O. B. WILSON.

Dies for Making Stock-Bell Staples.

No. 220,558. Patented Oct. 14, 1879.

Fig. 1.

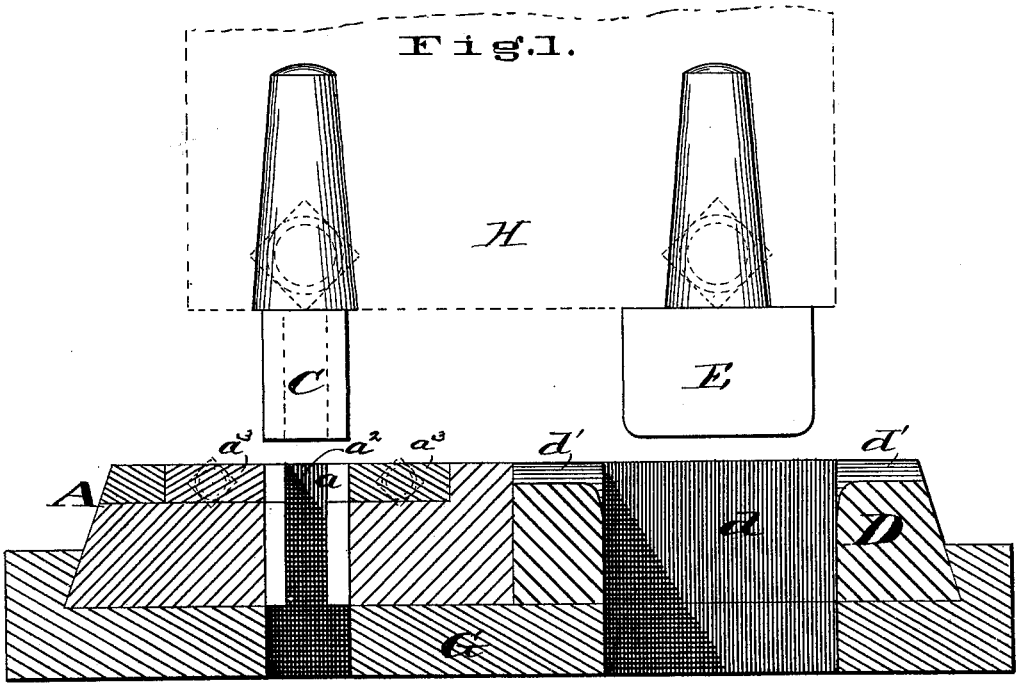


Fig. 2.

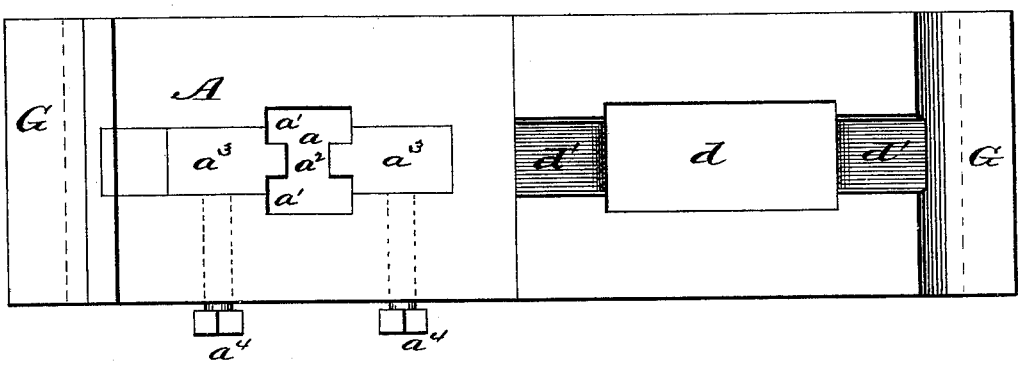
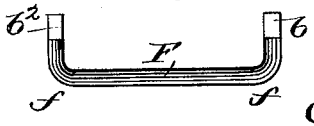


Fig. 3.

Fig. 4.



Attest.

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UNITED STATES PATENT OFFICE.

OSCAR B. WILSON, OF COLLINSVILLE, ILLINOIS.

IMPROVEMENT IN DIES FOR MAKING STOCK-BELL STAPLES.

Specification forming part of Letters Patent No. **220,558**, dated October 14, 1879; application filed June 4, 1879.

To all whom it may concern:

Be it known that I, OSCAR B. WILSON, of Collinsville, Illinois, have made a new and useful Improvement in Dies for Making Stock-Bell Staples, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a central longitudinal section; Fig. 2, a plan of the dies; Fig. 3, a view showing the rod from which the staples are made, one of the blanks being detached; and Fig. 4, a finished staple.

The same letters denote the same parts.

The staples of stock-bells are made from blanks cut from a rod, usually half-oval in cross-section. The practice heretofore in making them has been to first cut the rod into blanks, and afterward, and by a second operation, to form a tongue at each end of the blank, for the purpose of attaching the staple to the shell of the bell. The blanks are then given their shape by bending first one end and then the other end of the blank. The various operations named, in addition to being performed successively, have been done by hand.

To simplify, cheapen, and improve the manufacture of these staples is the aim of the present improvement, which consists in a device by which the rod is cut into blanks and the tongues formed thereon at one operation, and also in the means for bending the blank into the shape of the finished staple.

Referring to the drawings, A represents a die having an opening, *a*, of the I shape shown—that is, having the portions a^1 a^1 united by the portion a^2, the portions a^1 a^1 being spaced apart a distance less than the width of the rod from which the blanks are made, and equal to the width of the tongue that it is desired to form upon the blanks. The portion a^2, in the direction of the length of the machine, is longer than the combined lengths of the tongues of two adjacent blanks. The rod B is fed along above the opening *a*, and then, by means of a punch, C, which in shape corresponds to the opening *a*, is cut so as to form the tongue *b*, Fig. 3, at its inner end. The rod is then moved along again a blank-length, (the movement being suitably guided and gaged), when the punch C is again forced down into the opening *a*. This movement causes an I-shaped piece, b^1, (indicated by the dotted lines in Fig. 3,) to be cut out of the rod, and both severing the blank b^1 from the rod and forming the tongues b^2 b^3. The rod B is then moved along another blank-length, and the operation is repeated. Thus, by a single movement of the punch C, the blank b^1 is cut off and a tongue formed both on the staple-blank and on the rod. The staple-blank, having the tongues *b* b^2, then passes onto a second die, D, where, by means of a punch, E, it is bent into the form shown at F, Fig. 4. The die D has an opening, *d*, as long as the finished staple—that is, from *f* to *f*—while the punch E is sufficiently shorter than the opening *d* to enable the blank to be bent without shearing it upon the edges of the opening *d*. The die D has a groove, *d'*, at each end of the opening *d*, to enable the blank to be securely held as it is being struck by the punch.

The die A is, preferably, furnished with face-plates a^3 a^3, held by screws a^4 a^4, which are detachable, and which when worn can be removed and new ones inserted. The dies A and D are held in a bed-plate, G.

The punches C E can be operated by any suitable power, and they can be held in a suitable head. (Indicated at H, Fig. 1.)

The opening *d* in the die D insures the staples being made of uniform length.

I claim—

The die A, having the I-shaped opening *a*, and punch C, of the form described, jointly with the die D, having opening *d*, and punch E, for cutting out and bending tongued blanks for stock-bell staples, substantially as shown and described.

OSCAR B. WILSON.

Witnesses:

C. D. MOODY,

CHAS. E. DOW.