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M. S. CARNEGIE.
DIE AND DIE BLOCK.
APPLICATION FILED AUG. 17, 1906.

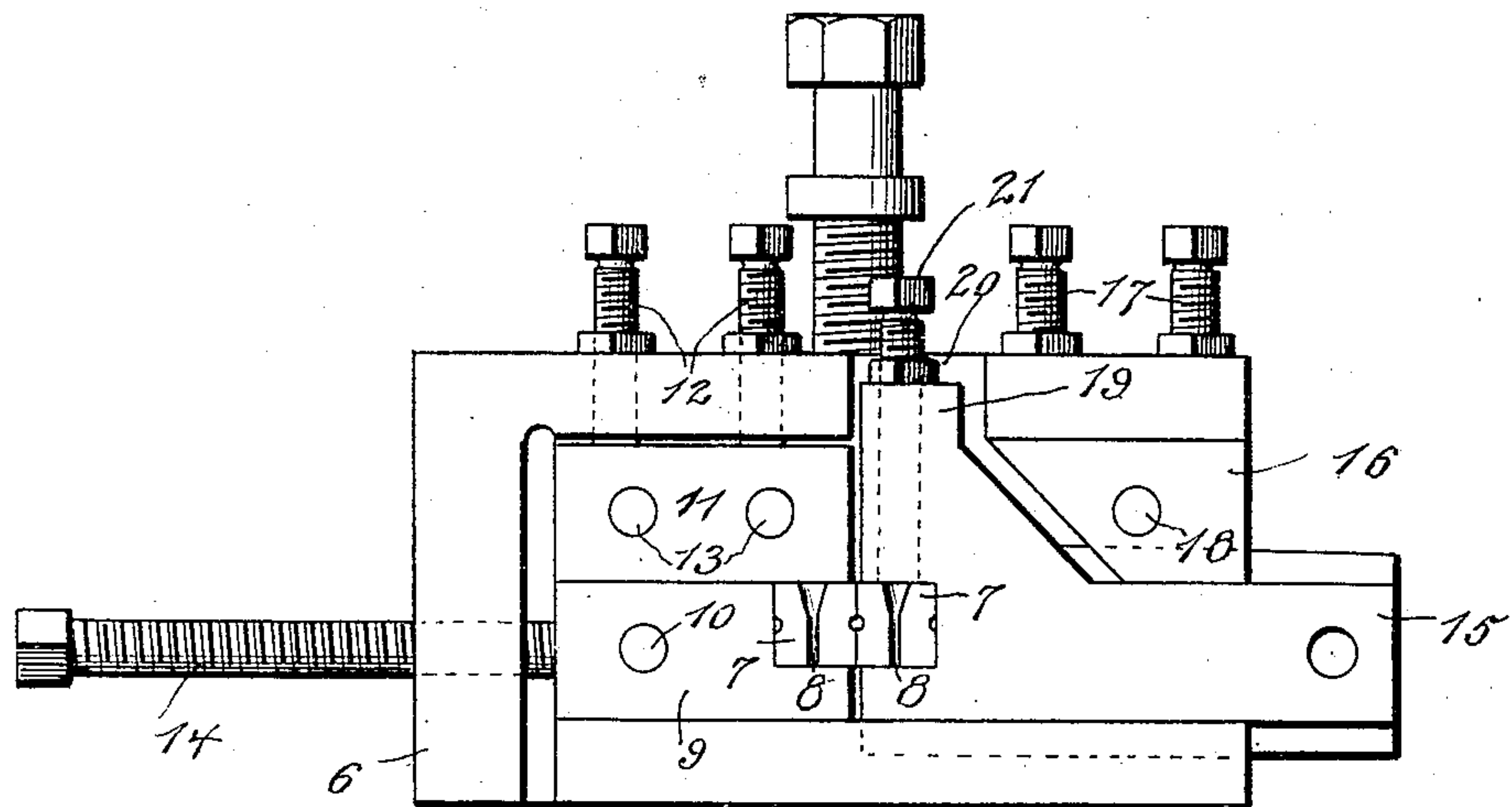


Fig. 1.

