

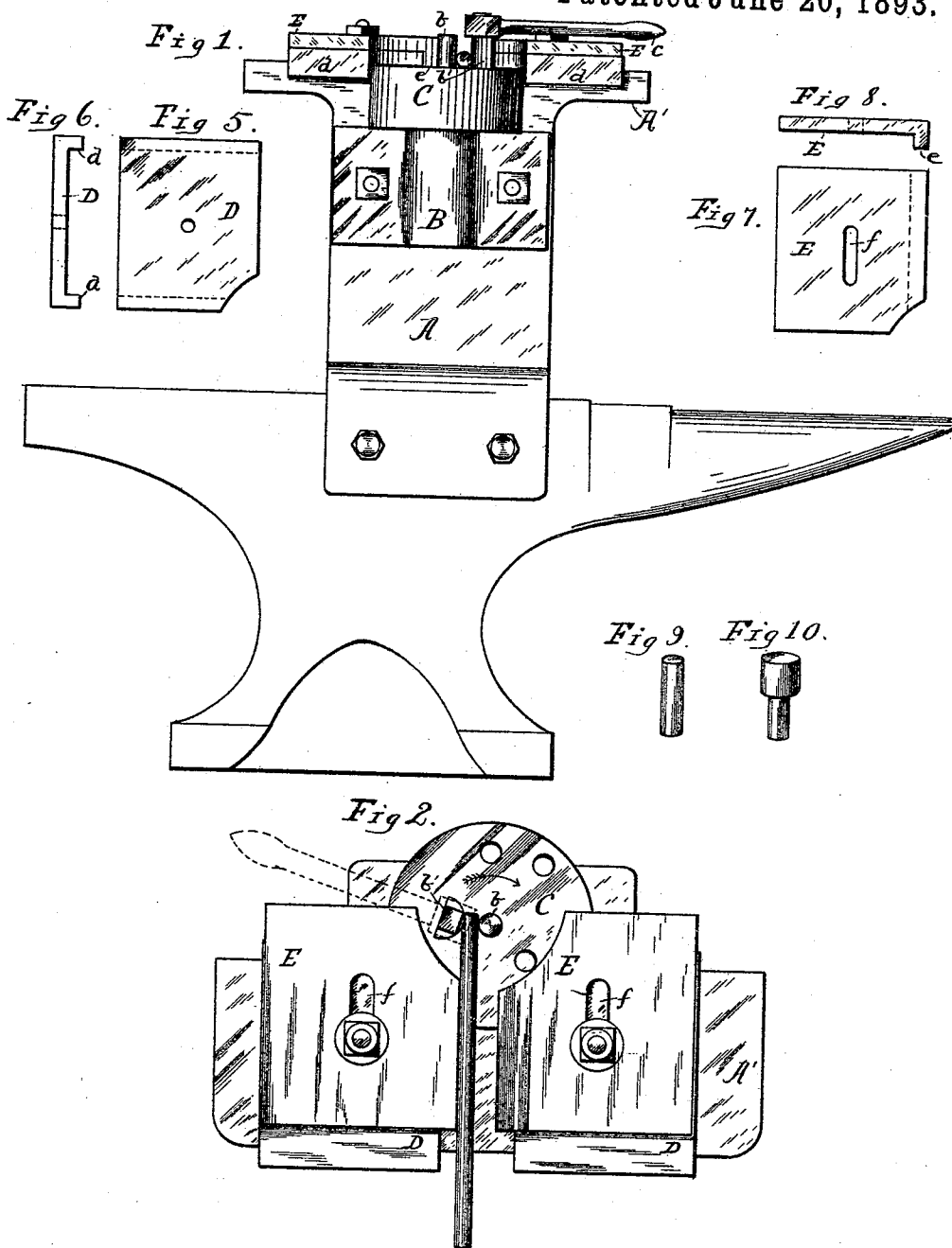
(No Model.)

W. E. L. RODGERS.
EYE FORMER.

2 Sheets—Sheet 1.

No. 499,802.

Patented June 20, 1893.



