

D. WILCOX.

Dies for Forging Stay-Ends for Carriages.

No. 154,574.

Patented Sept. 1, 1874.

FIG. 2.

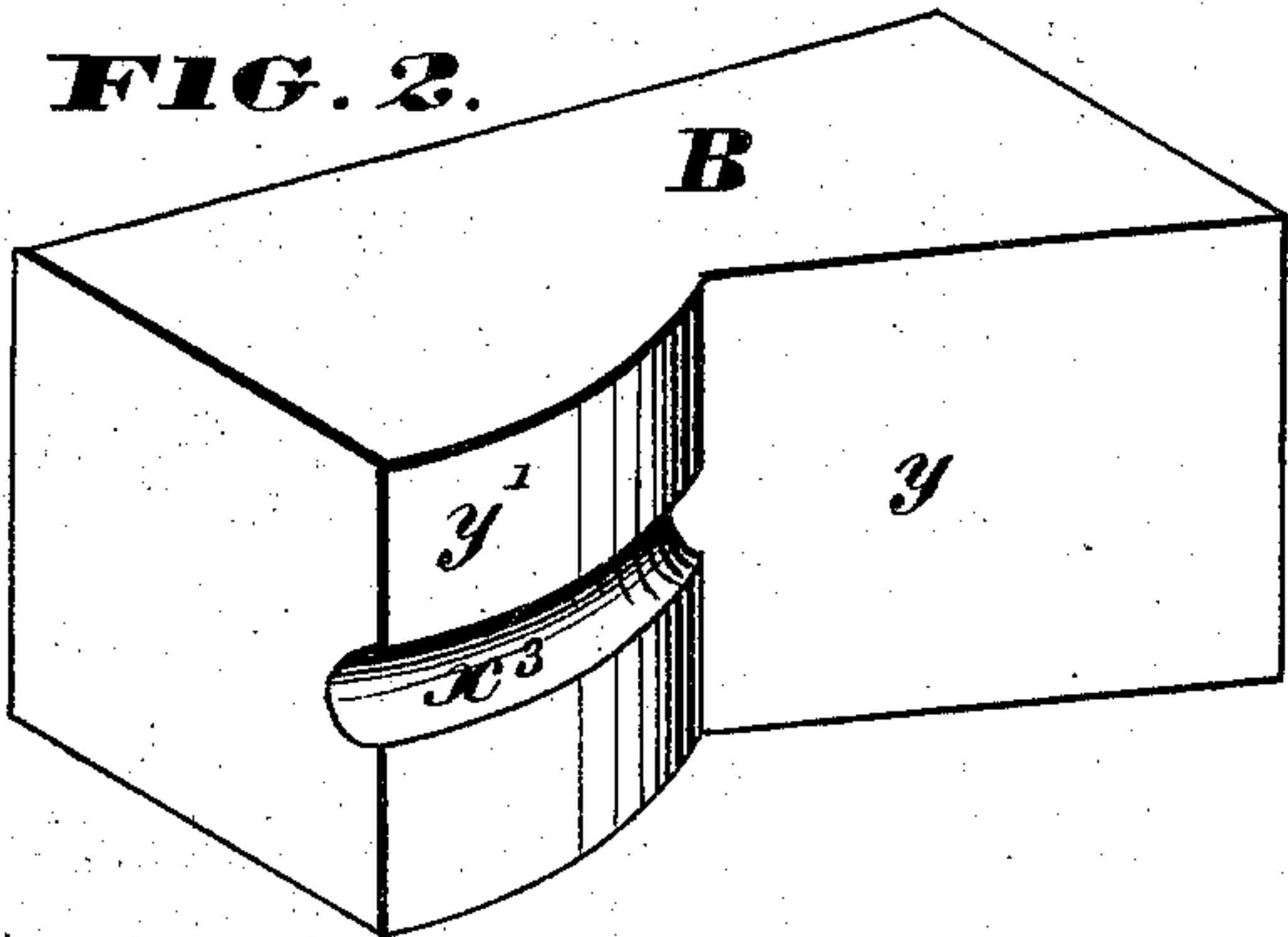


FIG. 1.

