

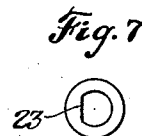
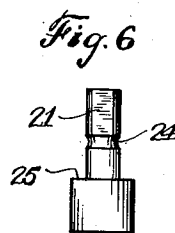
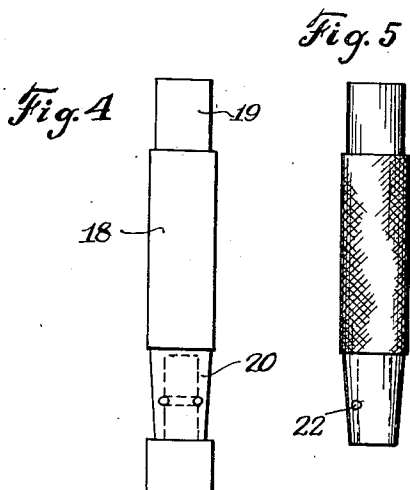
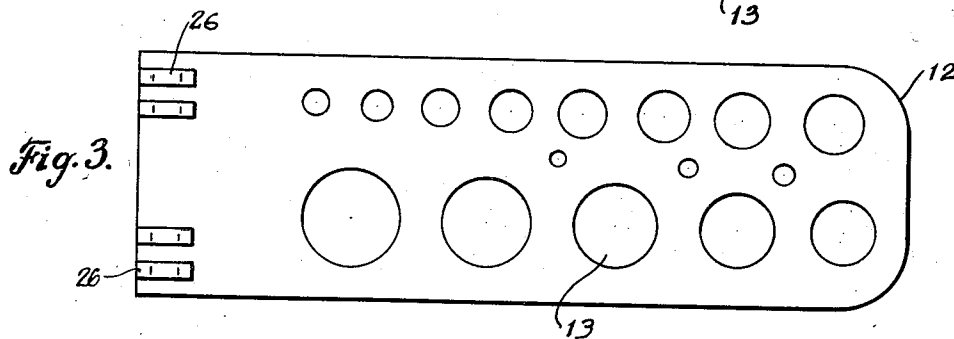
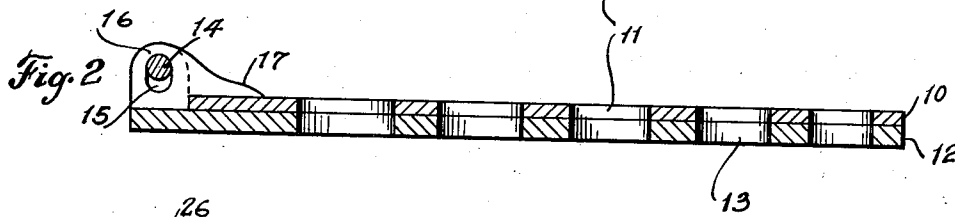
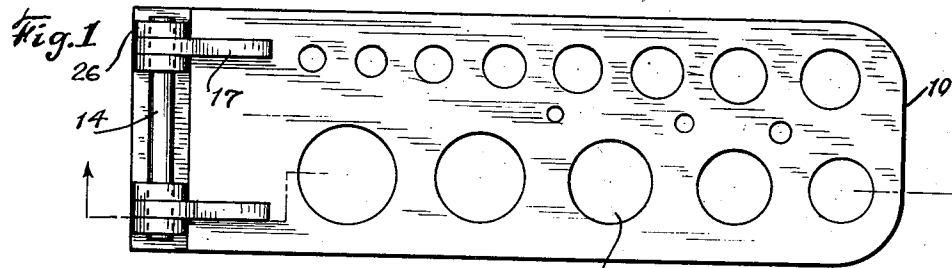
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2,077,232

TEMPLATE AND PUNCH THEREFOR

Original Filed Dec. 4, 1931



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UNITED STATES PATENT OFFICE

2,077,232

TEMPLATE AND PUNCH THEREFOR

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Substitute for application Serial No. 578,932, December 4, 1931. This application October 22, 1934, Serial No. 749,492

2 Claims. (Cl. 164—119)

This invention relates to improvements in gasket or washer punching devices, and it is the principal object of my invention to provide a template for same accommodating small shop 5 keepers and garages or repair plants with a handy outfit to make gaskets or washers for different purposes by hand and of any suitable sizes and materials.

This application is a substitute for one filed 10 December 4, 1931, Serial No. 578,932, which has become abandoned.

