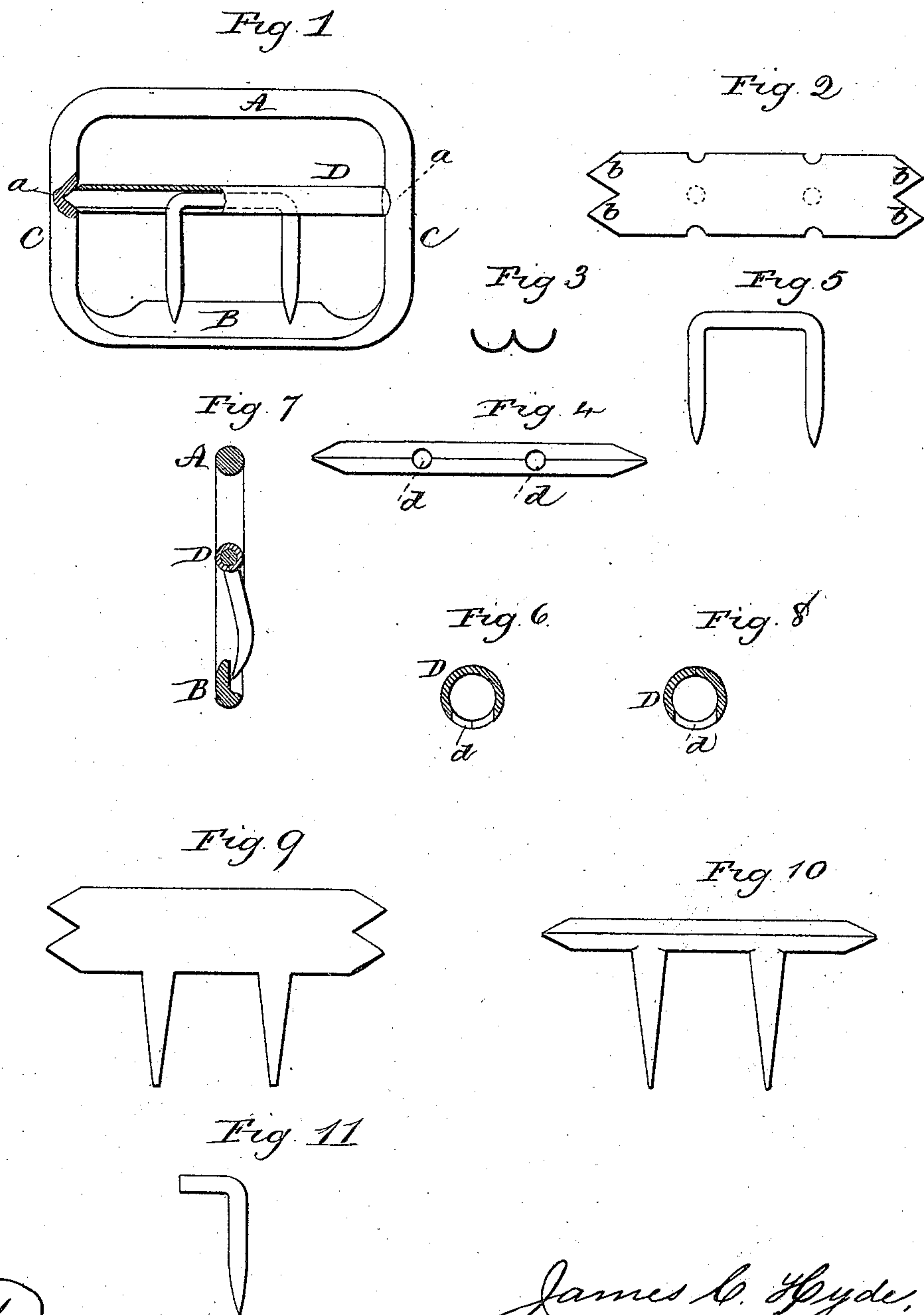


(No Model.)

J. C. HYDE.
BUCKLE.

No. 369,526.

Patented Sept. 6, 1887.



Witnesses
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BUCKLE.

SPECIFICATION forming part of Letters Patent No. 369,526, dated September 6, 1887.

Application filed July 18, 1887. Serial No. 244,582. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. HYDE, of West Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Buckles; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a face view of the buckle, showing the tongue-bar and one end of the frame in partial section; Fig. 2, the blank from which the tongue-bar is formed; Fig. 3, a transverse section of the blank struck into double semicircular shape; Fig. 4, a side view of the bar complete; Fig. 5, the wire tongues detached; Fig. 6, a transverse section through the tubular bar, cutting through one of the openings *d*; Fig. 7, a transverse central section through the buckle; Figs. 8, 9, 10, and 11, modifications.

This invention relates to an improvement in that class of buckles which consist of a four-sided frame with a bar longitudinally across it midway between its two sides, the said bar supported in two ends of the frame and carrying tongues adapted to swing in the frame, but so as to take a bearing upon one side of the frame. In a general and common construction of this class of buckles the tongue-bar and tongues are cast complete, the ends of the bar pointed, so as to take bearings in the recesses in the ends of the frame. Such cast bars and tongues are unavoidably rough and the ends of the bar are as unavoidably irregular, which renders the tongues liable to displacement from the frame. In another class the tongue-bar is made a permanent part of the frame and the tongues bent around the frame, so as to swing thereon. This construction makes the buckle expensive, as some provision must be made to prevent longitudinal play or movement of the tongues upon the bar.

