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L. BENEDETTO

2,370,836

DIE SET

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Fig. 1

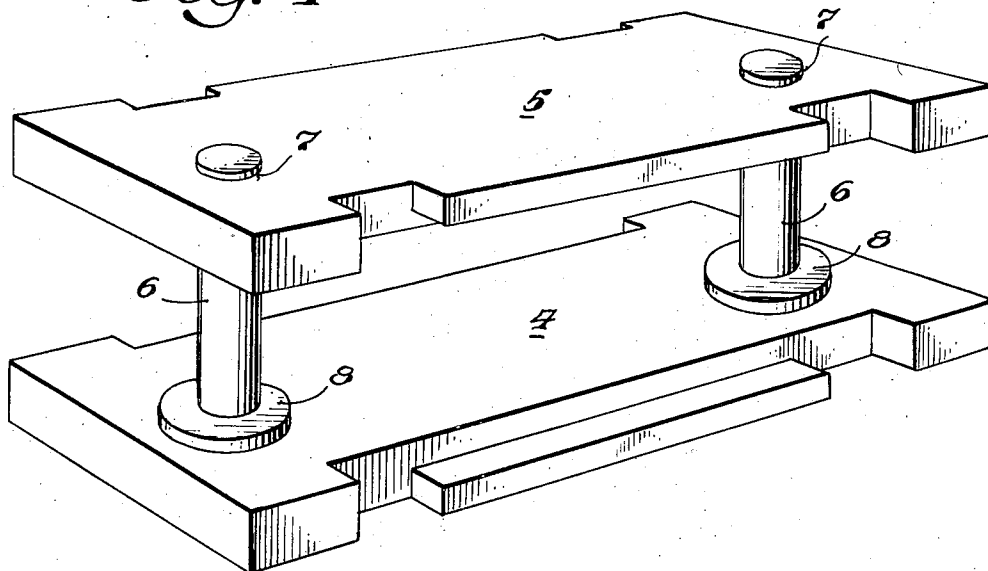


Fig. 2

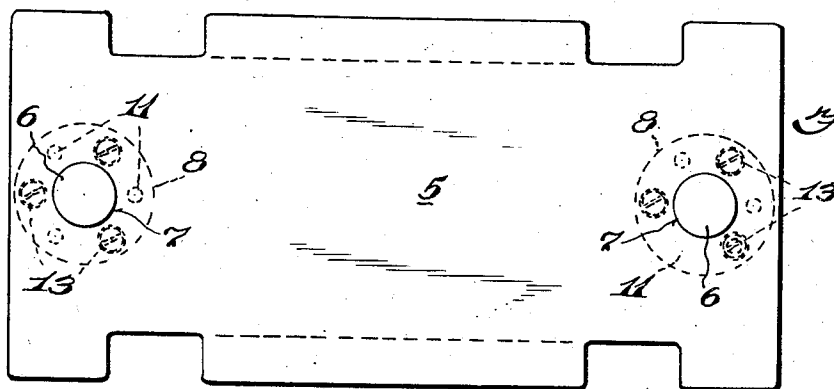
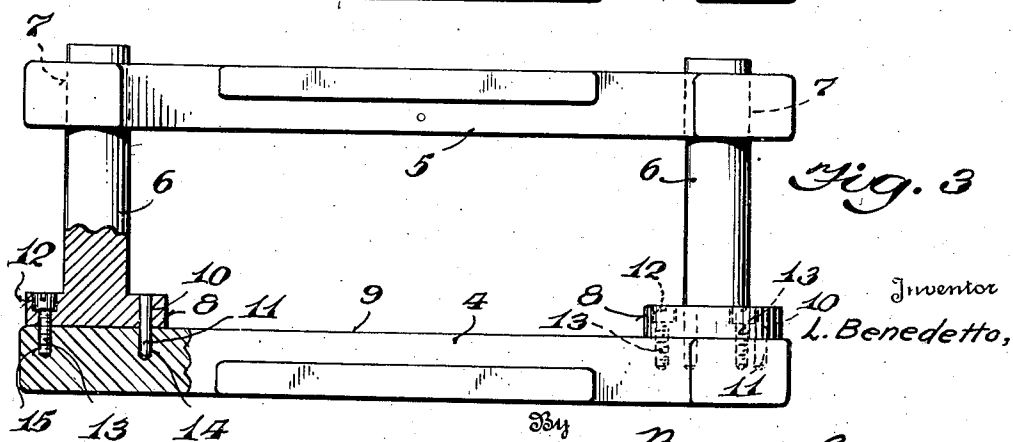


Fig. 3



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2,370,836

DIE SET

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5 Claims. (Cl. 164—118)

This invention relates to improvements in die sets. By a "die set" is meant a pair of die supports composed of a top unit and a bottom unit, to each of which is attached dies, punches, cutters, forming dies or any of the other mechanism conventionally used. The dies, punches, etc., likewise are used in pairs after they have been attached to the die set. Frequently the dies are referred to as male and female dies, such as in the case of forming dies or punch dies.

