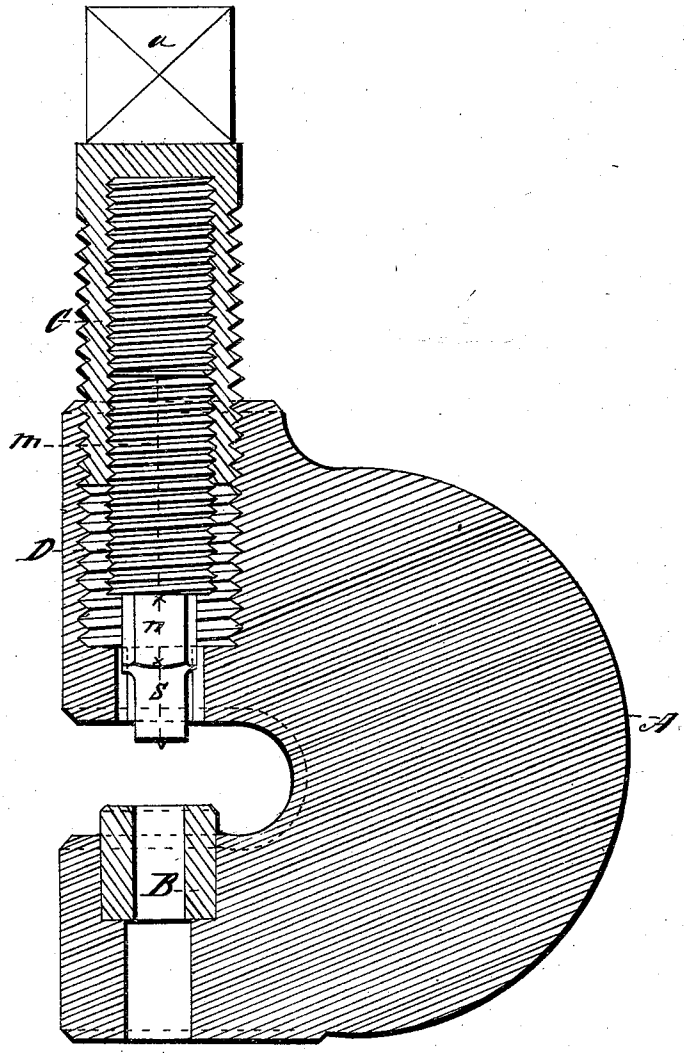
J. F. Allen,

Metal Punch,

No. 52,810. Patented Feb. 27, 1866.



Witnesses,

Henry E. Rader

David Knowles

Inventor

John F. Allen

UNITED STATES PATENT OFFICE.

JOHN F. ALLEN, OF NEW YORK, N. Y.

IMPROVED APPARATUS FOR PUNCHING.

Specification forming part of Letters Patent No. **52,810**, dated February 27, 1866.

To all whom it may concern:

Be it known that I, JOHN F. ALLEN, of New York, in the county and State of New York, have invented a new and Improved Screw Punch or Press; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists in the arrangement at the upper part of the punch or piston of a screw-thread having a fine pitch and made to enter the screw-plug, which latter is screwed into the jaw or head of the punch or press, the pitch of the screw of this screw-plug being considerably coarser. By this combination and arrangement a powerful punch or press is obtained.

In the accompanying drawing, which represents my invention as applied for a punch, A represents the jaw or frame of the punch, in the lower part of which the die B is fixed. Into the upper part of this jaw the screw-plug C is fitted, provided at its upper end with a square head, *a*, to which a lever or handle is attached for the purpose of turning this screw-plug C, and thereby operating the punch.

D is the punch, the lower part, *s*, of which is made round, of the required size. Above this round part *s* the part *n* is made square or polygonal and fitted into a corresponding hole in the bottom of the upper part of the jaw, so as to prevent the punch D from turning while being forced downward or moved upward. The upper part, *m*, of this punch D is provided with a screw-thread having a finer pitch than the screw-thread made on the screw-plug C. The screw part *m* of the punch D is made to screw into the screw-plug C.

Instead of making the punching part *s*, the square or guiding part *n*, and the top screw *m* all in one piece, as here described and represented, the same may be so arranged as to fit the lower or punching part, *s*, into the square part *n*.

When the screw-plug C is screwed down into the head of the jaw or frame the punch D will at the same time screw itself into said screw-plug C, as said punch D is prevented from turning; but as the pitch of the thread of the screw-plug C is larger than the pitch of the thread on the upper end of the punch D, said punch D will at the same time be forced downward into the die B in such a manner as to punch a hole into any plate placed between the punch and the die. The power applied on the head of the screw-plug is multiplied and increased by the difference and proportion between the pitch of the thread of the screw-plug and pitch of the thread on the end of the punch.

I do not claim, broadly, the arrangement and use of two screws having different pitches and operating together; but

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

The arrangement and combination of the punch D, or its equivalent, screwed into the screw-block C, the pitch of the thread on the punch D being finer than the pitch of the thread on the block C, and acting together in such a manner that while the punch D is prevented from turning, the same will be forced downward by a power applied to the block C, the whole being arranged and combined in the manner and for the purpose substantially as described.

JOHN F. ALLEN.

Witnesses:

HENRY E. ROEDER,

DAVID MOSHER.