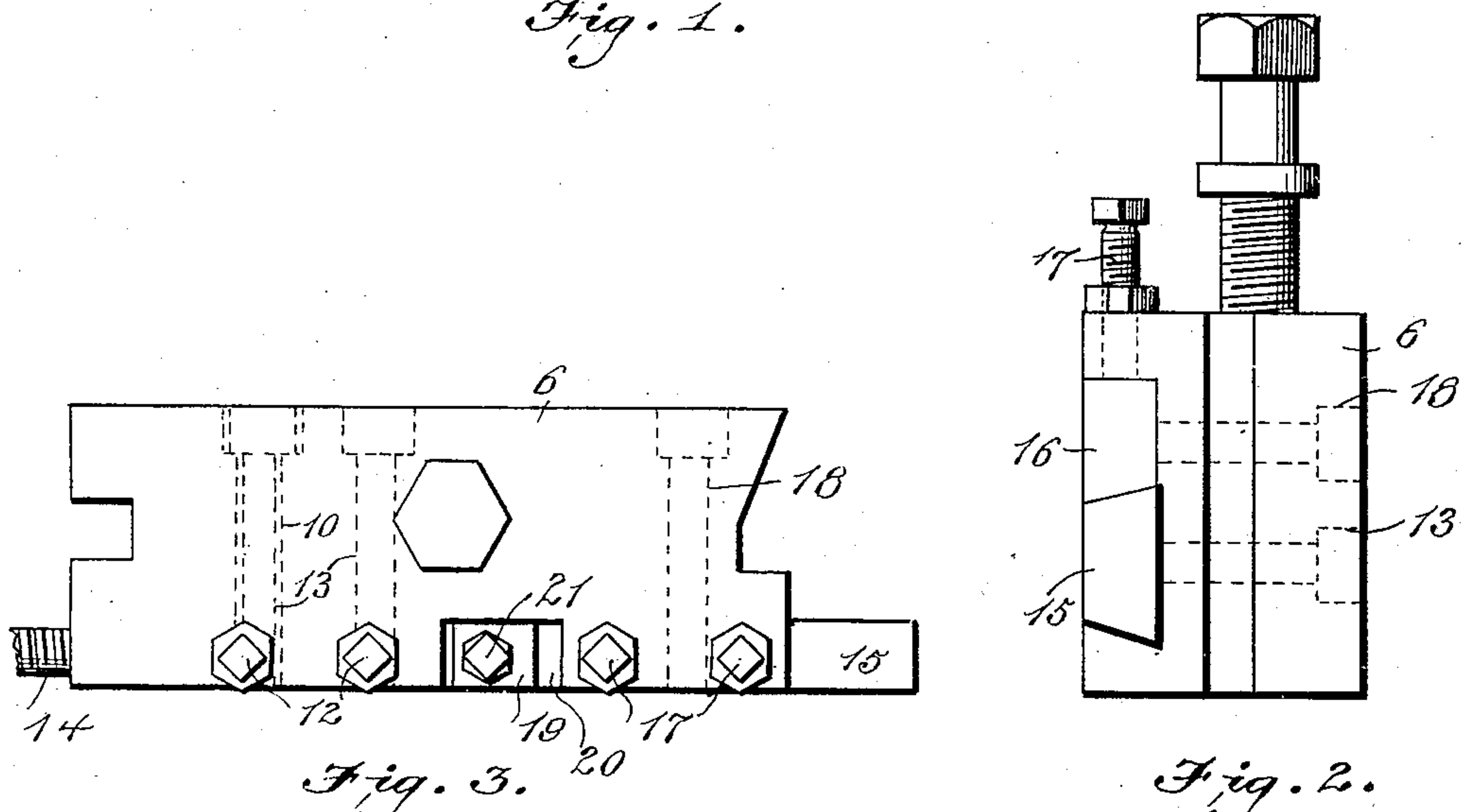


Fig. 2.

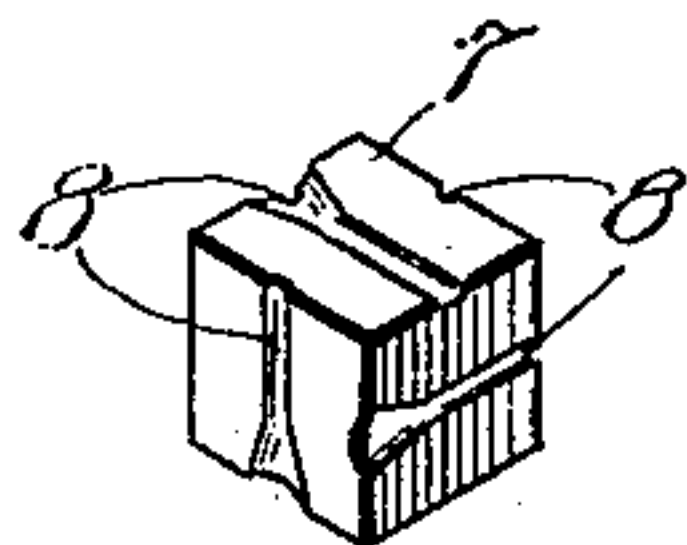


Fig. 4.

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UNITED STATES PATENT OFFICE.

