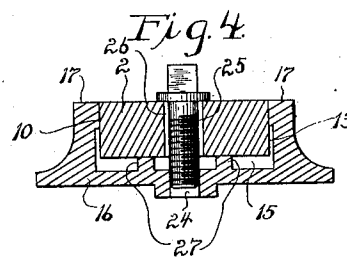
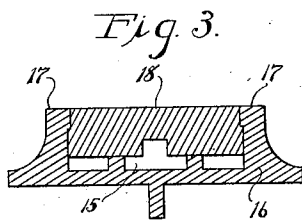
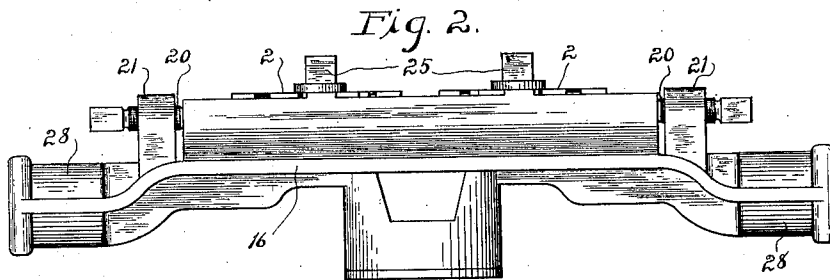
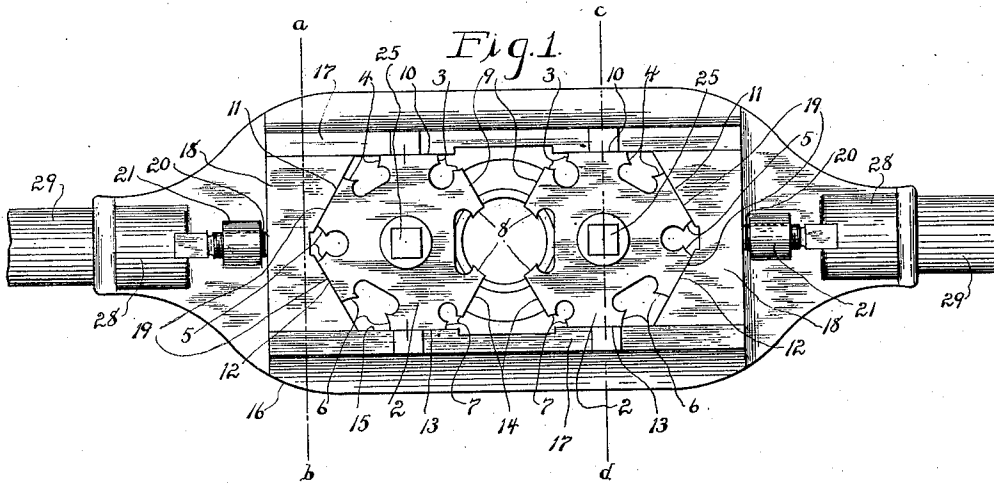


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DIE STOCK AND DIES.  
APPLICATION FILED SEPT. 9, 1912.

1,059,025.

Patented Apr. 15, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

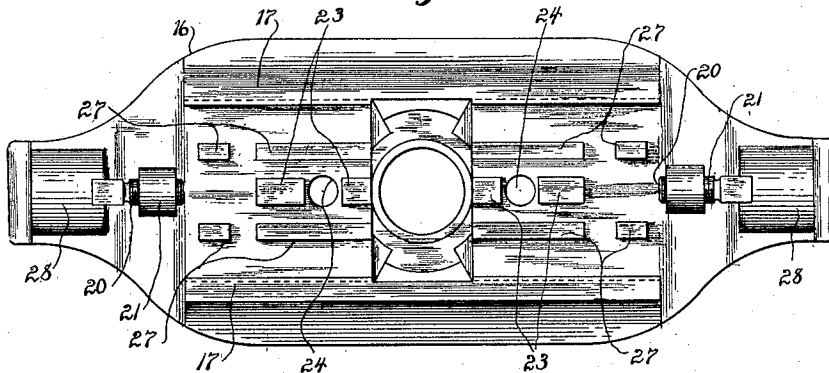


Fig. 6.

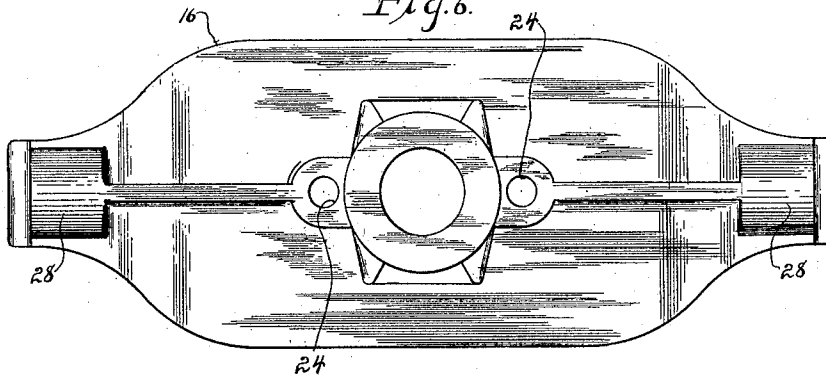


Fig. 7.

