

O. C. Burdick

Nut Machine Die.

N^o 14,137.

Patented Jan. 5, 1864.

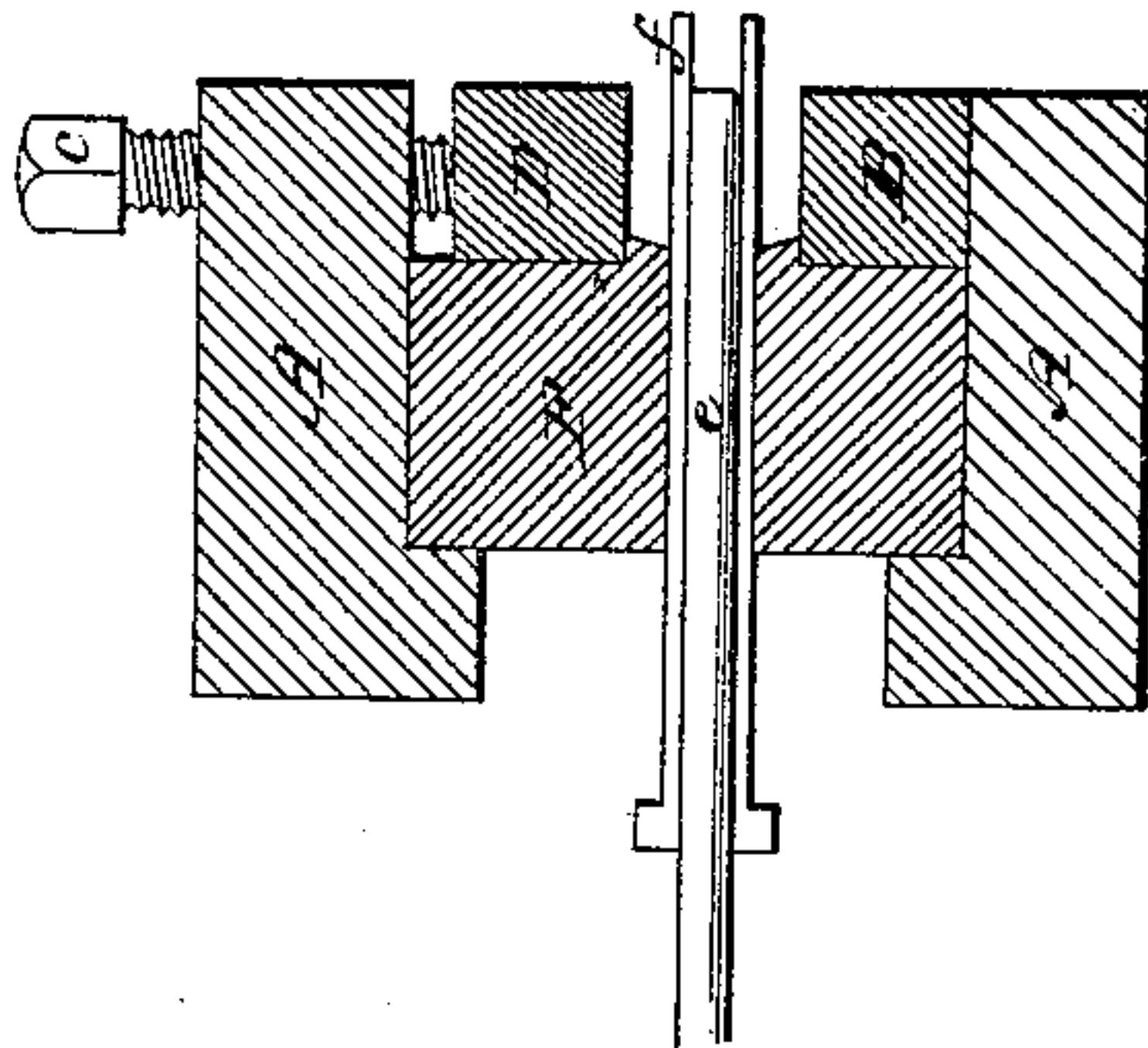


Fig. 2.