The conventional die set has two or more fixed guide posts to provide proper apposition and alinement of the dies when in operation. These fixed guide posts, through use, become worn or out of line, and this out-of-alinement condition is a drawback, as it necessitates discarding the die set and gives rise to considerable waste of equipment and loss of time. Prior to my invention this disadvantage had been recognized and efforts made to provide structures to eliminate the objection. Usually, however, this was accomplished by the use of collars through which the guide posts extend into the lower one of the supporting members of the die set. Hence, such proposals do not entirely obviate the objection. The primary purpose of the present invention is to remove such objection, and this I accomplish by specially constructed guide posts which may be adjusted to re-establish correct alinement. This will result in a saving of parts and a very substantial saving in money to manufacturers engaged in the use of die sets.

With the above object set forth and with other objects in view which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawing and more particularly pointed out in the appended claims.

In the drawing,

Fig. 1 is a perspective view of a die set provided with my improvements.

Fig. 2 is a top plan view of the same.

Fig. 3 is a side elevation, partly in vertical section.

Referring to the drawing, 4 designates the lower stationary member and 5 the upper movable member of a die set, the latter being guided in its reciprocation by means of guide posts 6 which pass through holes 7 bored in the upper member.

Heretofore, it has been customary to bore holes in the lower member 4 for the reception of the lower ends of the posts, and this I eliminate. In accordance with my invention I provide each

post with an enlarged base 8 that rests on the upper surface 9 of the member 4. The base is of larger diameter than the post and is provided with drilled holes 10 for the accommodation of dowel pins 11, and countersunk holes 12 for the reception of socket head cap screws 13. The dowel pins extend into holes 14 drilled in the member 4, and the screws extend into threaded holes 15 tapped in said member. It may be seen from Fig. 2 that the holes 14 and 15 are arranged about the axes of the guide posts and obviously either post may be removed from the member 4 whenever desired or may be shifted about its own axis. It is also apparent that as the post per se does not extend into the member 4, either post can be shifted toward or away from the other, if additional holes for accommodation of the dowel pins and screws are made in the member 4.

From the foregoing, it is believed that the construction and advantages of my improved die set may be clearly understood, and I am aware that changes may be made in the details disclosed without departing from the spirit of the invention as expressed in the claims.

What I claim and desire to secure by U. S. Letters Patent is:

1. A die set comprising opposed horizontal members having confronting faces, vertical guide posts having enlarged bases abutting one of said faces and detachably secured to the member having the last mentioned face, the other member being provided with holes through which the guide posts extend, the portion of the member to which the posts are secured being imperforate directly in alignment with the posts.

2. A die set comprising opposed members having confronting faces, guide posts having enlarged bases abutting one of said faces and detachably secured to the member having the last mentioned face, the other member being provided with holes through which the guide posts extend, the end of each guide post adjacent its base terminating between the faces of said members.

3. A die set comprising opposed members having confronting faces, guide posts having enlarged bases abutting one of said faces and detachably secured to the member having the last mentioned face, the other member being provided with holes through which the guide posts extend, the portion of the member to which the posts are secured being imperforate directly in alinement with the posts.

4. A die set comprising a lower member having a substantially plane upper surface, guide posts having enlarged bases with substantially

plane bottoms resting directly on said surface, means detachably connecting the bases of the posts to said member, said member being imperforate directly in alignment with the posts, and an upper member having holes through which the posts extend for guiding the upper member in its movement toward and away from the lower member.

5. A die set comprising a lower member having a plane upper surface, a plurality of posts rising from said member and having enlarged

bases provided with plane bottoms resting directly on said surface, said member being imperforate directly in alignment with the posts, the base of each guide post being apertured, fastening means extending through the apertures and detachably securing the bases to said member, and an upper member having holes through which the guide posts extend for guiding the member relatively to the lower member.

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