

(No Model.)

J. BASS.
DIE FOR MAKING TURN BUCKLES.

No. 468,778.

Patented Feb. 16, 1892.

Fig. 3.

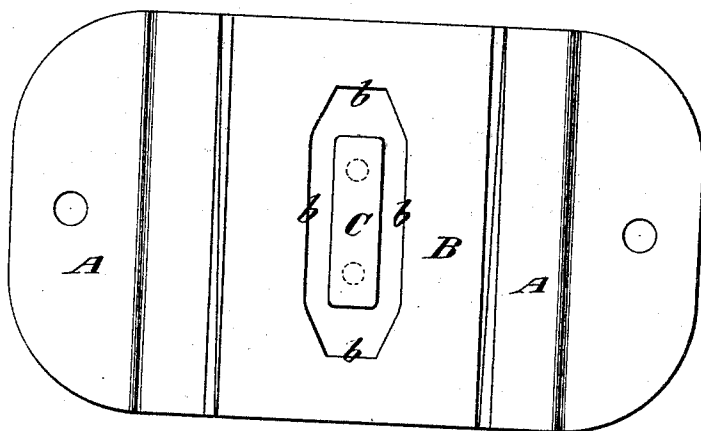


Fig. 1.

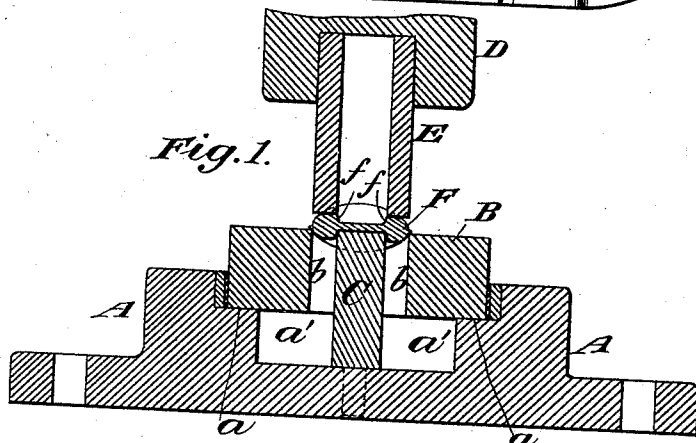
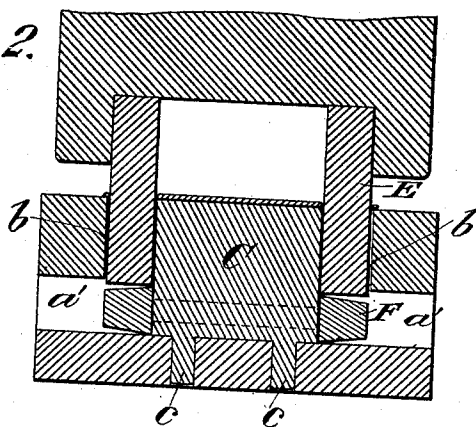


Fig. 2.



Witnesses:-
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Inventor:-
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UNITED STATES PATENT OFFICE.

JAMES BASS, OF BROOKLYN, NEW YORK, ASSIGNOR TO MERRILL BROTHERS,
OF SAME PLACE.

DIE FOR MAKING TURN-BUCKLES.

SPECIFICATION forming part of Letters Patent No. 468,778, dated February 16, 1892.

Application filed April 27, 1891. Serial No. 390,528. (No model.)

To all whom it may concern:

Be it known that I, JAMES BASS, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Dies for Trimming Turn-Buckles and other Articles of Like Form, of which the following is a specification, reference being had to the accompanying drawings.

According to the method in which wrought-iron turn-buckles are now commonly made a fin or burr is left around the outer edges and a web is left between the reins or a fin left along the interior thereof. Heretofore two separate operations have been performed for trimming by two different sets of dies and plungers, one for trimming the inside and the other for trimming the outside.