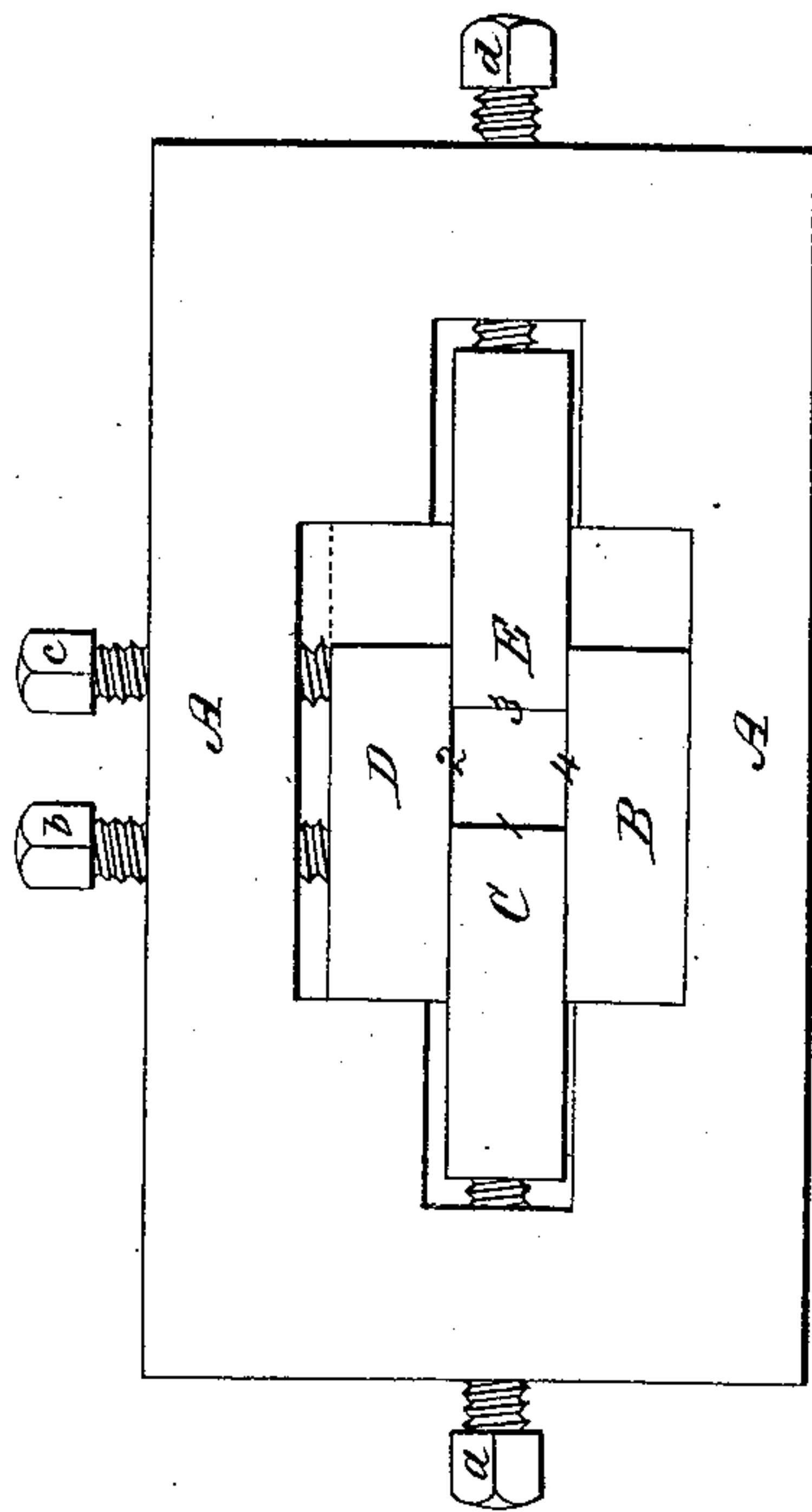
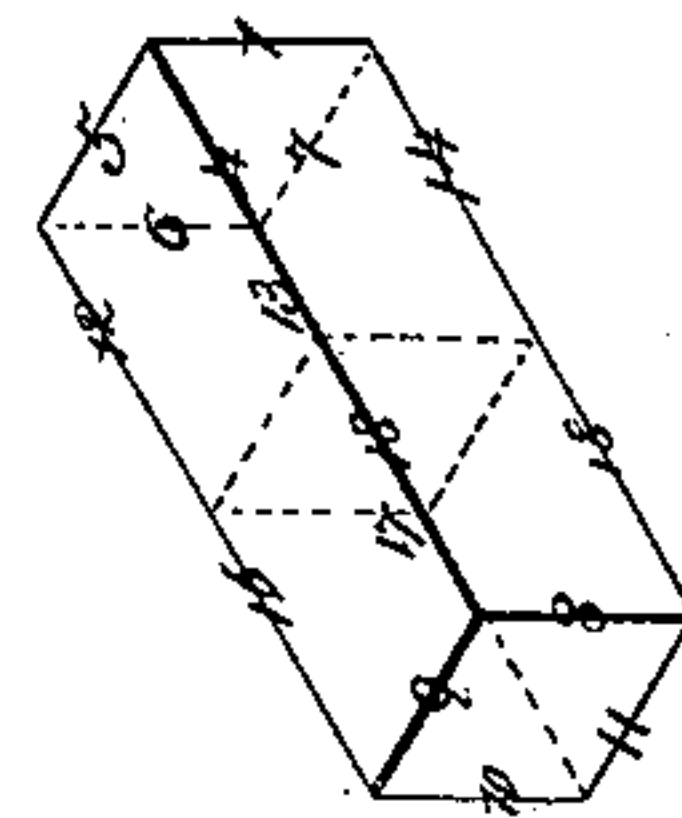
