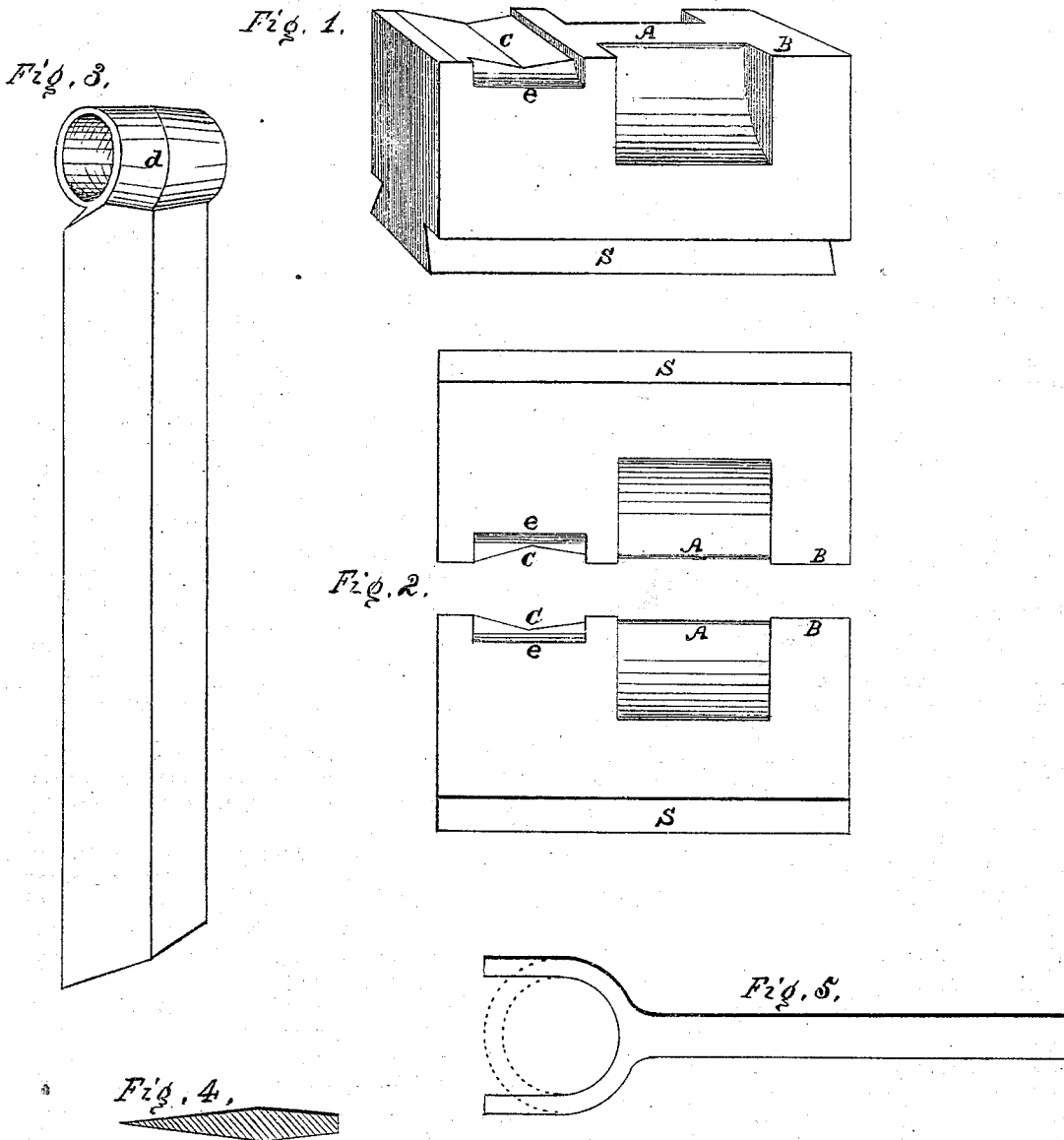


C. KONOLD.

Dies for Forging Frowers.

No. 134,993.

Patented Jan. 21, 1873.



Witnesses—

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UNITED STATES PATENT OFFICE.

CHRISTIAN KONOLD, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN DIES FOR FORGING FROWERS.

Specification forming part of Letters Patent No. 134,993, dated January 21, 1873.

To all whom it may concern:

Be it known that I, CHRISTIAN KONOLD, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain Improvements in Dies for Forging Metals, of which the following is a specification:

Nature and Objects of the Invention.

This invention relates to an improvement in that class of dies used in trip-hammers and rolls for drawing down and giving shape to the blades of frowers and edge tools of like character; and the invention I have made consists in forming each die of a pair with three faces of different shapes, by which the forgerman is enabled to draw and form a blade at one heat without change of dies, thus greatly facilitating and cheapening their manufacture.

Description of the Accompanying Drawing.

Figure 1 represents a perspective view of one of my improved dies; Fig. 2, a front elevation of top and bottom dies; Fig. 3, perspective view of a "frower" or implement used by backwoodsmen for riving shingles, clap-boards, and the like; Fig. 4, transverse section of a frower-blade. Fig. 5 represents an edge view of a blank or bar of metal, exhibiting its appearance at one stage of its manufacture into a frower.

General Description.

These dies are made of steel or cast-iron, and as large and strong as the nature of the case may require, and each provided with a longitudinal dovetailed tongue, S, to fit a recess or correspondingly-shaped groove, the one in an anvil and the other in a hammer, where they may be firmly held in place by wedges, screws, or otherwise, after the manner of those used for other objects. The operative portion of these dies is alike, each being constructed with three faces—the middle one, A, of which is used for drawing down or reducing the size of the metal submitted to their joint action; and to accomplish this rapidly that part of each die is made very narrow. At one end of this central part the face is the full width of the die, forming a broad, level plane, B, by which the metal, when reduced to the proper

size by the action of the narrow part, may be straightened and smoothed. Across the top and at the opposite end of each die is a flaring gutter or shallow groove, C, corresponding in shape to one side of the blade or implement being forged, and so constructed with a concave recess, e, as to assist in giving proper shape to the eye of the frower next its blade.

The operation of making a frower by the aid of these dies is as follows: A bar of iron of proper length, breadth, and thickness is to be split edgewise at one end, as shown at Fig. 5. This split is opened out and bent into the shape of a circle, as indicated by the dotted lines. The ends are then welded to form an eye, d, Fig. 3. Along one edge of this bar a strip of steel is inserted, and united by heat, to constitute, when finished, the cutting-edge. This portion of the bar while hot is submitted to the action of the narrow part A of the dies until it is reduced to the proper size, and then to the broad part B, for the purpose of making it straight and smooth, and from thence transferred to the shallow groove C at the opposite end of the dies, by the action of which the blade is brought to the form indicated by the cross-section, Fig. 4.

I have described these dies as intended to be fitted, the one in an anvil and the other in a hammer, so arranged as to work face to face; but the same object may be accomplished by attaching them to a pair of rolls so geared together as that the dies will work in unison, and by which the same result may be attained. Although the central narrow part A of these dies is on a level with the broad part B, still for some purposes it may be made somewhat lower, not exceeding, however, a depth equal to one-half the thickness of the intended blade.

Claim.

I claim—

The triple-faced dies, constructed as shown and described, for the purposes set forth.

CHRISTIAN KONOLD.

Witnesses:

J. B. WHALEY,
T. B. FORD.