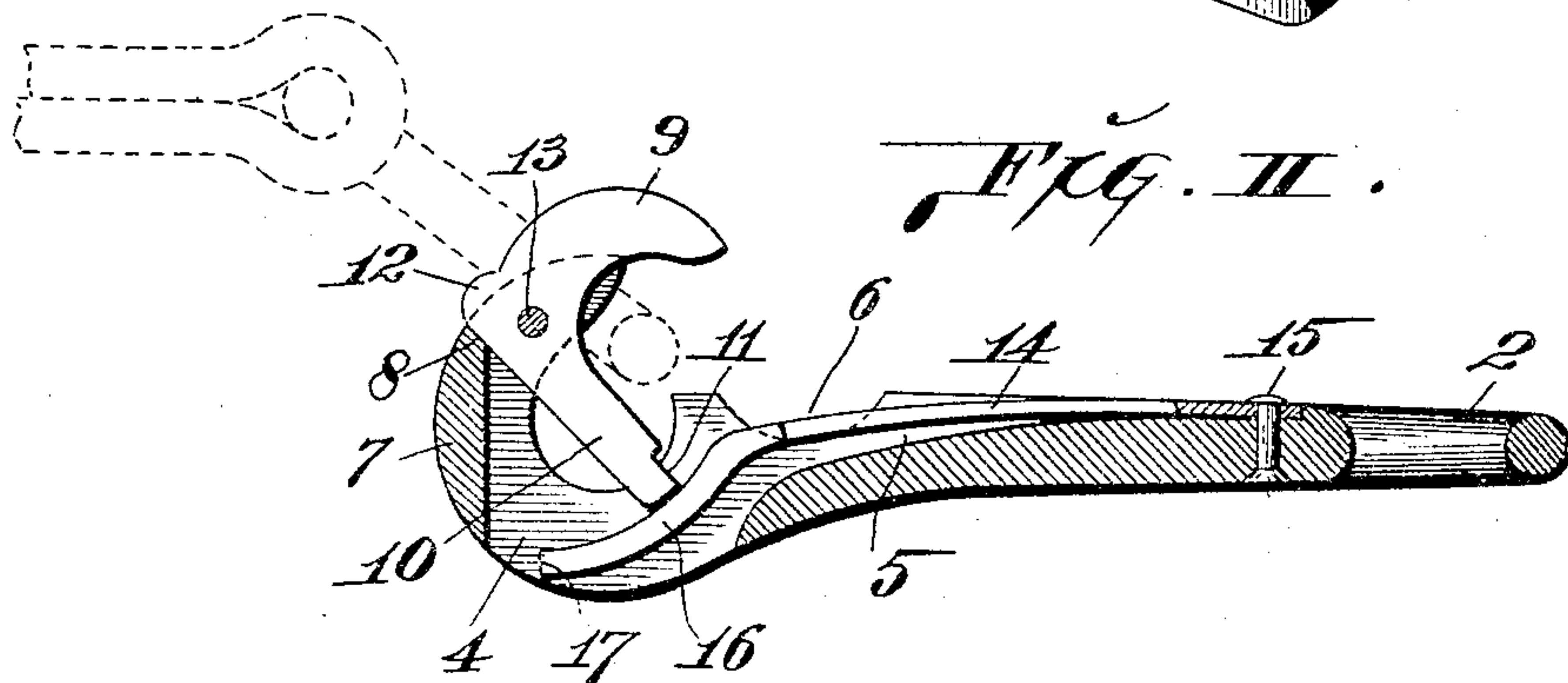
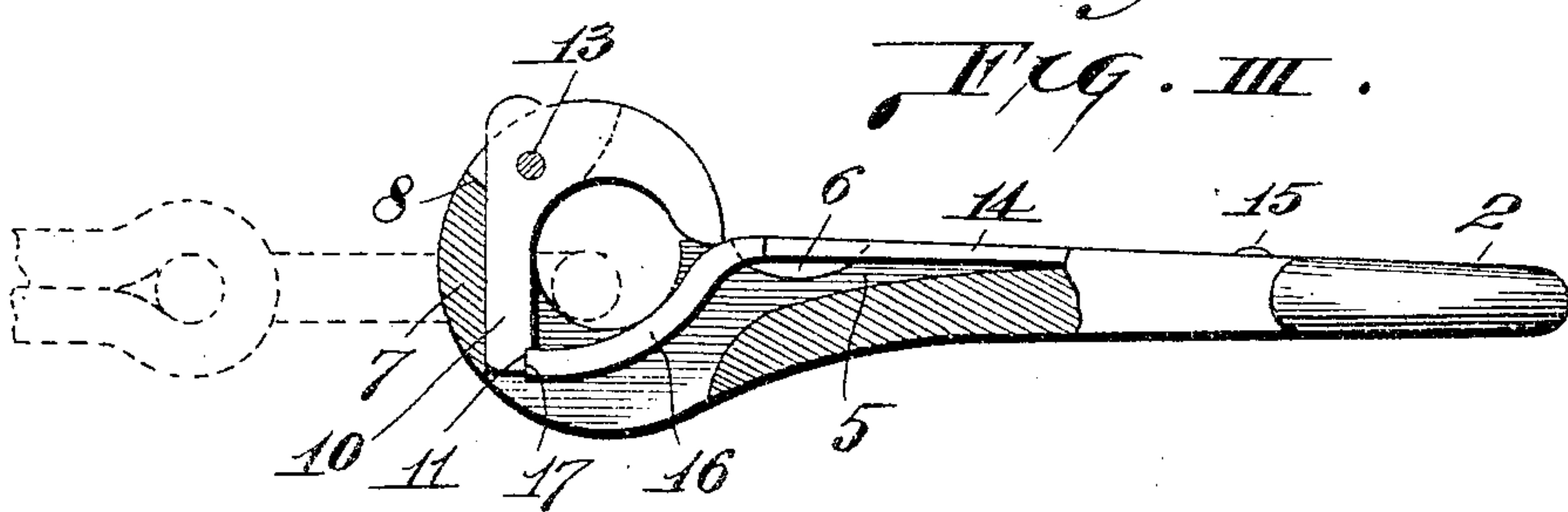