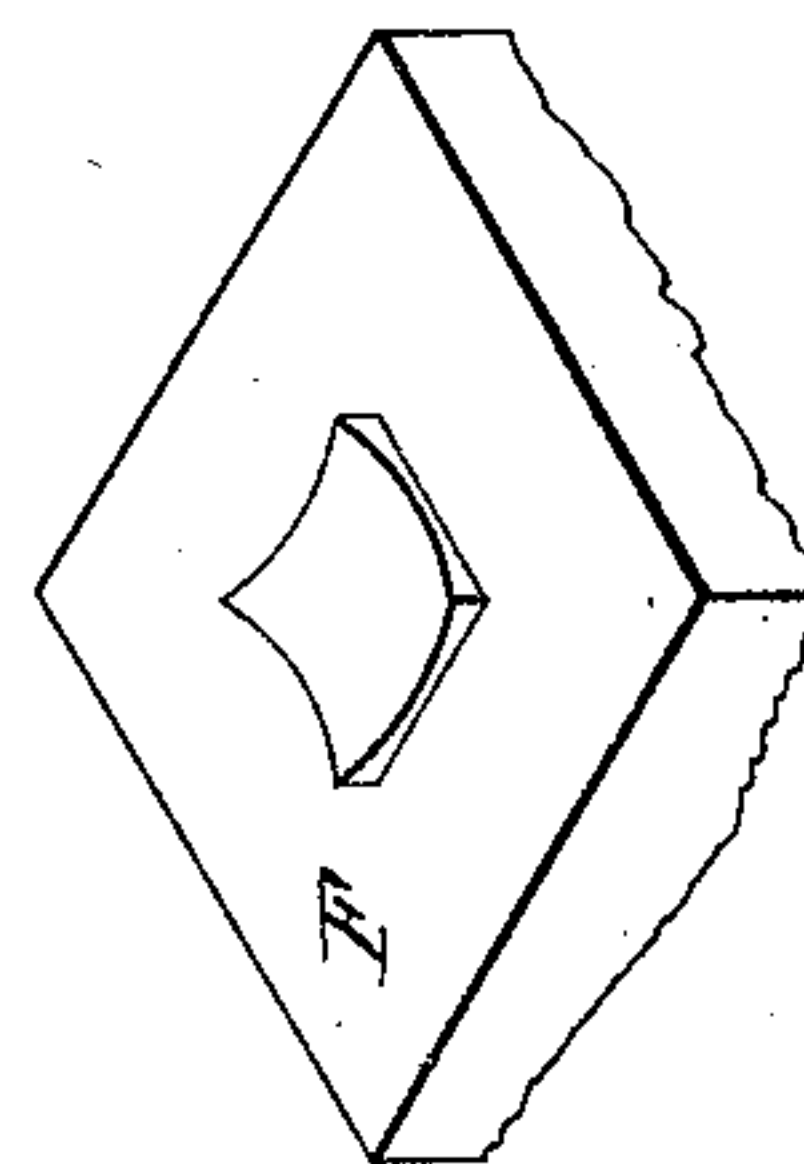


Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

O. C. BURDICT, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN DIES FOR NUT-MACHINES.

Specification forming part of Letters Patent No. 41,137, dated January 5, 1864.

To all whom it may concern:

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

Figure 1, a front view of my improved die; Fig. 2, a section of the same; and in Fig. 3 a perspective view of detached parts.

Similar letters and characters indicate like parts.

My invention relates to an improvement in the nut-machine for which I have applied for Letters Patent, application acknowledged complete under date of September 30, 1863, but not confined to my machine, as it may be adapted to other swaging-machines.

In bolt-machines, as well as in all swaging-machines where dies are used, the trouble and expense of repairing the dies detracts materially from the practical usefulness of such machines. To overcome in a great degree this trouble and expense is the object of my invention.

It consists in forming a die from four separate pieces, each piece in its breadth and depth equal to the nut or piece to be swaged, and in length, say, three times its width, more or less, the said pieces or blocks placed so that each block will form one of the four sides of the die, and when the outer angle or corner of the die or face of the die shall have become worn by use the block or piece may be changed to present a new face or angle, each end of each block allowing four such changes, and the sides an equal number of changes, and requiring no repairs until all the angles shall have been used.

To enable others skilled in the art to make and use my improved dies, I will proceed to describe the construction and operation of the same.

A is a die-holder. B, C, D, and E are four pieces or blocks of steel, each block the same in width and depth as the width of the nut or

piece to be swaged, and, say, three times as long. One of the blocks is shown in perspective in Fig. 3. I make all the angles of the said blocks right angles, and give to each block a temper according to the purpose for which it is to be used. I place the four blocks in the die-holder, as in Fig. 1, setting the upper and lower blocks, B and D, so that the part used in the die will be entirely to one side of the center, for the purpose hereinafter described. I adjust and fix the said blocks in the die-holder A by means of the set-screws *a b c d*.

To form the back or bottom of the die, I place a block of metal, F, in the die-holder A, and if it is desired to make an oval head I make a projection from the said block F (see Fig. 2, and in perspective, Fig. 4) the size of the die, and made the reverse of the form required for the nut or piece to be swaged.

e is a punch; *f*, a sleeve fully described in the application before referred to. When the angles 1 2 3 4, Fig. 1, shall have become worn or injured, the four blocks may be turned one-fourth over, presenting new angles, as see single block, Fig. 3, 1 being the first angle or face used, 5 the second, 6 the third, 7 the fourth, 8 the fifth, 9 the sixth, 10 the seventh, and 11 the eighth. These angles are used in the position of C and E, Fig. 1.

In the position of B and D, 4 is the first angle, (see Fig. 3,) 12 the second, 13 the third, and 14 the fourth. When these four angles have been used, move the blocks (upper and lower) to the right or left, as the case may be. (See in red, Fig. 1.) This will present a new and fifth angle or surface, 15, and 16, 17, and 18 the sixth, seventh, and eighth angles, and when the eight angles or faces of the blocks in the position of B and D are worn change and insert the blocks C and E in place of B and D, and vice versa. Thus each block is capable of being placed and used in sixteen different positions before any repairs will be necessary, whereas a solid die would require to be faced sixteen times for the same amount of work performed. The cost of my improved die is comparatively small, as I make the block from square bar-

steel, and each block cut to the proper length from a bar finished to the proper size.

Having fully described my improvement, what I claim therein as new and useful, and desire to secure by Letters Patent, is—

A die composed of four pieces, when the same are of the form and combined and ar-

ranged in the manner and for the purpose substantially as herein set forth.

O. C. BURDICT.

Witnesses:

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