WITNESSES:

L. C. Leaty.
George H. Word

Wm E. L. Rodgers. INVENTOR

BY
T. A. M. Leaty.
His ATTORNEY'S

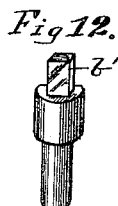
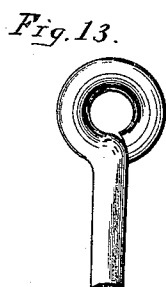
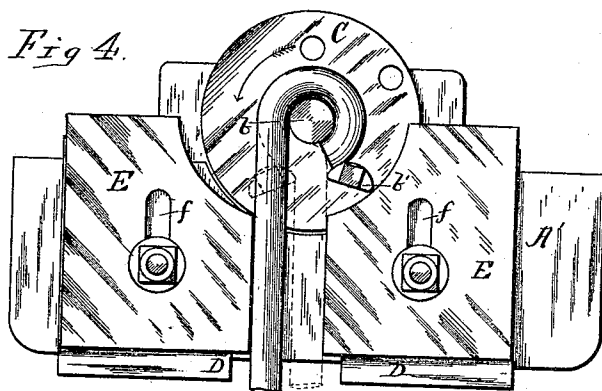
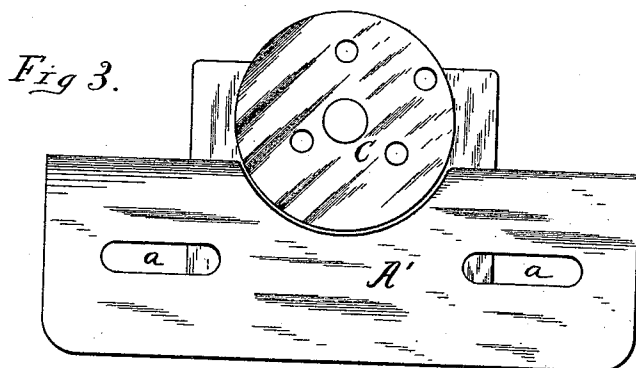
(No Model.)

W. E. L. RODGERS.
EYE FORMER.

2 Sheets—Sheet 2.

No. 499,802.

Patented June 20, 1893.



WITNESSES:

L. C. Leoty
George H. Word.

Wm. E. L. Rodgers. INVENTOR.

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His ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM E. L. RODGERS, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF TO
ALLEN E. THOMAS, OF SAME PLACE.

EYE-FORMER.

SPECIFICATION forming part of Letters Patent No. 499,802, dated June 20, 1893.

Application filed March 24, 1893. Serial No. 467,511. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. L. RODGERS, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Eye-Formers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in hand devices for forming eye-bolts; the object of the invention is to supply a want known to exist by those familiar with the work, and it consists of means whereby the eye-former is improved and the work done thereon greatly facilitated.

The improvements have reference particularly to a series of sliding plates the construction, arrangement and adjustment of which make them both novel and useful in this connection.

A further object is to adapt a single set of adjustable plates to suit irons of different diameters.

By the employment of the plates that will be hereinafter fully described, their removal from the eye-former does not become necessary at any time. Therefore, they are not lost, misplaced or found missing, when their presence is required.

The accompanying drawings illustrate my improvements, and the reference letters thereon indicate the same parts in the different views, of which—

Figure 1 is a side elevation of an eye-former attached to an anvil; Fig. 2, a plan view of the same, removed from the anvil; a piece of iron appears in position preparatory to being formed into an eye-bolt; Fig. 3, a plan view of the eye-former with the adjustable plates removed; Fig. 4, a plan view showing a rod of larger diameter than that shown in Fig. 2, the dotted lines representing the eye as completed, and the position of the cam surface eccentric pin after having completed the same; Fig. 5, the intermediate adjustable

plates; Fig. 6, an end view of the same; Fig. 7, the upper adjustable plates; Fig. 8, an end view of the same; Fig. 9, a longitudinal elevation of the center pin; Fig. 10, a similar view of a center pin having a larger diameter; Fig. 11, a longitudinal elevation of the cam surface eccentric pin; Fig. 12, a similar view presenting the cam surface; Fig. 13, an eye-bolt completed and removed from the former.

