S. H. JENKINS.

Punches for Metal.

No. 199,715. Patented Jan. 29, 1878.

Fig. 1

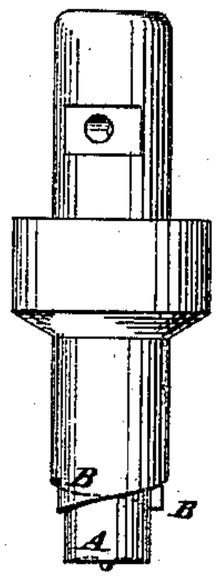


Fig. 2

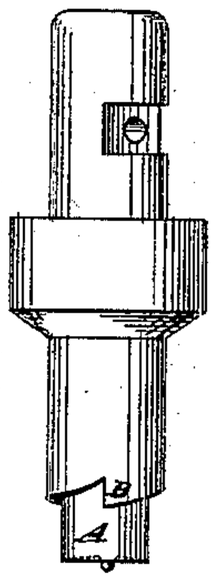
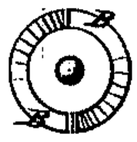


Fig. 3



WITNESSES:

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SAMUEL H. JENKINS, OF NASHVILLE, TENNESSEE.

IMPROVEMENT IN PUNCHES FOR METAL.

Specification forming part of Letters Patent No. **199,715**, dated January 29, 1878; application filed June 30, 1877.

To all whom it may concern:

Be it known that I, SAMUEL H. JENKINS, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and Improved Punch for Metal, of which the following is a specification:

The object of this invention is to construct a tool which will cut a true hole through heavy boiler-plate, &c.—that is to say, having the sides of the hole parallel and leaving no ragged edge at the base of the hole—all of which I accomplish by having the tool made of two diameters. The punch, being the smallest, drives its piece out of the plate; but just previous to its being driven through, the cutting-edges of two spirals take hold, and with a shearing cut remove the ragged edges of the hole, leaving it as clean as if drilled, the construction and operation of my invention being described as follows:

Figure 1 represents a side view, showing the points of both cutting-edges of the shears or cutters. Fig. 2 is a side view of the same in different positions. Fig. 3 is a plan of the same.

Similar letters of reference indicate corresponding parts.

In the case here presented the punch-point is made bolt-shaped, as punches now in use, as shown at A, and one-quarter of an inch (more or less) from the point there are two supplemental cutters, B B′. Each of the said cutters forms a semi-spiral around the punch, running in the line of a double screw.

It will here be observed that the cutters B B′ are made in one solid piece with the punch, and are of greater diameter than the punch proper. Thus in punching a hole through heavy boiler-plate the point forces a wad of its own diameter through, or nearly through, the plate; and the cutters on the upper section of punch, being made in spiral form, give a shearing cut by the continuous downward movement of the punch, thereby serving to remove the ragged edges of the hole punched, and leaving it as clean as though it had been drilled with one operation.

The advantage which my invention has over others now in use is, first, that in having the spiral cutters B B′ evenly spaced all lateral strain on the punch is obviated; secondly, the point acts as a guide to steady the punch until the cutters have caught a sufficient gripe to insure perfect work.

The cutters produce a clean shearing cut, and are designed to cut out a portion around the punched hole, so as to make it perfectly true and of required size, leaving its lower edge free from rag or swell, thus enabling boiler-plates, &c., to be made to match without hammering or straining, and consequent weakening of parts.

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

The spiral shears or supplemental cutters B B′, in combination with the punch A, the same being constructed, arranged, and operated in the manner and for the purpose substantially as herein set forth, shown, and described.

SAMUEL H. JENKINS.

Witnesses:
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CHARLES H. NASH.