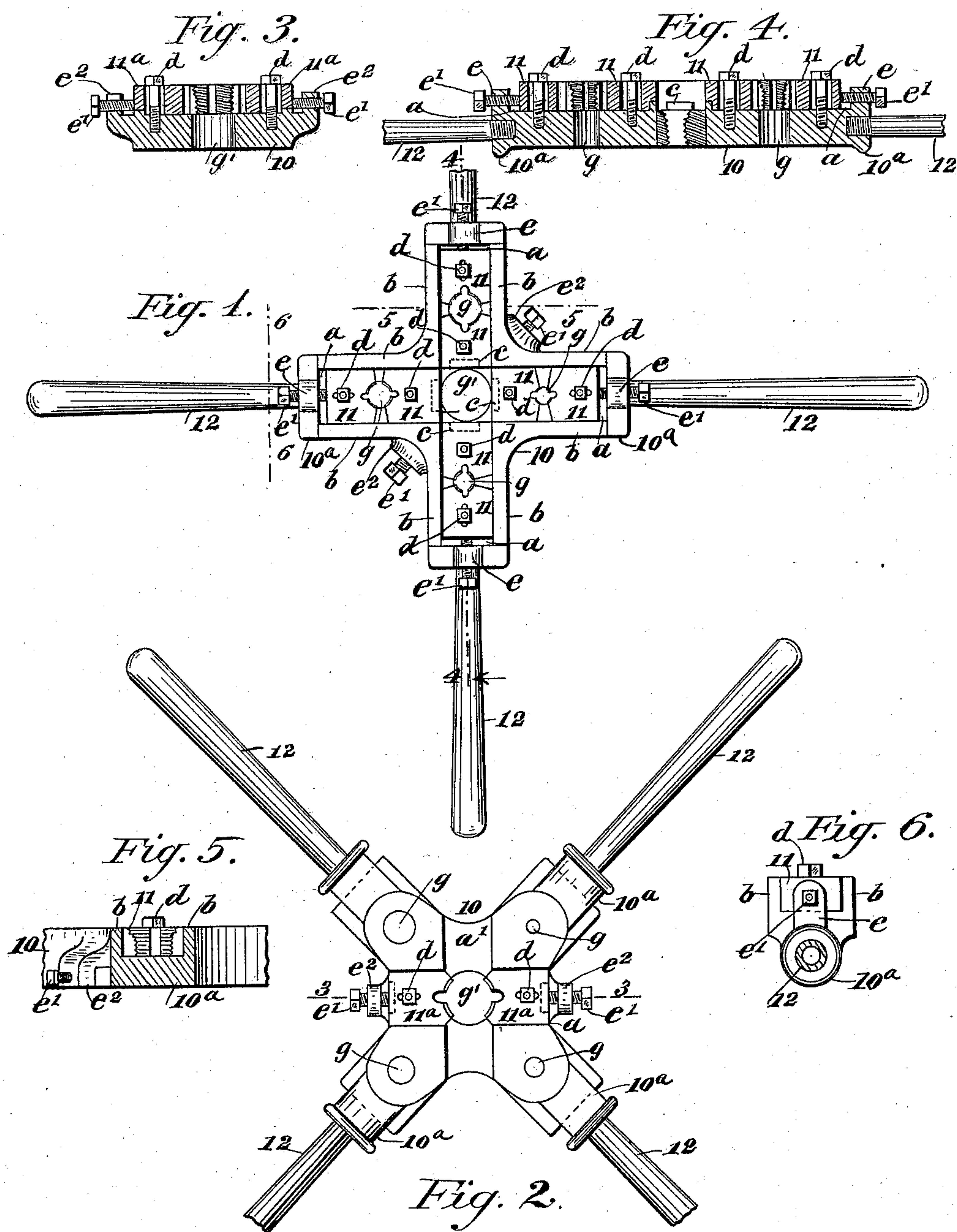


(No Model.)

W. H. SWEITZER.
DIE STOCK.

No. 603,930.

Patented May 10, 1898.