FIG. III.



attest:—

M. J. Smith,

Blanche Hogan

Inventor:—

John A. Eberle.

By Knight, Bro.

attys.

UNITED STATES PATENT OFFICE.

JOHN A. EBERLE, OF ST. LOUIS, MISSOURI.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 778,776, dated December 27, 1904.

Application filed July 15, 1904. Serial No. 216,654.

To all whom it may concern:

Be it known that I, JOHN A. EBERLE, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Snap-Hooks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a snap-hook of the safety type ordinarily used in connection with harness, the object of my invention being to provide a simple, inexpensive, and easily-operated hook which may be closed or locked with a single movement and when so locked cannot become accidentally opened to allow the release of the ring or other part of harness that it engages.

Figure I is a perspective view of a hook of my improved construction. Fig. II is a longitudinal section taken on line II II, Fig. I. Fig. III is a view analogous to Fig. II and showing the hook or keeper in a closed or locked position.

In the construction of the device shown, 1 indicates the shank of my improved hook, the same terminating at its rear end in a horizontally-disposed loop 2, these parts being integral with each other. The opposite end of the shank 1 terminates in a hook 3, the same being vertically slotted or bifurcated, as indicated by 4, said slot being extended in the form of a groove 5 along the top face of the shank 1 and terminating adjacent to the loop 2. Formed in the top of the shank, at a point adjacent the beginning of the hook portion 3 and above the point where the slot 4 joins with the groove 5, is a notch 6.

7 indicates the wall of material forming the shank 1, that joins the sides of the hook formed by the vertical slot or bifurcation 4, and the upper end of this wall 7 is formed with an inclined face or shoulder 8.

