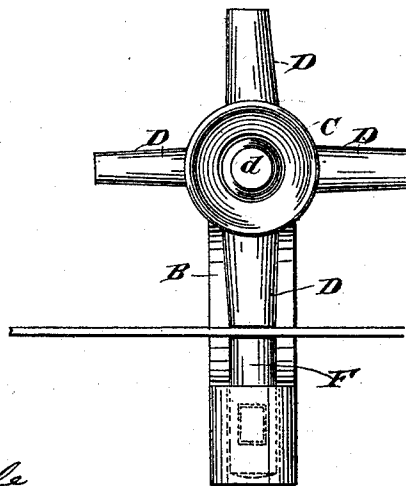
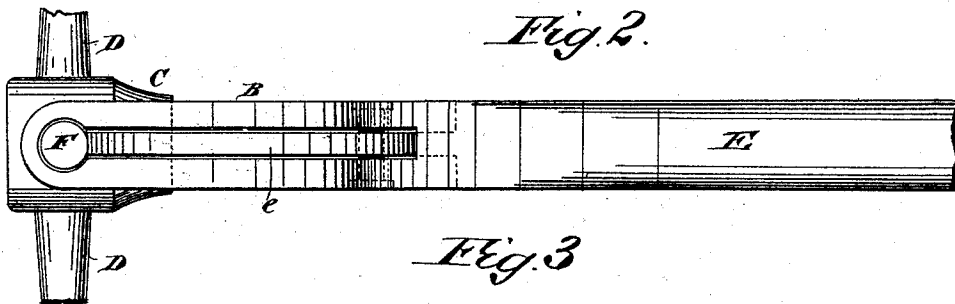
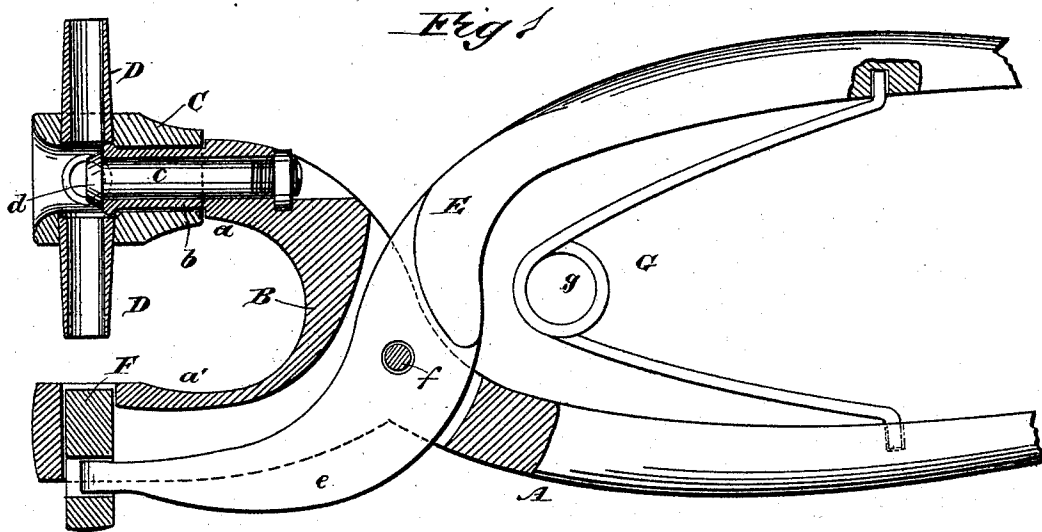


(No Model.)

W. CAREY.
HAND PUNCH.

No. 499,094.

Patented June 6, 1893.



WITNESSES:

F. M. Andle
C. Sedgwick

INVENTOR:

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UNITED STATES PATENT OFFICE.

WILSON CAREY, OF FOREST HILL, CALIFORNIA.

HAND-PUNCH.

SPECIFICATION forming part of Letters Patent No. 499,094, dated June 6, 1893.

Application filed March 3, 1892. Serial No. 423,634. (No model.)

To all whom it may concern:

Be it known that I, WILSON CAREY, of Forest Hill, in the county of Placer and State of California, have invented a new and Improved

5 Hand-Punch, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—
Figure 1 is a side elevation, partly in section, of my improved punch. Fig. 2 is a plan

10 view; and Fig. 3 is a front elevation.

Similar letters of reference indicate corresponding parts in all the views.

My invention is an improvement in the class of hand punches which are intended and

15 specially adapted for making holes in leather, cloth, rubber, &c. The features of novelty are hereinafter set forth.

The handle A, is provided with a forked or U-shaped end B, having the arms *a, a'*. The

20 arm *a* terminates in a sleeve *b*, which is slightly enlarged at its outer end and to which is fitted the boss C, the said boss being kept in place on the sleeve *b* by a slight increase in the diameter of the sleeve at the extremity.

25 In the boss C, are inserted punches D, which may be of the same size or of different sizes, and in the sleeve *b* is inserted a bolt *c*, having a conical head *d* which extends over the inner ends of the tubular punches D, and

30 tends to force the small pieces of leather or other material removed by the punches out through the center of the boss.

The arm *a'* is slotted, and the handle A is mortised to receive the shorter arm *e* of the lever handle E, which is fulcrumed on a piv-

35 tal pin *f* extending through the handles A, E. The arm *a'* is bored to receive the follower F, which is mortised to receive the end of the arm *e* of the lever handle E. The follower F

40 is made of soft metal such as brass or copper,

and is axially in line with one of the punches D, when the said punch is in the position of use.

In the inner surfaces of the handles A, E, are formed holes for receiving the ends of a V-shaped spring G, placed between the handles and exerting an outward pressure upon them. The V-shaped spring G is preferably made with a volute spiral *g* at the angle thereof, to give the spring greater elasticity. With this construction the follower F, is made to advance toward the punch D, and in the same vertical plane therewith. This construction insures an equal pressure on all portions of the end of the punch, and avoids the lateral strain common to punches in which both jaws have a swinging motion.

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

1. The combination, of the handle A provided with the forked end B, having the sleeve *b*, the boss C placed on the sleeve and carrying one or more punches D, a bolt *c* inserted in the sleeve *b* and provided with the conical head *d*, the follower F, the lever handle E, and the V-shaped spring G, substantially as specified.

2. In a hand punch, the combination, of a support provided with the sleeve *b*, the boss C, mounted revolubly on the sleeve *b*, the tubular punches D carried by the boss, and the conically headed bolt *c* inserted in the sleeve *b* and boss C, and adapted to discharge the punchings, substantially as specified.

WILSON CAREY.

Witnesses:

JOHN W. HANLY,
GEORGE MCAULAY.