WITNESSES:

Otto Spieth.
Wm. L. Patton

INVENTOR

W. H. Sweitzer.

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM HENRY SWEITZER, OF DANVILLE, ILLINOIS.

DIE-STOCK.

SPECIFICATION forming part of Letters Patent No. 603,930, dated May 10, 1898.

Application filed July 31, 1897. Serial No. 646,621. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY SWEITZER, of Danville, in the county of Vermilion and State of Illinois, have invented a new and Improved Die-Stock, of which the following is a full, clear, and exact description.

This invention relates to a stock-plate and dies therefor used in threading bolts or pipes, and has for its object to provide a device of the indicated character which is of compact form, cheap construction, convenient to manipulate, and that affords means to cut threads on bolts or pipes of various diameters in a rapid and perfect manner.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improved stock and a plurality of dies therein. Fig. 2 is a reverse plan view of the same. Fig. 3 is a transverse sectional view of the stock and one pair of dies substantially on the line 3 3 in Fig. 2. Fig. 4 is a transverse sectional view substantially on the line 4 4 in Fig. 1, showing the stock and two pairs of dies therein. Fig. 5 is a transverse sectional view on the line 5 5 in Fig. 1, and Fig. 6 is a transverse sectional view on the line 6 6 in Fig. 1.

The die-stock, as represented in the drawings, is adapted to hold in operative condition five pairs of adjustable dies, and consists mainly of the four-limbed body-piece 10.

The four limbs 10^a of the body-piece are projected oppositely in pairs, and the longitudinal axis of one pair of limbs is at right angles with the axis of the other pair, all said limbs being integrally joined to the central portion of the body-piece 10.

On a side of the stock which may be regarded as the upper one each limb 10^a is longitudinally recessed, said recesses having flat bottoms and parallel side walls, the width of these recesses *a* being so proportioned to that of the limbs as to leave side flanges *b* at each side edge thereof. The shallow flat-bottomed recesses *a* are provided for the reception and holding in operative position of the thread-

cutting dies 11, one pair being located in each recess.

The pairs of thread-cutting dies 11 vary in capacity, each pair being adapted to cut bolts or pipes that differ in diameter from those that are cut by other pairs of dies.

At the inner end of each recess *a* a projection or abutment-flange *c* is formed, which flanges are adapted to receive the impingement of the innermost die of each pair.

The innermost dies 11 are perforated in alinement with threaded perforations in the bottoms of the recesses *a* to receive screw-bolts *d*, that screw into said threaded holes.

Each of the outermost thread-cutting dies 11 is apertured, said apertures being elongated longitudinally of the limbs 10^a and being opposite tapped holes in the bottom wall of the limbs 10^a to accommodate the screw-bolts *d*, the provision of said elongated apertures enabling a longitudinal adjustment of the outermost dies 11 toward or from the mating innermost dies.

At the outer end of each stock-limb 10^a an ear *e* is integrally formed thereon, said ears each being perforated and tapped to receive a set-screw *e'*, which set-screws may be screwed against the outer ends of the dies 11 that are nearest thereto, and thus move such dies toward the innermost dies as occasion may require.

Opposite the threaded ends of each pair of thread-cutting dies 11 a perforation *g* is produced in the bottom wall of each recess *a*, each perforation respectively having a diameter which will permit the free insertion of a bolt or pipe end therethrough and which is to be threaded by the pair of dies between which said bolt or pipe end is thus introduced.

It will be seen that the defining-walls of the perforations *g* that loosely embrace the body of a bolt or pipe end serve to guide and steady the inserted bolt or pipe, which insures the proper action of the cutting-dies 11 thereon.

The outer ends of the limbs 10^a are perforated and threaded therein longitudinally for the reception of threaded ends on the handle-levers 12, which have sufficient length to adapt them for effective service, two of the levers being shown thus connected with the stock 10 in Fig. 4, this means for connecting

the levers with the die-stock permitting their free removal when the device is to be packed for transportation. The reverse side of the die-stock 10 is channeled transversely and at right angles between the limbs 10^a, as clearly shown in Fig. 2, and a central orifice *g'* is formed in the stock-body where the channels or recesses *a'* cross each other.