A represents the standard terminating upwardly in a projection or lateral support A' which is provided with elongated slots *a, a*. This standard is attachable to any suitable support; it is usually the custom to secure it to an anvil as is shown in the drawings.

B is a supporting plate secured to the standard by bolts, in which plate is provided a socket for a pin that extends downwardly from the head or chuck C. This chuck is provided also with a center pin *b* removably placed therein and projecting from the upper surface, around which the eye is formed.

b' is an eccentric pin having a cam surface and a squared upper end, upon which a lever *c* is placed and by which the chuck is rotated the required distance to form the eye around the pin *b*; the iron to be thus formed being secured between said pins. The pins *b'* may be placed in any of the eccentric openings shown in the chuck in Fig. 3, according to the diameter of the iron or other metal to be formed.

D, D are sliding plates each of which has a circular opening, and downwardly projecting flanges *d, d*. These plates are placed on the lateral support A' in a manner that brings the flanges against the sides of the said support, and enables the plates to be slid horizontally on the support to the extent of the elongated slots therein.

E, E are a second pair of sliding plates having elongated slots *f, f* therein, and downwardly projecting flanges *e, e*. These plates are placed upon plates D, D so that the flanges *e, e* inclose the inner edges of the latter plates, and the elongated slots *f, f* in the former plates occupy positions at right angles to the slots *a, a*, in the support A'. These plates are maintained in their operative positions

by bolts which are passed through the openings therein and through the slots *a, a*, in the support.

By the employment of the adjustable plates described in the foregoing specification, an adjustment to suit any size iron is effected; the elongated slots in the support A' permitting the entire series of plates to be brought closer together or farther apart, while the slots *f, f* in the plates E, E admit of an adjustment of said plates nearer to or farther from the chuck, as the diameter of the metal to be formed may require.

It will be understood that when iron of a comparatively small diameter is to be worked, all the plates will necessarily be brought closer together, and the plates E, E, farther up in the direction of the chuck, and vice versa. Figs. 2 and 4 will convey an idea as to the adjusting capacity of these plates. The flanges *e, e* of the plates E, E provide bearings for the iron in the different stages of the forming of the same into an eye as is shown in full lines in Figs. 2 and 4, and in dotted lines in Fig. 4.

I do not wish to create the impression that the eye-former illustrated in the drawings and herein described, is new in its entirety, for such in part, is old, but heretofore a single plate with a circular opening to accommodate a bolt, and a corresponding opening in the support A' through which openings the bolt is passed, has been in use. A number of these plates, as various in size as the different diameters of the iron to be formed, were a necessary accompaniment for every machine; in other words, a different size plate was needed for every diameter of iron. Therefore these

plates had to be removed and replaced frequently, and in thus being dispensed with, they would become misplaced or lost,—often finding their way to the scrap pile. Under these circumstances it would become a question whether or not it was advisable to make a new plate for the work in hand, rather than consume time in looking for the missing one.

Having described my invention, I desire to secure the following features:

1. In an eye-former, the combination with the chuck and the lateral support with the slots *a, a*; of the sliding plates with flanges and openings, substantially as and for the purposes specified.

2. In an eye-former, the combination with the chuck C; of the lateral support A' with slots *a, a*; the adjustable plates D, D with flanges *d, d*, and openings as herein described; the adjustable plates E, E with flanges *e, e*, and slots *f, f*, substantially as and for the purposes specified.

3. In an eye-former, the combination of the standard with the lateral support A' with elongated slots; the chuck with the center and eccentric pins; the sliding plates D, D, and E, E, with slots and openings as herein described.

4. In an eye-former, the sliding or adjustable plates D, D with circular openings and flanges *d, d*; the plates E, E with slots *f, f*, and flanges *e, e*, as herein specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. L. RODGERS.

Witnesses:

R. JAY McCARTY,
GEORGE H. WOOD.