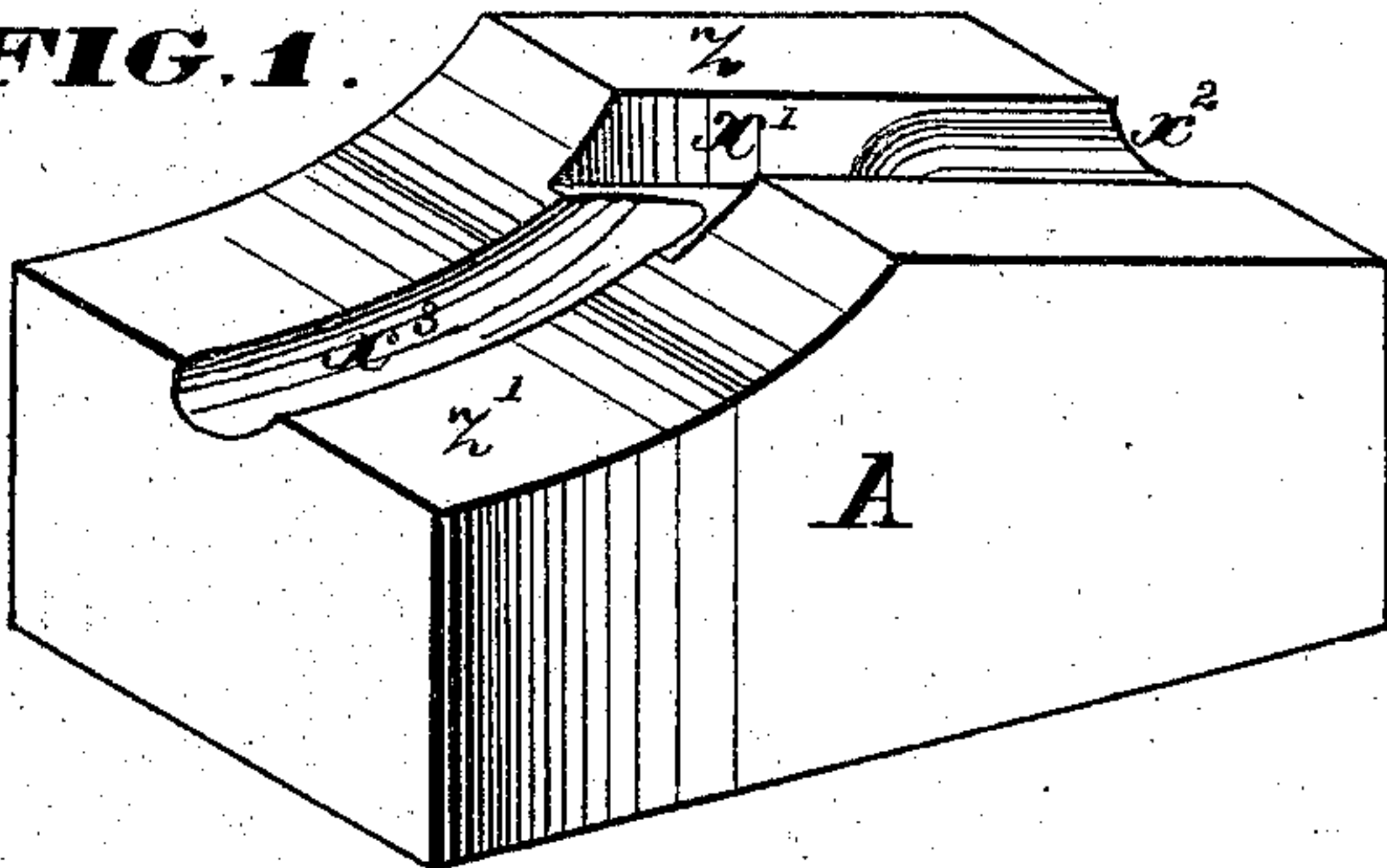


FIG. 3.