Another object of my invention is the provision of a template for punching gaskets and washers consisting of two plates hingedly connected at one end between which the gasket material is placed, and each provided with a plurality of holes of varying diameters according to the size of gaskets to be punched out of the material. 15

A further object of my invention is the provision of a template and punch of simple and inexpensive construction, and yet durable and efficient in operation. 20

A still further object of my invention is the provision of a template allowing the use of a plurality of punching tools for punching first the inside holes and then the entire gasket from the material. 25

These and other objects and advantages of my invention will become more fully known as the description thereof proceeds, and will then be specifically defined in the appended claims. 30

Referring now to the accompanying drawing, forming part of this application, and wherein like reference characters indicate like parts: 35

Figure 1 is a top plan view of the assembled template in accordance with my invention.

Figure 2 is a vertical section on the line 2—2 of Figure 1. 40

Figure 3 is a top plan view of the bottom plate of the template.

Figure 4 is an elevation of one of the punch handles with a punch assembled therein.

Figure 5 is a similar view to Figure 4 with the punch omitted. 45

Figure 6 is a side elevation of one of the punches.

Figure 7 is a top plan view of Figure 6.

In the drawing, the numeral 12 represents the lowermost plate of the template upon one end of which are integrally formed two pairs of spaced upstanding ears or lugs 26 for the reception, between each pair, of the lugs 16 extending forwardly of and attached to one end of the upper 50 plate 10 of the template. These lugs are provided with elongated extensions 17 thereupon for more secure attachment to the plate and it will be noted that the bottom portion of these lugs extend downwardly beyond the end of the plate 10 to a plane with the bottom thereof; this being for the purpose of insuring ample stock about the vertically elongated holes 15 in said lugs 16. 55

The pintle 14 is fixed within the two pairs of lugs 26 transverse the end of the template assembly and through the vertically elongated holes 15 in the lugs 16 so as to permit of vertical adjustment of the plates when prone upon a bench or the like for the insertion of the material from which the washers or gaskets are to be punched and yet not interfere with the proper alignment of the holes in the two template plates. 5

The punch handle, as illustrated in Figures 4 and 5, is preferably of cylindrical form, with an enlarged central portion 18, a reduced or stepped portion 19 for reception of the blow from a hammer or other tool used in energizing the punch, while at the opposite end the stepped portion is tapered as at 20 and hollow for the reception of the shank 21 of the punch. Transverse this tapered portion 20 and to one side of the bore therein, is a small pin or cotter hole 22 for the reception of a fixed cotter or pin, and the shank 21 of the different punches is flattened upon one side as indicated at 23 so that when the shank is positioned within the bore of the handle this flat portion of the upper end of the shank will readily pass the pin in the hole 22, and as the lower end of the flattened portion is provided with an annular groove 24 about the punch shank, the punch may be readily turned one way or the other to prevent its accidental dislodgment from the handle. The punch head being circular and/of a size to fit a correspondingly sized hole, if at all larger than the lowermost tapered portion 20 of the handle, provides a shoulder as at 25 for impingement of the terminal end of such tapered portion to take the blow of the punch when struck for example with a hammer. For the holes smaller than the terminal end of the tapered portion of the handle it is deemed that the blow received in the punching operation will be sufficiently cared for upon the uppermost end of the shank 21; the cutting end of the punch, of course, being of the diameter to register with the hole as predetermined. 10

Thus it will be seen that I have provided an exceedingly simple combination of template and punch for the making for example of sixteen different sizes of washers or gaskets, and resulting in a device occupying the least possible 15

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amount of space. The interchangeable feature of the punches provides for the making of gaskets with any size axial hole therein, and consequently an exceptionally convenient shop tool is provided.

In use I lay the template plates flat on a workbench or the like and lift the top plate to allow the insertion of the material from which the gaskets or washers are to be punched. Then I lower the top plate against the material holding it between the plates.

I now take a punch of the desired size and insert it into the punch handle, securing it therein as previously described. Then I punch the inside hole of the gasket to be punched first, and then select a punch of the desired size of the outside of the gasket, insert it into the punch handle, position the gasket material so that the hole punched is in the center of the hole to be punched, and then punch out the latter, thereby forming the gasket.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. An apparatus for punching gaskets by hand, comprising a lower base plate having a plurality

of series of openings therethrough of progressively increasing diameters in opposite directions, an upper plate hinged to the lower plate and having corresponding openings adapted to register with the openings in the base plate and said hinge connection allowing for a slight vertical movement of the pivot of the upper plate relative to the lower plate to compensate for the thickness of the material between the plates, whereby the walls of the registering openings in the plates are in perfect parallel alinement.

2. An apparatus for punching gaskets by hand, comprising a lower base plate having a plurality of openings therethrough, an upper plate hinged to the lower plate and having corresponding openings therethrough adapted to register with the openings in the base plate, and said hinged connection allowing for a slight vertical movement of the pivot of the upper plate relative to the lower plate to compensate for the thickness of material placed between the plates, whereby the walls of the registering openings in the plates are in perfect parallel alinement.

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