

(No Model.)

S. L. BARRIETT.
PUNCH.

No. 582,582.

Patented May 11, 1897.

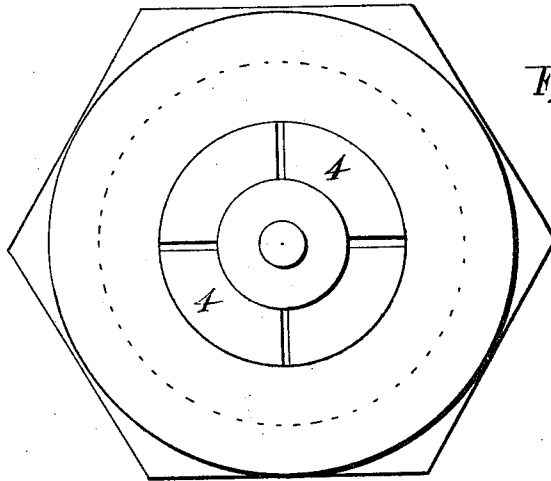


Fig. 1

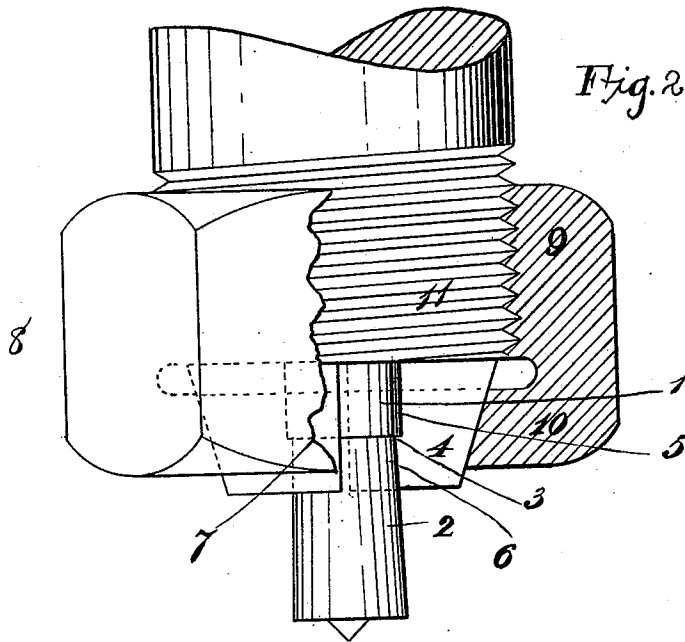


Fig. 2

Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL L. BARRIETT, OF NEW YORK, N. Y., ASSIGNOR TO JOHN M. CORNELL, OF SAME PLACE.

PUNCH.

SPECIFICATION forming part of Letters Patent No. 582,582, dated May 11, 1897.

Application filed November 17, 1896. Serial No. 612,405. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL L. BARRIETT, a citizen of the United States, and a resident of the city of New York, county of New York, and State of New York, have invented a new and useful Improvement in Punches and Holders, of which the following is a specification.

My invention has relation to certain new and useful improvements in punches and in holding-jaws therefor, which will be fully set forth in the following specification, illustrated in the accompanying drawings, and pointed out in the claims.

The object of my invention is to so construct the punch proper that it may be readily and cheaply formed from a section of a rod of suitable material by turning off part of the peripheral face of such section to form a retaining shoulder or abutment, thus obviating the necessity of losing but a minimum amount of the material during the process of manufacturing the parts.

A further object is to so construct the internal face of the jaws and operatively hold said jaws in contact with the punch that the latter will be reliably held to its work against any lateral or other movement, enabling the punch to be promptly withdrawn from the hole formed by it.

A difficulty arising from the use of punches constructed as now in common use rests in the fact that an insufficient means is provided for withdrawing the punch after it has entered the hole formed by it, as in practice the grasp of the parts designed to hold the punch will be overcome by the cohesion of the point of the punch with the walls of the hole formed by it.

Referring to the drawings, Figure 1 is a bottom plan view of the punch and the holder therefor. Fig. 2 is a side elevation of the punch, showing the retaining-jaws mainly by dotted lines, also showing a holder for the jaws, partly in section.

Reference to the details of my invention will be made by figures.

The essential feature of novelty of my invention may be said to consist in so forming the punch proper that it will have the cylin-

drical shank 1, preferably having the same diameter throughout in cross-section, and integrally formed therewith the outwardly-tapered section 2, the inner end of which, being of less diameter than said shank, provides at its point of juncture therewith the offset or shoulder 3, and while I have described the preferred construction for the periphery of the punch, shank, and body it will be understood that any equivalent thereof is comprehended by me.

In order that the punch may be securely grasped and held in its operative position, I provide the jaws 4, which may be multiplied in number as desired and when assembled form in general outline an inverted truncated cone provided with a central bore, the upper portion 5 of which being cylindrical will receive and reliably seat the shank 1, while the lower portion 6 of said aperture thus provided by the union of the jaws 4 is of less diameter at its upper end than the cylindrical section, thus providing the offset 7, upon which the shoulder 3 is received. The remaining portion of the aperture 6 is gradually enlarged or tapered outwardly, being designed to snugly receive that portion of the body 2 grasped thereby.

In order that the several jaws 4 may be held in their assembled position, I provide the holder 8, the upper section of which is provided with the internally-threaded flange 9, while the lower section thereof is formed with the inwardly-tapered seat 10, and it will be readily apparent that when the jaws are placed in position in said seat and the shank of the punch entered in the aperture provided thereby the tendency will be to direct said jaws into positive engagement with the punch, which tendency is supplemented by the pressure brought to bear upon the upper face thereof and upon the upper end of the punch by the threaded end 11 of the stem 12.

By the construction above set forth it will be readily apparent that I have produced a reliably-efficient means for operatively combining the upper end of the punch with the retaining-jaws, to the end that the punch will be positively held to its work. It will be

further observed that the several parts may be readily and cheaply formed, enabling any one of them to be removed and replaced.

5 A further advantage arising from my construction resides in the fact that the punch proper may be readily removed and replaced by a downward movement of the holder upon the stem, which results in permitting sufficient upward play of the jaws to cause the
10 disengagement therewith of the shank of the punch.

Having thus fully described the construction, advantages, and operation of my improved punch and holder, what I claim as new,
15 and desire to secure by Letters Patent, is—

20 1. A punch having a shank of uniform cross-section throughout and a body reduced in diameter adjacent the shank forming an abrupt abutment, and tapering outwardly therefrom to its extremity, as set forth.

2. A punch having a shank of uniform cross-section throughout and a body frusto-conical

in shape with its reduced diameter arranged next the shank, forming an abutment, as set forth.

25 3. In combination with a punch having a shank of uniform cross-section throughout and a body reduced in diameter adjacent thereto forming an abutment and tapered outwardly therefrom to the face of the punch, a series of jaws, having a tapered exterior and forming a corresponding counterbore adapted to grasp the shank and punch, a coupling or head having a tapered aperture and means
30 for forcing the series of jaws within the aperture and cause them to grasp the punch, as set forth.

In testimony that I claim the foregoing as my own invention I hereto affix my signature in presence of two witnesses.

SAMUEL L. BARRIETT.

Witnesses:

HULBERT PECK,
ALVA PECK.