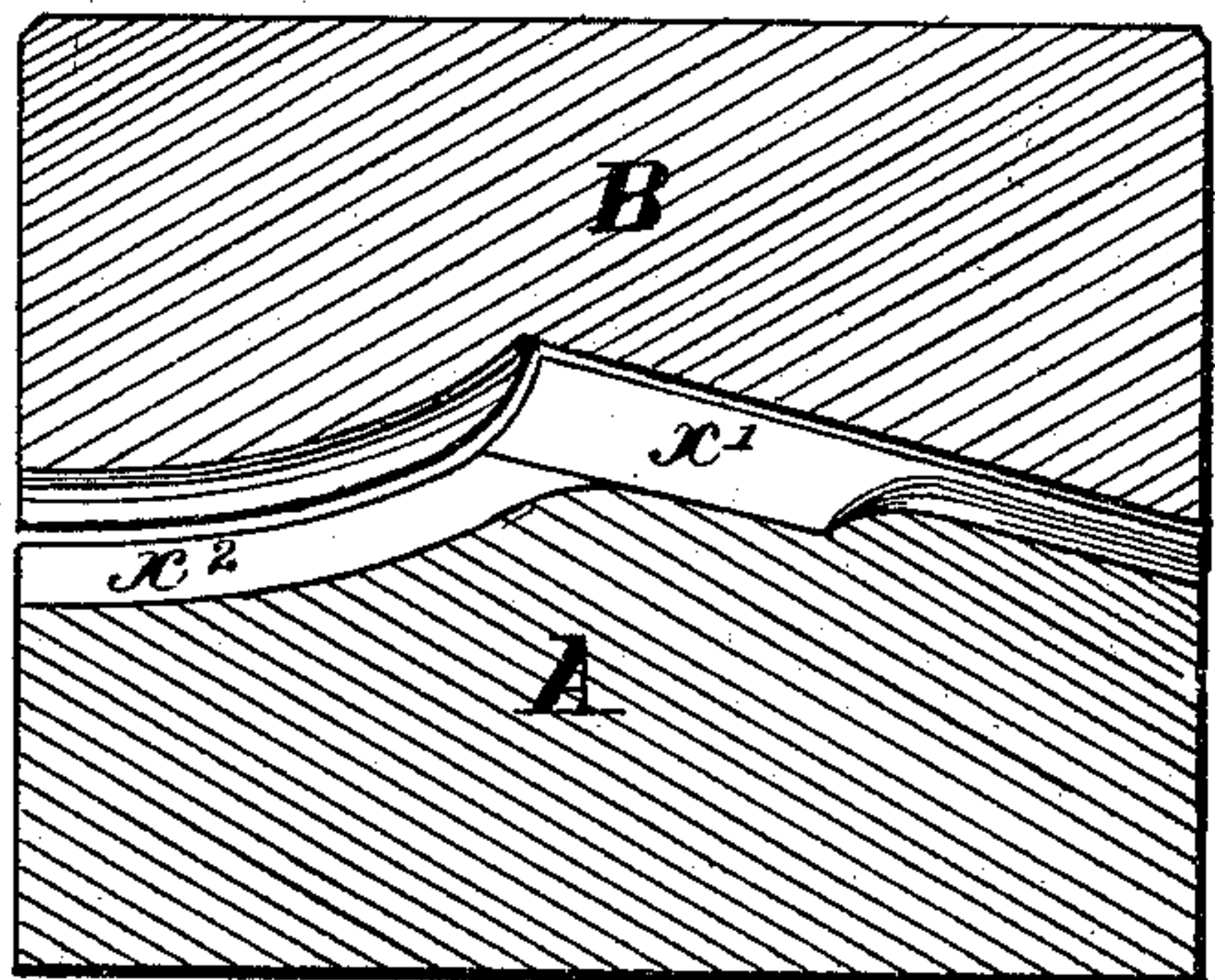
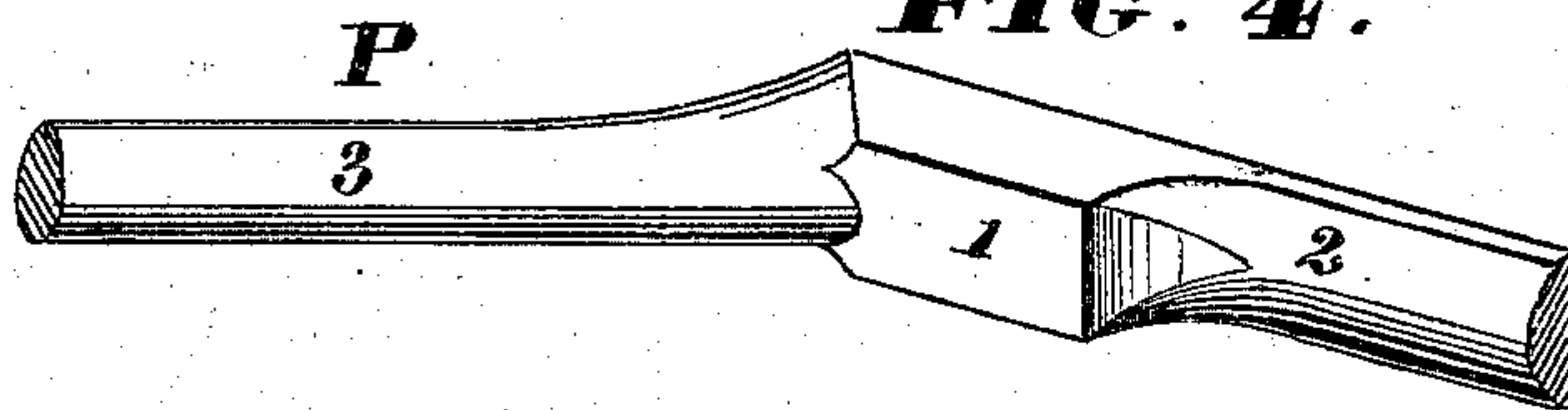