9 indicates a curved hook or keeper the lower end 10 of which is made straight and provided on the inner face with a notch 11. A lug 12 is formed integral with the outer face of the hook 9 at the point where it joins with the straight lower end 10. This hook or keeper is positioned in the slot or bifurca-

tion 4, with the straight lower end extending downwardly adjacent the wall 7, and said hook is pivotally held by a pin 13, that passes through the side walls of the hook 3 and through the hook 9 at a point adjacent the lug 12 thereon. A leaf-spring 14 occupies the groove 5 and is rigidly fixed to the shank 1 by a rivet 15 at the end of said groove, the forward end 16 of said spring curving downwardly through the slot or bifurcation 4, its point or free end terminating in a straight face or shoulder 17, that normally occupies a position opposite the lower end of the wall 7.

My improved hook is shown closed in Figs. I and III, and when so closed the straight portion 10 of the hook or keeper 9 occupies a vertical position immediately against the wall 7, and the straight shoulder 17 on the end of the spring 14 occupies the notch 11 in the lower end of said portion 10. The point of the hook or keeper 9 is positioned on the spring 14 at a point immediately in front of the notch 6 in the shank 1, and when the parts are in these positions the hook is positively locked and the ring or other part of the harness that is engaged by said hook cannot be disengaged therefrom until the spring 14 is depressed to allow the hook or keeper 9 to swing open. This operation is accomplished by placing the thumb or finger in the notch 6 and pressing downwardly upon the spring 14. This causes the point of the spring to be disengaged from the notch 11, and the hook or keeper is now free to swing upon the pivot-pin 13 upwardly and rearwardly into the position shown in Fig. II, and in so doing the lower end of the portion 10 rides upon the curved upper face of the portion 16 of the spring, thus frictionally holding the hook or keeper 9 during its opening movement. The hook or keeper 9 is limited in its movement by reason of the rear side of the lug 12 contacting with the inclined shoulder 8 on the upper end of the wall 7, and when the hook is in this position a ring or other part of the harness to be secured can be readily passed between the point of the hook or keeper and that portion of the shank immediately in front of the notch 6. When said ring or other part of the harness strikes against the front side

of the part 10, the hook is swung downwardly and rearwardly into its closed position and until the point of the spring 17 locks in the notch 11. The lug 12 may be engaged by the
5 thumb or finger to swing the hook or keeper 9 into an open position when the spring 14 is depressed.

My improved hook can be quickly opened, is instantly closed by pressure of the ring or
10 harness to be engaged upon the lower end of the hook or keeper, and said hook possesses superior advantages in point of simplicity, durability, and general efficiency.

I claim as my invention—

15 1. A snap-hook consisting of a shank having a bifurcated end, the two arms of which are connected by a wall, a hooked keeper pivotally held in the bifurcated end of the shank, and a leaf-spring fixed to the shank and which
20 engages one end of the keeper; said keeper being arranged to engage against said wall in both its open and closed positions, substantially as set forth.

25 2. A snap-hook consisting of a shank having a bifurcated end, the two arms of which

are connected by a wall, a hooked keeper pivotally held in the bifurcated end of the shank, and a leaf-spring fitted to the shank and which engages the end of the keeper; said keeper
30 being arranged to engage against said wall in both its open and closed positions, and said spring acting to lock said keeper in its closed position until it is moved by hand out of engagement with the keeper, substantially as set forth.

35 3. A snap-hook comprising a shank, a loop integral with one end of said shank, a slotted hook integral with the opposite end of said shank, a wall connecting the sides of the hook formed by the slot through the shank, a hooked
40 keeper pivotally held in the slotted end of the shank, said keeper engaging against the wall in both its open and closed positions, and a leaf-spring fixed to the shank and engaging one end of the keeper, substantially as set forth. 45

JOHN A. EBERLE.

In presence of—

NELLIE V. ALEXANDER,
BLANCHE HOGAN.