The object of my invention is to provide for trimming the inside and the outside of the turn-buckle at one operation, and thereby not only to effect a saving of labor, but to obviate the liability to twist the reins of the turn-buckle by reason of the lack of support to the inside during the trimming of the outside and by reason of the lack of support to the outside during the trimming of the inside when the two operations are separately performed.

I will now proceed to describe my invention as adapted for the trimming of turn-buckles, with reference to the drawings, and afterward point out its novelty in claims.

Figures 1 and 2 represent vertical sections at right angles to each other of a set of dies embodying my invention. Fig. 1 shows a turn-buckle placed between the dies ready to be subjected to the trimming operation; and Fig. 2 represents the turn-buckle in the dies as trimmed, but not yet removed therefrom. Fig. 3 represents a plan of the bed-plate and the lower die fitted thereto.

Similar letters of reference designate corresponding parts in all the figures.

A designates a bed-plate, in which is secured a stationary bottom die B C.

P is a plunger, to which is fitted a removable upper die E.

F is a turn-buckle.

The stationary die is composed of two members B and C. The member B has an opening *b* through it, which corresponds in form

with the intended contour of the finished turn-buckle, the upper margin of said opening having sharp edges, and the said member is so supported on shoulders *a* in the bed-plate as to leave below the die a space or passage *a'* of considerable depth, the said space or passage being open at either end, as shown in Fig. 2. The member C consists of a punch or post-like piece, the horizontal section of which conforms to the contour of the intended interior of the finished turn-buckle, and it is erected upon the bed-plate A at the bottom of the space or passage and stands centrally within the opening *b* in the member B, its top or upper face having sharp edges and being flush with the top of the member B. The member C, though occupying a fixed position relatively to the member B when in operative combination therewith, is required for the purpose of my invention, to be removable through the opening *b* of the member B, and for that purpose it is fitted to the bed-plate at the bottom of the space or passage *a'* by means of dowel-pins *c*, which are firmly and permanently attached to its bottom and are inserted into corresponding holes or mortises in the bed-plate.

The upper die E is in the form of a hollow punch and an exact counterpart of the lower one, its horizontal section presenting an exterior which conforms exactly to the opening *b* in the member B of the lower die and its interior conforming exactly to the member C of the lower die. This die E is made with sharp inner and outer edges to act with a shear-like action in combination with the edges of the two members of the lower die.

The operation of the invention is as follows: The plunger D and upper die E being raised, the turn-buckle F is placed over the opening *b* in the lower die. The plunger D and die E are then brought down upon the turn-buckle and made to drive it downward through the said opening and over the member C, and by that operation both the inside and the outside are trimmed simultaneously by the edges of the two dies without any tendency to twist the reins *f f*. The die E descends far enough to drive the turn-buckle completely through the member B of the lower die into the space *a'*, where it is left impaled on the member C

on the return of the upper die E. It remains now to get the trimmed turn-buckle out of the die, and in order to do this the member C of the lower die is removed by lifting it outward through the lower member B by a pair of tongs or other suitable implement applied from above the latter member. The turn-buckle then remains loose at the bottom of the space or passage *a'* in the bed-plate, whence it can be withdrawn through the opening at either end thereof.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the outer die member B, having an opening which conforms to the exterior of the article to be trimmed, and a support for said member in which there is left below said member a space or passage *a'* open at one end, of the inner die member C, which conforms to the interior of

the article to be trimmed and is supported at the bottom of said space or passage, but removable therefrom through the outer die member B, substantially as and for the purpose herein set forth.

2. The combination, with a pair of dies which conform to the interior and exterior of an article to be trimmed, one of said dies being composed of separable outer and inner members, of a support for both said members, said support having provided in it a space behind said outer member and the said inner member projecting through said space and being removable through said outer member, substantially as and for the purpose herein set forth.

JAMES BASS.

Witnesses:

GEORGE BARRY,
FREDK. HAYNES.