No. 884,350. PATENTED APR. 7, 1908.

W. CARMAN.

PUNCH.

APPLICATION FILED DEC. 24, 1907.

Fig. 1.

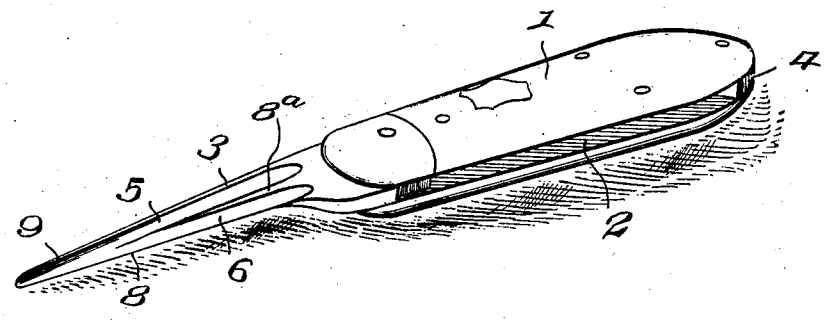


Fig. 2.

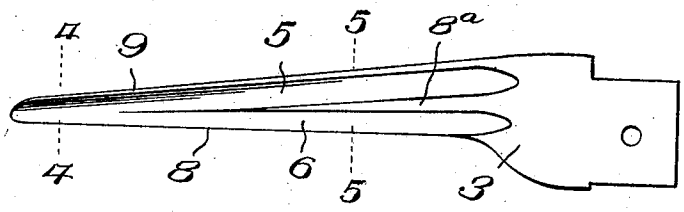


Fig. 3.



Fig. 4.

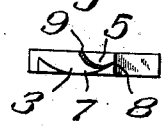
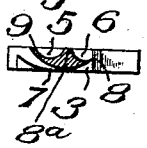


Fig. 5.



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PUNCH.

No. 884,350. Specification of Letters Patent. Patented April 7, 1908.

Application filed December 24, 1907. Serial No. 407,892.

To all whom it may concern:

Be it known that I, WILLIAM CARMAN, a citizen of the United States, residing at Napanoch, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Punches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in punches and more particularly to that class adapted to be used for cutting holes in leather and my object is to provide a punch of this class, which may be secured to a handle, such as a knife handle, whereby the punch, when not in use, may be closed into the handle, similar to a knife blade.

A further object is to provide grooves in the punch, so that the parts of the leather removed by the punch, may readily feed through the grooves and not retard the operation of the punch and a still further object is to provide means for reinforcing the parts of the punch, whereby a very thin cutting edge may be provided without unduly weakening the parts of the punch.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings which are made a part of this application, Figure 1 is a perspective view of the punch and handle therefor, said punch being shown in an open position. Fig. 2 is an elevation of the punch removed from the handle Fig. 3 is an edge elevation thereof. Fig. 4 is a sectional view as seen on line 4—4, Fig. 2, and, Fig. 5 is a sectional view, as seen on line 5—5, Fig. 2.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the handle for my improved punch and preferably consists of the usual form of knife handle, said handle having a cavity 2 extending inwardly from one edge thereof, in which the punch 3 is adapted to extend when the punch is in its closed position, said punch being pivotally mounted at one end of the handle and having a spring 4 engaging the pivoted end thereof, whereby the punch will be normally held in its open or closed position, said spring acting on the punch in a similar manner to the action of a spring on a knife blade.

The punch 3 is formed in the shape of a blade, one face of which is provided with a main and auxiliary groove 5 and 6, while the opposite face 7 of the blade is curved to give a semi-circular shape to the punch, the lower edge 8 of the blade being sharpened to form a cutting edge and the blade is tapered from its inner to its outer end and the extreme outer end of the blade is also sharpened so that the punch may be readily entered into the leather.

The main groove 5 is extended the full length of the cutting portion of the punch and is parallel with the upper edge of the blade, while the auxiliary groove 6 is parallel with the cutting edge of the blade and extends from adjacent the inner end thereof, to the point of inter-section with the main groove 5, or slightly beyond the longitudinal center of the blade and it will be seen that as the punch is passing through the leather, that portion of the leather removed by the outer end of the punch, will pass through the main groove 5, while that portion of the leather removed by the upper portion of the punch will pass through the auxiliary groove 6, thereby preventing the punch from becoming choked with the removed portions of the leather.

By providing one face of the blade with the two grooves 5 and 6, a rib 8^a is formed between the two grooves, which will greatly strengthen the blade and permit the cutting edge to be made very thin, the position of the rib being such as to overcome the weakening effects of the blade by reducing the thickness of the cutting edge.

The upper edge 9 of the punch 3 is so shaped, by providing the groove 5 parallel with the edge 9, that the blade may be readily engaged by the thumb nail to open the blade.

The punch when in its closed position may be readily carried in the pocket, the same as a knife, and when the blade is open, the handle 1 provides a convenient gripping surface, whereby the punch may be readily applied to use.

It will thus be seen that I have provided a very cheap, strong and economical form of punch, and by providing a handle of the class described, said punch may be readily transported and quickly arranged to be used and it will further be seen that by providing

the double groove in the face of the punch, said punch will be prevented from becoming choked by the particles of the leather removed by the punch and the rib between the grooves will add strength to the blade and compensate for the reduction of the metal at the cutting edge.

What I claim is:

1. A punch of the class described, comprising a blade having one of its faces curved and the opposite face thereof provided with a main and auxiliary groove, a cutting edge for said blade and a handle, to which said blade is secured.

2. A punch of the class described, comprising a blade, a handle pivotally secured to said blade, said blade being tapered towards one end thereof, a main and auxiliary groove in one face of said blade and paralleling, respectively, the upper and lower edges of the blade and a reinforcing rib between the main and auxiliary grooves, adapted to strengthen the blade.

3. In a punch of the class described, the combination with a handle, having a cavity therein and a spring at the rear of said cavity; of a punch pivotally secured to one end of said handle and adapted to move into said cavity when in its closed position, said punch having one of its faces curved and the opposite face thereof provided with a main and auxiliary groove, said main groove extending substantially the full length of said punch, and the auxiliary groove intersecting the main groove at a point adjacent the longitudinal center of the punch, a cutting edge parallel with the auxiliary groove and a rib between the main and auxiliary grooves.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM CARMAN.

Witnesses:
WILLIAM C. ROSE,
W. C. COTALLY.