A pair of thread-cutting dies 11^a is located in one transverse recess or channel *a'*, and said dies have their cutting edges disposed at opposite sides above the periphery of the central orifice *g'*, intermediate of the four dies that have previously been described.

The die-sections 11^a are each slotted longitudinally at suitable points for the reception of set-screws *d*, that are screwed into tapped perforations in the stock 10, and the die-sections 11^a may be longitudinally adjusted by set-screws *e'*, that are in threaded engagement with the tapped ears *e*², which are projections on the stock-body 10 at the outer ends of the channels *a'*, wherein the dies 11^a are held.

It will be seen that any of the five pairs of screw-cutting dies 11 11^a may be separately used, and as they considerably vary in diameter where they engage with material to be threaded, a large range of work may be effected by the use of the improved die-stock and the plurality of thread-cutting dies thereon.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a die-stock, having radial handle-bars, and radial recesses for dies in opposite faces of the stock, of a plurality of thread-cutting dies engaging the recesses of the stock, a central die occupying the recesses on one side and the other dies being disposed about the center and in the recesses on the other side of the stock, each die comprising a fixed section and a movable section, and a set-screw bolt for adjusting each movable die-section, said bolts each having a threaded engagement with the die-stock, as specified.

2. The combination, with a die-stock, comprising a stock-body having four spaced limbs longitudinally channeled to receive thread-cutting dies, and four pairs of thread-cutting dies in said channels, one die-section of each pair being longitudinally slotted and the other die-section thereof perforated, of set-screw bolts engaging in the said holes and slots and screwing into tapped holes in the die-stock, said stock having an orifice opposite the cutting ends of each pair of dies, and set-screw bolts screwed through tapped ears on the stock-body and pressing on the outer slotted section of each pair of dies, as specified.

3. The combination with a die-stock channeled on one side to produce four radial channels or recesses therein, and on the opposite side to receive one pair of thread-cutting dies which lie between the four radial recesses, of four pairs of thread-cutting dies in the radial

recesses, the die-stock being circularly apertured opposite the cutting edges of each pair of dies, and means for adjustably holding all the dies on the stock, as specified.

4. The combination with a die-stock having on one side thereof four die-receiving recesses alined in pairs, each pair of recesses being at right angles with the other pair, said stock being also provided with a single die-receiving recess on the opposite face thereof, which recess lies diagonally between the pairs of recesses in the opposite face of the die-stock, of five thread-cutting dies each comprising a fixed die-section and a movable die-section, means to hold the pairs of die-sections in respective recesses, and a set-screw bolt for each pair of dies projecting through a tapped ear on the die-stock, and adapted to press upon the movable die it is opposite, as specified.

5. A die-stock, comprising a central plate or body having a central pipe-receiving hole passing therethrough and a series of other pipe-receiving holes disposed about the same, thread-cutting dies and means for securing them to the central body to register with said holes, the central die being upon one side of the body and the other dies being upon the opposite side thereof.

6. A die-stock, comprising a central plate or body having a central pipe-receiving hole passing therethrough and a series of other pipe-receiving holes disposed about the same, recesses in the face thereof adapted to receive thread-cutting dies and hold them in register with said holes, and dies in said grooves, the central die being upon one side of the body and the other dies being upon the opposite side thereof.

7. A die-stock, comprising a central plate or body having a central pipe-receiving hole passing therethrough, and a series of other pipe-receiving holes disposed about the same, recesses in the face thereof adapted to receive thread-cutting dies and hold them in register with said holes, dies in said grooves formed of plural members and set-screws mounted in the recess-walls and adjusting said die members.

8. A die-stock, comprising a central body having a central pipe-receiving hole passing therethrough, and a series of other pipe-receiving holes parallel thereto and disposed about the same, recesses in the face thereof adapted to receive thread-cutting dies and hold them in register with said holes, dies in said grooves formed of plural members, the central die being upon one side of the body and the other dies being upon the opposite side thereof and set-screws mounted in the recess-walls and adjusting said die members.

WILLIAM HENRY SWEITZER.

Witnesses:

ROBERT HOLMES,
H. M. OLEHY.