FIG. 4.



WITNESSES

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DARIUS WILCOX, OF BIRMINGHAM, CONNECTICUT.

## IMPROVEMENT IN DIES FOR FORGING STAY-ENDS FOR CARRIAGES.

Specification forming part of Letters Patent No. **154,574**, dated September 1, 1874; application filed February 19, 1874.

### CASE B.

*To all whom it may concern:*

Be it known that I, DARIUS WILCOX, of Birmingham, in the county of New Haven, Connecticut, have invented a new and useful Improvement in Dies for Forging Offsets or Stay-Ends, of which the following is a specification:

The present invention relates to the manufacture of a certain class of offsets or stay-ends for use in ironing carriages and other vehicles. The offsets or stay-ends referred to have only two ends or limbs, and in use are bolted to the sides of a carriage-reach, and serve to unite and attach to the reach lateral stays and plates extending therefrom to the head-block. This invention consists in a pair of dies in which the said offsets or stay-ends are struck side-wise, as hereinafter set forth.

Figures 1 and 2 are perspective views of the parts of a pair of dies illustrating this invention. Fig. 3 is a vertical longitudinal section of the same. Fig. 4 is a perspective view of the product.

The lower die A of this pair of dies is constructed with a face,  $z z'$ , which is flat in transverse section, and in longitudinal section, Fig. 3, is inclined upward from one end to a point at or slightly beyond the middle, and from thence curves or inclines downward to the other end. The first-named surface,  $z$ , corresponds with the flat face of the body or offset proper 1 and front end 2 of the product P, Fig. 4. The downwardly curved or inclined end  $z'$  corresponds to the central plane of the lateral arm 3 of the product, as illustrated in Fig. 3. The face  $y y'$  of the upper die B matches that of the lower die, being concave in longitudinal section. To shape the body or offset proper 1 of the product, and the end 2 in line therewith,

corresponding recesses  $x^1 x^2$  are formed of complete depth in the lower die, the smooth face  $y$  of the upper die serving to complete the matrix. To form the lateral arm 3 a corresponding recess,  $x^3$ , is formed one-half in each die, extending from the body-recess  $x^2$  to the end of the dies.

Both ends of the product being weld-ends, the matrical recesses are open at each end to permit surplus metal to protrude.

A rough blank having been placed between these dies, the forging operation is completed by pressure or blows on the upper die.

The fins are formed on the edges, and are trimmed off after the forged offset or stay-end is removed from the dies. The lateral arm 3 is then straightened or bent, if this is required, and a bolt-hole is drilled or punched through the body or offset 1. The finished product is then ready for use.

The dies may be of iron or steel, and may be made by any approved process, and each or either die may be made in two or more parts, if preferred, to facilitate the manufacture.

The form of offset or stay-end herein described admits of being struck edgewise in dies of the construction described in my Letters Patent No. 144,375, dated December 4, 1873. This form constitutes no part of the present invention.

The following is claimed as new, namely:

The dies herein described for forging offsets or stay-ends by striking them sidewise, substantially in the manner set forth.

DARIUS WILCOX.

Witnesses:

S. M. GARDNER,  
GUSTAVE WIEDEMANN.