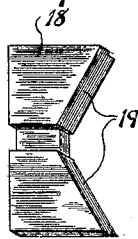
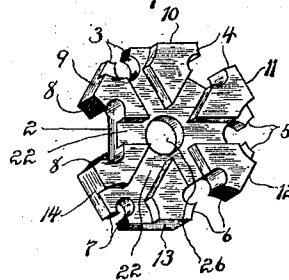


Fig. 8.



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# UNITED STATES PATENT OFFICE.

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## DIE-STOCK AND DIES.

1,059,025.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed September 9, 1912. Serial No. 719,442.

*To all whom it may concern:*

Be it known that I, FRANK S. BRADLEY, a citizen of the United States, residing at West Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Die-Stocks and Dies; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a plan view of a die-stock constructed in accordance with my invention and furnished with dies constructed in accordance with my invention, the handles of the stock being broken away. Fig. 2 a view thereof in side elevation. Fig. 3 a view in transverse section on the line *a—b* of Fig. 1. Fig. 4 a corresponding view on the line *c—d* of Fig. 1. Fig. 5 a plan view of the die-stock, with the dies removed. Fig. 6 a reverse plan view of the die-stock with the handles removed. Fig. 7 a reverse perspective view of one of the clamping blocks. Fig. 8 a reverse perspective view of one of the dies.

My invention relates to an improved die-stock and dies therefor, the object being to produce a compact, durable and accurate tool by means of which threads may be cut upon pipes or bolts having a considerable range of diameter by re-positioning the dies.

With these ends in view, my invention consists in the combination with a die-stock, of two corresponding dies each having a plurality of differentiated cutting edges and adapted to be rotatably mounted in the stock in a plurality of positions as required to bring their several cutting edges into play.

My invention further consists in a die-stock and dies having certain details of construction as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I employ two corresponding hexagonal dies 2 each having threading edges 3, 4, 5, 6, 7 and 8 differentiated in size to adapt the dies to be used in threading pipes, bolts and the like, having a range of diameter corresponding to the capacity of the several threading edges aforesaid. These dies

blanks, but are given symmetrical, though irregular form by differentiating the threading edges in size and amount of separation as above described, to adapt the dies to be employed in threading pipes, bolts, etc., having a considerable range of diameter. As thus constructed, each die is formed with clearance faces 9, 10, 11, 12, 13 and 14, which provide for the clearance of the chips. The centers of the described cutting-edges if projected to meet projections of the described clearance-faces, would be found to be of the same length and produce symmetrical, hexagonal figures. In this connection I may state that I have found by taking a hexagonal figure as a basis for my die-blank, I secure, in conjunction with the desired cutting-edges, just the angular disposition of the clearance-faces required for the free clearance of the chips. I do not wish, however, to be limited to the employment of hexagonal dies founded upon hexagonal blanks, as other die-blanks of other polygonal forms might satisfy the requirements of my invention.

The two dies 2, 2, are placed facing each other in an oblong longitudinally arranged chamber 15 occupying the main portion of the body of the stock or die-holder 16 and located between two parallel flanges 17 formed upon the upper face of the stock 16. As thus formed the said chamber 15 is open at both ends for the reception and operation of removable, adjustable positioning blocks 18 having angular inner faces 19, 19, corresponding to the angles of the clearance-faces of the said dies 2, and having square outer faces which are engaged by set-screws 20 mounted in upwardly extending threaded lugs 21 cast integral with the stock 16 and arranged centrally at the ends of the chamber 15. The said dies 2 are held against rotation by having their lower faces formed with intersecting diametrical grooves 22 which are exactly alined with the radial centers of the cutting edges. These grooves 22 function to position the dies by their reception of locking lugs 23 arranged exactly in the axis of the stock and in the longitudinal center of the chamber 15 as clearly shown in Fig. 5. Each lug 23 is intersected by a threaded opening 24, provided for the reception of binding screws 25 employed for holding the dies in place and passing downward through them, the holes 26 formed in the

dies 2 for the passage of the binding-screws 25 being made enough larger than the same, as shown in Fig. 4, to permit the dies 2 to be adjusted by the positioning-blocks 18 and the set-screws 20. The lugs 23, before mentioned, are flanked on either side by bearing ribs 27 of ordinary construction and function, the upper faces of the dies bearing against these ribs. The ends of the stock are formed with threaded sockets 28 for the reception of the removable handles 29.

It will be readily understood that by removing the binding screws 25, the dies 2 may be re-positioned with little time or labor for cutting pipes and the like, varying in diameter, whereby a single tool is endowed with a wide range of use at a minimum outlay for dies, time and labor.

I claim:—

1. The combination with a die-stock having a chamber formed with longitudinally arranged locking-lugs extending into the said chamber, of two corresponding dies located in the said chamber on opposite sides of the center thereof and each having a plurality of differentiated cutting edges and rotatable in the stock as required to bring the same into play and formed in their

lower faces with intersecting diametrical grooves receiving the said locking-lugs according to the positions of the dies in the said chamber, and means for positioning the dies and securing them in place.

2. The combination with a die-stock formed with a longitudinally arranged die-receiving chamber containing longitudinally arranged locking-lugs; of two dies located in the said chamber on opposite sides of the center thereof, and each having a plurality of cutting edges, and formed in their lower faces with intersecting grooves receiving the said locking-lugs of the die-stock, two removable, adjustable positioning-blocks respectively located in the ends of the said chamber and adapted upon their inner edges to co-act with the said dies, and set-screws co-acting with the outer edges of the said blocks for the longitudinal adjustment thereof.

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

FRANK S. BRADLEY.

Witnesses:

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