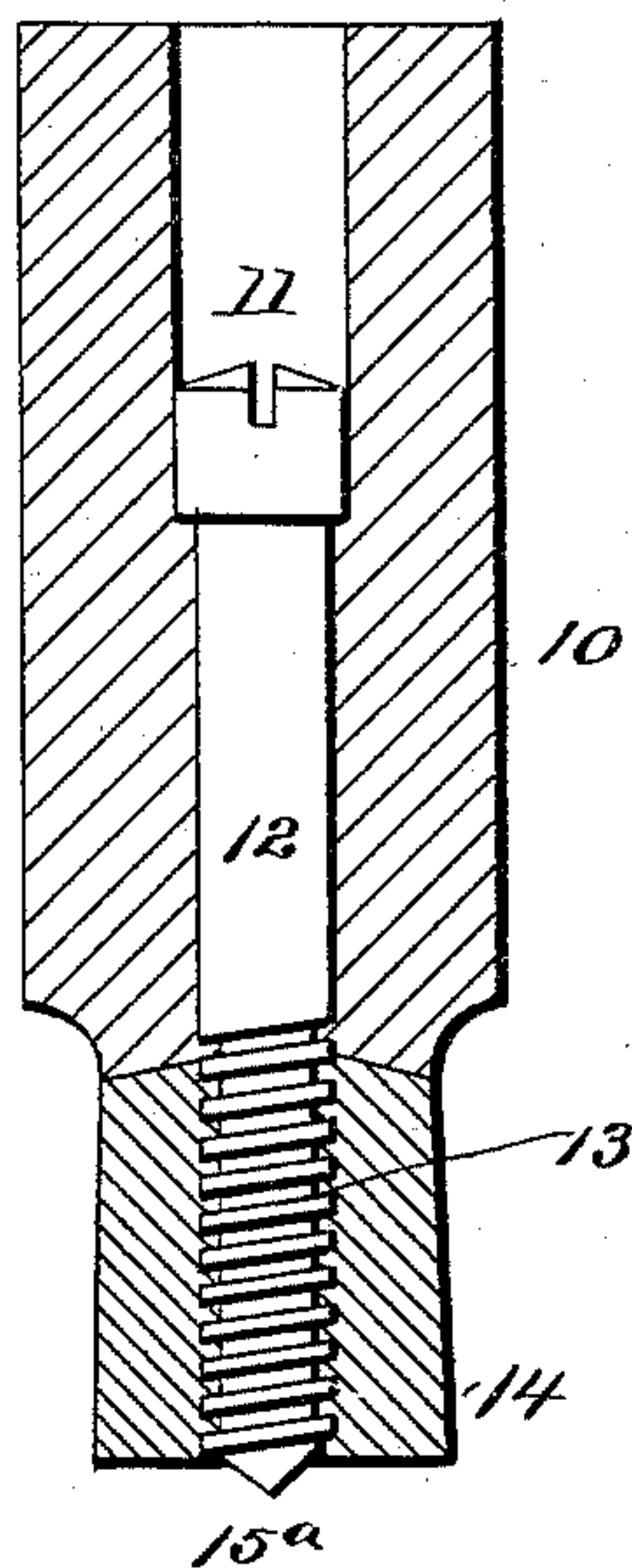


(No Model.)

F. N. SIMMONDS.
PUNCH.

No. 473,791.

Patented Apr. 26, 1892.



WITNESSES :

H. Walker
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INVENTOR

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UNITED STATES PATENT OFFICE.

FRANCIS N. SIMMONDS, OF SAN FRANCISCO, CALIFORNIA.

PUNCH.

SPECIFICATION forming part of Letters Patent No. 473,791, dated April 26, 1892.

Application filed December 1, 1891. Serial No. 413,682. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS N. SIMMONDS, of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Punch, of which the following is a full, clear, and exact description.

My invention relates to improvements in the construction of punches such as are used on metal work and for punching holes in articles generally; and its object is to produce a punch which may be cheaply made, which will operate efficiently, and the penetrating portion of which can be cheaply and easily renewed after it is worn out.

To this end my invention consists in a punch the construction of which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which my improved punch is shown in central vertical section.

10 is the longitudinally-bored body of the punch, the upper end of the bore being enlarged, as at 11.

14 is the removable face of the punch, which has a screw-threaded bore aligning the bore of the body 10. A bolt 12, having an operating-head at its upper end, is passed down through the bores of the body 10 and face 14

until its head rests on the shoulder formed at the base of the enlargement 11, the lower end of the bolt being threaded, as shown at 13, to engage the threads of the bore of the face 14. The lower extremity of the bolt is formed into a hardened centering-point 15^a. The several parts are by this construction firmly united and there is no liability of the face 14 getting loose upon the bolt, as it might if its bore and the exterior of the screw were plain or non-threaded.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A punch consisting in a body 10, provided with a longitudinal bore, the upper end of which is enlarged, as at 11, a face 14, having a screw-threaded bore, and a screw 12, having an operating-head at its upper end and a screw-threaded lower end terminating in a centering-point 15^a, the screw being passed down through the two bores, with its threaded end engaging the threaded bore of the face and its point projecting beyond the lower side of the face 14, substantially as set forth.

FRANCIS N. SIMMONDS.

Witnesses:

JOHN P. POOLE,
WILLIAM S. WEBSTER.