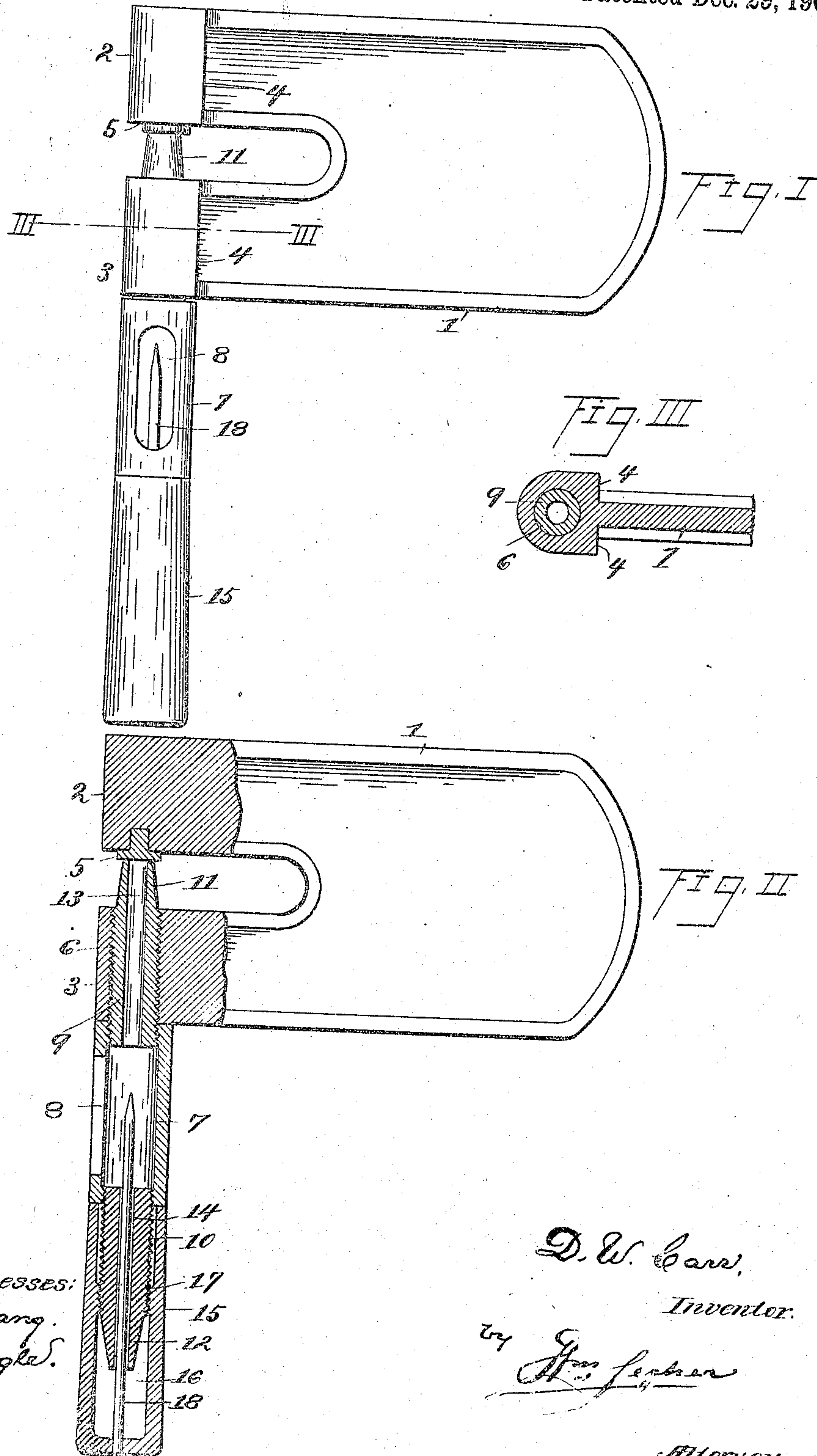


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BELT PUNCH.

APPLICATION FILED APR. 11, 1908.

908,071.

Patented Dec. 29, 1908.



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UNITED STATES PATENT OFFICE.

DANIEL W. CARR, OF CLEVELAND, OHIO.

BELT-PUNCH.

No. 908,071.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed April 11, 1908. Serial No. 426,424.

To all whom it may concern:

Be it known that I, DANIEL W. CARR, a citizen of the United States, resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Belt-Punches, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The annexed drawings and the following description set forth in detail, one mechanical form embodying the invention; such detail construction being but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings Figure I represents a side view of my improved belt-punch; Fig. II, an axial section of the same, and Fig. III, a sectional detail view on the line III—III in Fig. I.