The object of my invention is to simplify the construction of the buckle and produce a tongue-bar which is certain to be of uniform length and to form perfectly-shaped points

for the pivots upon which the tongue-bar will turn.

A represents one side of the frame; B, the opposite side, upon which the tongues bear; C C, the two ends which connect the said two sides, forming a rectangular frame of common construction. Midway between the two sides and on the inside of each end of the frame a cavity, *a*, is formed to receive the ends of the tongue-bar in the usual manner.

I make the tongue-bar D from sheet metal. To do this I cut a blank from sheet metal, as seen in Fig. 2, the length of which is the extreme length required for the tongue bar, and the width of the blank corresponding to the circumference required for the tongue-bar. The two ends of the blank terminate in two V-shaped points, *b*. This blank, insuitable dies, is struck into semicircular shape each side the longitudinal central line, and so as to form two semicircles in transverse section, as seen in Fig. 3. These semicircles continue through the extreme points *b b*, so that each end of the said semicircular portions terminates in the form of one-half a cone. Then the two parts are doubled together, so as to form a complete cylinder terminating at each end in a conical point, as seen in Fig. 4, so that a tubular bar is produced having a conical point at each end, adapted to set into the recesses *a* in the frame, the said points forming pivots upon which the bar may oscillate. The conical ends of the tongue-bar are set in the recesses in the frame by spreading the frame and then closing it upon the conical ends of the tongue-bar in the usual manner for introducing this class of tongue-bars. The tongues, which are usually two for this class of buckle, under this construction are made from wire, as seen in Fig. 5, the wire being bent into U shape, the two legs pointed. Through one side of the tubular bar apertures *d d* are formed, corresponding to the two legs of the U-shaped tongue-piece, as seen in Fig. 4. These may be made in opposite sides of the blank, as seen in Fig. 2, one-half in each side, so that when doubled together, as in Figs. 4 and 6, the notches in the two sides will complete the openings. As the two sides are doubled together the body portion of the tongue-piece is laid between them,

with the legs projecting therefrom, as seen in Fig. 1. The closing of the tube around the two legs serves to confine the tongue-piece in the bar and make it a permanent part thereof.

5 The length of the legs of the tongues is such as to permit the tongues to rest upon the bar B of the frame, as seen in Fig. 7.

10 Instead of making the openings in the edges of the tongue-piece, the openings may be made, say, centrally, as indicated in broken lines, Fig. 2, and as also seen in Fig. 8. By this construction the tongue-bar is extremely light and strong and the pivot-points are of the nicest construction, and the uniform length of the bar 15 is insured, thereby possessing advantages over a cast-metal tongue-bar.

The tongues may be formed as a part of the tongue-bar, as seen in Figs. 9 and 10, the tongues projecting from one side of the blank, 20 as seen in Fig. 9, and so that when the parts of the bar are brought into the tubular shape, as seen in Fig. 9, the tongues will project therefrom, substantially as do the wire tongues before described. While therefore preferring 25 the bent-wire tongue-piece, I do not wish to be understood as limiting the invention to that particular construction, the essential feature of the invention being the tubular tongue-bar terminating in conical ends.

30 If but a single tongue is required, the wire may be bent in L shape, as seen in Fig. 11, and this may be the shape for the two tongues, if required, and if more than two tongues are required this same shape will permit the employment of as many tongues as are desirable, 35 it being understood that the openings are made in the tubular bar according to the number of tongues required, and that the tongues are bent into right-angular shape, so as to form a body to be inclosed by the tubular bar; or if 40 the tongues are made an integral part of the bar, the blank is cut accordingly.

I claim—

45 1. The herein-described buckle, consisting of a frame composed of two sides connected by ends, the inner side of the respective ends midway between the two sides constructed with recesses to receive the tongue-bar, combined with the tongue-bar of tubular shape,

the said tubular bar terminating at each end 50 in conical points and the bar provided with one or more tongues projecting therefrom adapted to oscillate in the frame with the tongue-bar and to bear upon the frame, substantially as described.

55 2. A buckle consisting of a frame of rectangular shape, the two ends of which are constructed upon their inner side with recesses to form bearings for the ends of the tongue-bar, combined with the tongue-bar constructed 60 from sheet metal, the blank therefor being in width corresponding to the circumference of the bar and terminating at each end in two V-shaped points, the portions of the blank 65 each side the longitudinal central line struck into semicircular shape in transverse section, and the said blank doubled to bring the opposite edges together and the pointed ends one 70 over the other, so as to form a tubular bar with conical ends, the said bar provided with tongues adapted to bear upon the frame, substantially as described.

3. A buckle consisting of a frame of rectangular shape, the two ends of which are constructed upon their inner side with recesses to 75 form bearings for the ends of the tongue-bar, combined with the tongue-bar constructed from sheet metal, the blank therefor being in width corresponding to the circumference of the bar and terminating at each end in two 80 V-shaped points, the portions of the blank each side the longitudinal central line struck into semicircular shape in transverse section, the blank also constructed with openings corresponding to the number of tongues with 85 which the buckle is to be provided, one or more tongues made from wire bent into right-angular shape, the said blank doubled around the body portion of the tongue, so as to bring opposite edges of the blank together and the 90 pointed ends one over the other and so as to form a tubular bar with conical ends, substantially as described.

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