

C. J. DORFF.
 SCREW CUTTING DIE.
 APPLICATION FILED NOV. 29, 1909.

1,000,156.

Patented Aug. 8, 1911.

Fig. 1.

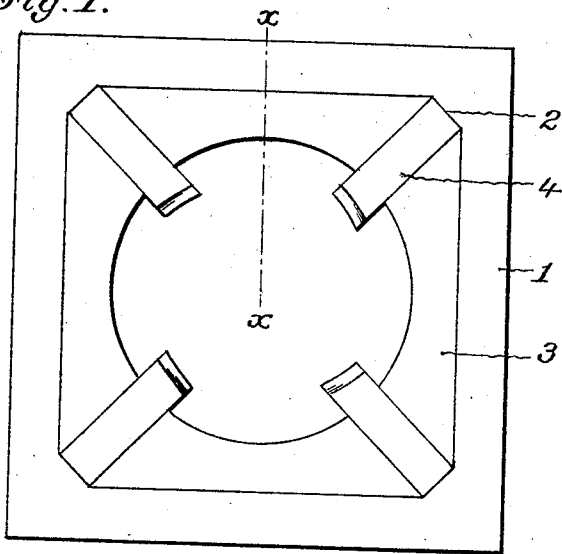


Fig. 2.

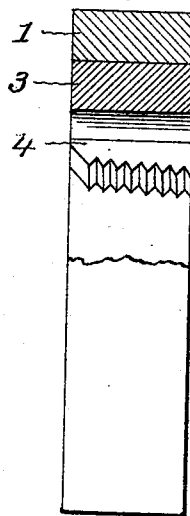


Fig. 3.

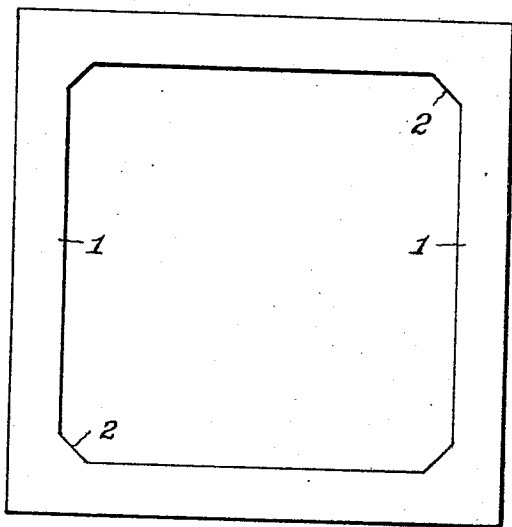


Fig. 4.

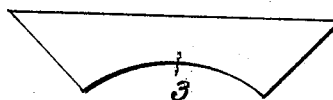
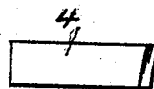


Fig. 5.



Attest:

Henry Wood.
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Inventor:

Conrad J. Dorff,
 by Robert Burns, Atty.

UNITED STATES PATENT OFFICE.

CONRAD J. DORFF, OF CHICAGO, ILLINOIS.

SCREW-CUTTING DIE.

1,000,156.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed November 29, 1909. Serial No. 530,418.

To all whom it may concern:

Be it known that I, CONRAD J. DORFF, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Screw-Cutting Dies, of which the following is a specification.

This invention relates to screw-cutting dies more especially intended for cutting screw-threads upon the ends of pipes, and has for its object to provide a simple and efficient sectional or composite structure of the die, adapted to afford great durability in use combined with economy in manufacture, all as will hereinafter more fully appear.

In the accompanying drawings: Figure 1, is an elevation of a die formed in accordance with the present invention, Fig. 2, is an end elevation, partly in section in line $x-x$, Fig. 1. Figs. 3, 4 and 5 are detached elevations of the component members of the die.

Similar numerals of reference indicate like parts in the several views.

Referring to the drawings, 1 represents the outer or border frame of the die, preferably of the rectangular form shown, and provided at its inner corners with fillets 2, for the purpose hereinafter stated.

3 are a series of segments or staves, the outer faces of which are flat and adapted to have bearing upon the inner surfaces of the border frame 1, while their respective ends have an angular or bevel formation adapting them to bear against the sides of the radially arranged cutter blades hereinafter described.

4 are the series of cutter blades of the rectangular form shown, and formed with the usual screw cutting threads or teeth on their inner ends. Said cutter blades have a radial arrangement within the border frame 1, and between the segments or

staves 3, with their outer ends bearing against the fillets 3, aforesaid. The cutting points of the series of cutters are concentric with the axis of rotation of the die.

In the manufacture of the present invention, the border frame 1 and staves 3, will be made from machinery steel or like inexpensive metal, while the cutter blades 4 will be formed of high grade tool steel and finished and tempered before assemblage.

The material parts of the present invention consist in making the interior opening of the border frame 1 somewhat smaller than the external dimensions of the series of staves 3 and cutter blades 4 in an assembled condition, and in connection with such formation, the expanding of said border frame by heat, to enable its application outside of said interior parts and so that as it cools and shrinks said frame will bind and hold the parts together in proper relation and in a very substantial manner.

Having thus fully described my said invention what I claim as new and desire to secure by Letters Patent, is:—

1. In a screw-cutting die, the combination of a border frame, a series of staves, and a series of radial cutter blades, the border frame having an opening smaller than the assembled staves and cutter blades and shrunk thereon, substantially as set forth.

2. In a screw cutting die, the combination of a border frame of a rectangular form and having fillets at its inner corners, a series of staves, and a series of radial cutter blades, the border frame having an opening smaller than the assembled staves and cutter blades and shrunk thereon, substantially as set forth.

Signed at Chicago, Illinois this 22nd day of November 1909.

CONRAD J. DORFF.

Witnesses:

ROBERT BURNS,
HENRY MOE.