MARTIN SHERIC CARNEGIE, OF DONORA, PENNSYLVANIA.

DIE AND DIE-BLOCK.

No. 868,325.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed August 17, 1906. Serial No. 330,981.

To all whom it may concern:

Be it known that I, MARTIN SHERIC CARNEGIE, a citizen of the United States, residing at Donora, in the county of Washington and State of Pennsylvania, have
5 invented new and useful Improvements in Dies and Die-Blocks, of which the following is a specification.

This invention is an improved die and die block for nail making machines.

10 The object of the invention is to form a die having a plurality of working sides or faces, so that when one becomes worn out it can be turned to present another face.

15 A further object of the invention is to save a large amount of cast or hard steel, in proportion to the life of the dies.

A further object of the invention is to provide improved means for holding the newly invented dies in the die block.

20 The invention is illustrated in the accompanying drawings, in which

Figure 1 is a face view of the die block. Fig. 2 is an end view thereof. Fig. 3 is a top view. Fig. 4 is a perspective view of one of the dies.

25 Referring specifically to the drawings, 6 indicates the die block of known nail making machines. The face of this is recessed to receive the dies and the gibs holding the same. One of the dies is relatively fixed, and the other reciprocates in a well known manner.

30 In the old construction, it is common to have a pair of dies consisting of pieces of cast steel several inches long, held between the gibs, with only one working face at the end. In my newly invented construction the die, 7, is made of a cube of cast steel, having an intaglio or nail groove 8 in each of its faces, thereby forming an
35 equivalent of six dies, so far as the life of the die is concerned. Of course, a pair of the dies are used, and the intaglios may be matched up to suit nails of different sizes. One of these dies is held in a recess in a block 9 which is set in the die block and held by a cross
40 screw 10 and a gib 11 pressed by top screws 12 and cross screws 13. The block 9 backs against an adjusting screw 14 in the end of the die block, which can be set up to adjust the position of the block. The die is held in its recess by the gib 11.

45 The movable die is carried by a reciprocating block or holder 15, in a recess in the front end thereof. This block is dove-tailed into the die block under a gib 16 held by top and cross screws 17 and 18. This gib is short, to allow room for an upper extension 19 on the
50 front end of the die holder 15. This extension projects into a recess 20 in the top of the die block, and is tapped vertically to receive an extra screw 21 the foot of which bears down upon the die 7 and so holds the same in place. The die holders 9 and 15 are dove-tailed into the die
55 block, as usual, and are made of soft steel. Only the

dies proper need be hardened, and different dies may be substituted in the same holders, according to the work. The dies being formed with six working faces gives them six times the life of the ordinary dies, with
60 also a large saving in material.

In practice, with the old construction, in order to change or replace the dies, it is necessary to disconnect the "pusher" or actuating device for the movable die, and also to take out all the top and cross screws and gibs in the die block; in other words, to unship the
65 whole block. It will be understood that when the die block is put in place in a nail-making machine it is so surrounded by other parts that with the old style form of dies and die holder it is practically impossible to get at the dies for removal thereof without taking it apart
70 as above indicated. But with this new construction, it is only necessary to ease off the front screw 12 to loosen the fixed die 7 and to ease off the screw 21 to loosen the movable die, these screws being readily ac-
75 cessible at the top of the block; then, the dies can be picked out laterally and removed through the space between the die block and the cutters, which latter are directly opposite or in front of the dies. And new dies can be inserted in the same manner, the whole operation requiring only the manipulation of two screws,
80 instead of several times that many, and the disconnection and reconnection of the "pusher", and displacement of the die block, as with the old kind of dies now in general use.

I claim:

1. The combination of the die block 6 having a main recess in the face thereof, and a branch recess 20 extending laterally from said recess, a pair of relatively fixed and movable die holders 9 and 15 held in the main recess, the movable die holder 15 having a projecting part 19 extending into said recess 20, and a screw 21 extending through said projecting part and arranged to clamp a die in the holder, said screw being movable with the holder and projecting in the recess 20.

2. The combination of the die block having a main recess in the face thereof and a branch recess extending from one side of said recess through the adjacent side of the block, a fixed die holder secured in one end of said recess, a movable die holder slidable in the other end of the recess, dies removably held in the adjacent ends of the holders, and a screw extending through said branch recess into the movable holder, and bearing at its foot against the die therein.

3. The combination of a die block having a main recess in the face thereof, and a branch recess extending laterally from said recess through a side of the block, a fixed die in the main recess, a movable die holder in the main recess, a die in said holder, and a clamping screw extending into the holder and bearing at its foot against the die therein, and operating through said branch recess.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARTIN SHERIC CARNEGIE.

Witnesses:

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