The punch has a yoke, 1, the arms of which have two heads, 2 and 3, the inner portions of which form shoulders, 4, the faces of which are at right angles to the two outer edges of the yoke, which edges are straight. An anvil, 5, of brass or other soft metal is secured in the inner face of one arm of the yoke, presenting in the gap of the same, and the head of the other arm has an axial screw threaded bore, 6, directly opposite to and registering with the anvil. A tubular sleeve, 7, has a longitudinal slot, 8, in its side, and has the screw threaded shanks, 9 and 10, of two punches, 11 and 12, secured, one in each end.

One of these punches is preferably of smaller diameter than the other. The punches are tapering and have axial bores, 13 and 14, which extend entirely through the shank. The screw threaded shanks are of such size and so threaded that they will fit in the screw threaded bore in the head of the yoke. The shank of one of said punches is screwed into the bore of the head, and a handle, 15, having an internal bore, 16, is fitted over the threaded shank of the other punch,—the bore of the handle having an internal screw thread, 17, a distance from the end, whereby the handle is secured over the punch and upon the screw threaded shank of the same. An awl, 18, has one end secured in the closed bottom of the handle and projects through the bore of the handle and through the axial bore of the punch and its shank, be-

yond the end of the handle, so that the awl may be used for its purpose when the handle is detached from the shank of the punch. When the handle is in place, said handle and the tubular sleeve form a handle by means of which the punch, the shank of which is threaded into the yoke, may be rotated and thus be screwed towards and from the anvil on the other arm of the yoke.

When the tool is to be used for punching rivet-holes or lace-holes in the ends of a belt, and one or both ends of the belt is or are to be cut off for shortening the belt, the yoke is placed upon the belt with the shoulders bearing against one edge of the same, when a straight line across the belt and at a right angle to the edge of the same may be drawn along either edge of the yoke at the point where the belt is to be cut to thus form a guide for cutting the belt. The location of the holes for the rivets or lacing may also be marked in straight lines at right angles to the edges of the belt by means of the yoke, in the same manner. After the location of the holes in the belt has been determined, the gap of the yoke is straddled over the belt, and the location of a hole is brought to register with the punch, which has been withdrawn by unscrewing the shank by means of the sleeve and handle. When the location of the hole registers with the punch, the punch is screwed into the gap and against and into the belt by rotating the handle, and the punch is forced through the belt with a rotary motion, causing the edge of the punch to cut into the belt, forming a hole and pushing the core of the hole through the axial bore of the punch and shank.

The screw action of the punch will drive the latter through a belt with great force, and a clean and regular hole will be made in the belt by this punch on account of the rotation of the latter as it is forced through the belt. The punched-out cores slide through the axial bore of the punch and its shank into the tubular sleeve, from which they are discharged through the slot in the side of the sleeve. If a hole is not sufficiently large, or any marking is to be made on the belt, the awl may be detached from the tool by unscrewing the handle, when the awl may be used in the ordinary manner.

In this tool, two punches and an awl are

combined in one tool, besides a gage or square provided by the shoulders and straight edges of the yoke.

By providing two punches in the one tool, holes of different sizes may be punched by the same tool, if the punches are made of different sizes, or a sharp punch may be substituted for a dull punch, if both punches are of the same size.

Other modes of applying the principle of my invention may be employed for the mode herein explained. Change may therefore be made as regards the mechanism thus disclosed, provided the principles of construction set forth respectively in the following claims are employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In a belt-punch, the combination of a yoke having an anvil upon the inner face of one arm and a screw threaded bore registering with such anvil through the other arm, a tubular sleeve having the screw threaded shanks of two tubular punches secured in its ends and one punch having its screw threaded shank fitted in the screw threaded bore to act against the anvil, and a hollow handle having an internal screw thread and screwed upon the threaded shank of the other punch.

2. In a belt-punch, the combination of a yoke having an anvil upon the inner face of

one arm and having a screw threaded bore registering with such anvil through the other arm, a tubular sleeve having a longitudinal slot in its side, a tubular punch having a screw threaded shank secured in one end of said sleeve and acting against the anvil and having its screw threaded shank fitted in the threaded bore of the yoke, a tubular punch having a screw threaded shank secured with its end in the other end of the tubular sleeve, and a hollow handle having an internal screw thread fitting upon the threaded shank of the last-mentioned punch and having an awl secured with one end in the closed bottom of the hollow handle and projecting through the tubular punch and shank beyond the end of the handle.

3. A belt-punch, having a yoke carrying a punch in one arm and an anvil on the other arm opposed to the punch, and having its side-edges straight and parallel, and formed with heads upon its arms forming shoulders at their inner sides at right angles to the straight side-edges of the yoke.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 24 day of March A. D. 1903.

DANIEL W. CARL.

Witnesses:

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GEO. C. LANG.