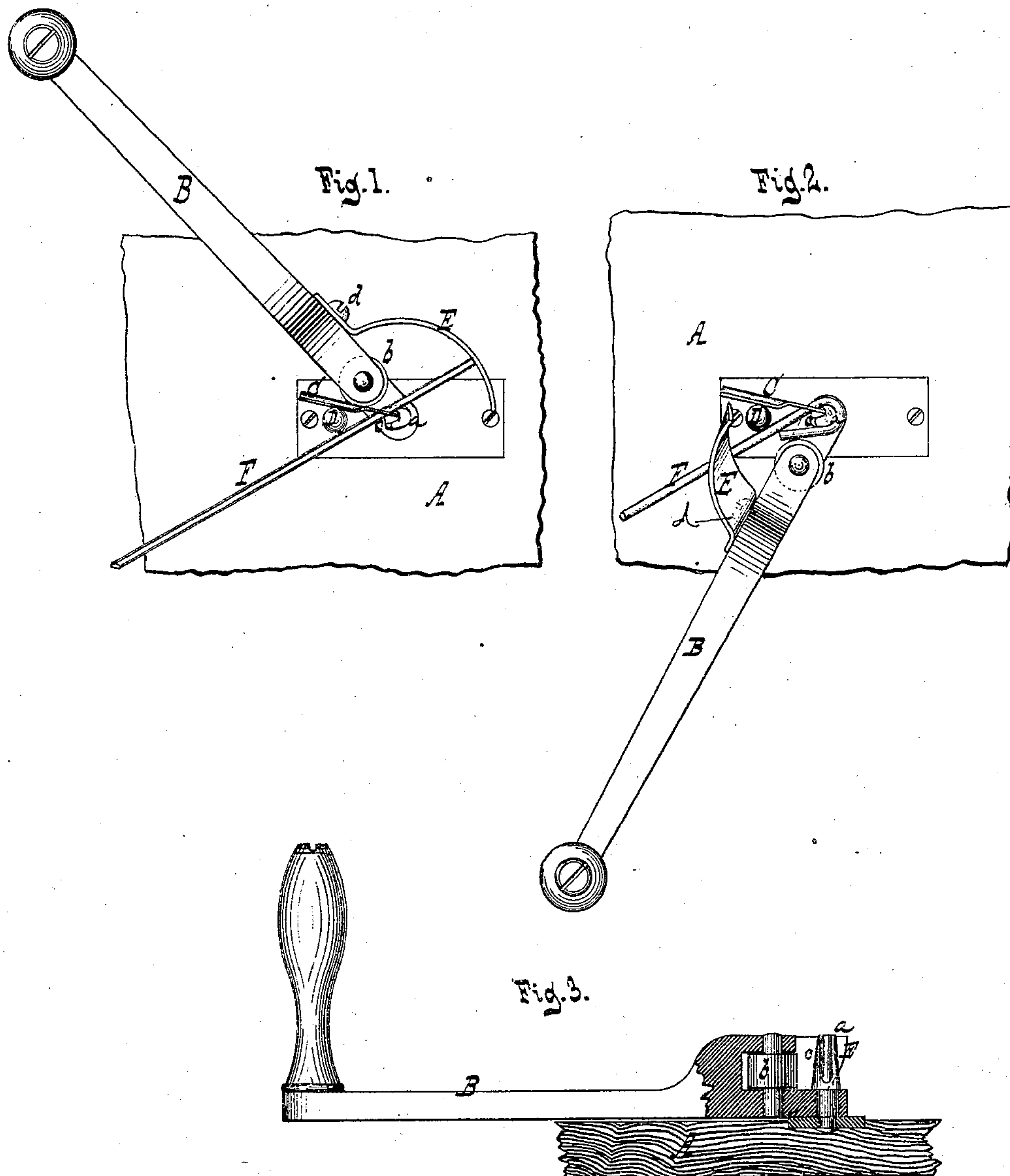


H. S. REYNOLDS.  
BAIL EYE FORMER.

No. 189,264.

Patented April 3, 1877.



Witnesses

*Otto Schupfard.*  
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Inventor

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*his attorneys.*

# UNITED STATES PATENT OFFICE

HENRY S. REYNOLDS, OF GREEN POINT, NEW YORK.

## IMPROVEMENT IN BAIL-EYE FORMERS.

Specification forming part of Letters Patent No. 189,264, dated April 3, 1877; application filed September 22, 1876.

*To all whom it may concern:*

Be it known that I, HENRY S. REYNOLDS, of Green Point, in the county of Kings and State of New York, have invented a new and Improved Machine for Forming Eyes on Metal Wire, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan or top view, showing the mechanism in position at the beginning of the operation. Fig. 2 is a similar view of the same at the end of the operation. Fig. 3 is a transverse vertical section of the same.

Similar letters indicate corresponding parts.

This invention consists in the combination with the lever for bending the wire, having a friction-roller for turning the eye, and a gage for regulating the size of the eye, of a stud to which the lever is pivoted, and around which the friction-roller travels, provided with a groove to receive the edge of an ordinary metallic bail-ear, whereby the wire can be fastened in said ear without injury to the same, as more fully hereinafter set forth.

In the drawing, the letter A designates a platform, which may be made of wood or metal. From this platform rises a stud, *a*, which forms the fulcrum for the eye-forming lever B. This lever is armed with an anti-friction roller, *b*, and it turns freely round the stud, being situated close on the surface of the platform A. The upper part of the stud *a* may be round, oval, or of any desirable shape and thickness, to correspond to the shape and size of the eyes to be formed, and in said upper part is a recess, *c*, into which is placed the edge of the ear C, (see Figs. 1 and 2,) that is to receive the eye to be formed. From the platform A also rises a pin, D, which sustains the wire during the operation of forming the eye, and to the lever B is secured a gage, E, by means of a screw, *d*, which forms the fulcrum on which said gage can swing

upward to the position shown in Fig. 2, the edge of the gage being curved, as shown in Fig. 3. For eyes of different size or shape different gages are used.

The wire F, on the end of which an eye is to be formed, is passed through the ear C, the edge of which is placed into the recess of the stud *a*, while the end of the wire abuts against the gage E, as shown in Fig. 1. By turning the lever B from the position shown in Fig. 1 to that shown in Fig. 2, the end of the wire is bent round the stud *a*, and as the curved edge of the gage strikes the wire F it turns up out of the way, so that it does not interfere with the motion of the lever. After the eye has been formed the lever is turned back to its original position, and the wire, together with the ear, is taken out.

My machine is intended particularly for connecting the ears of coal-hods, or other sheet-metal vessels, to the bails, and from the foregoing description it will be seen that this operation can be performed with great rapidity.

My machine can also be used with great advantage for forming open eyes or hooks at the ends of metal bars or wires—such, for instance, as the handles of ladles, said open eyes being used for hanging up such ladles or other articles.

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

In combination with the lever B, having a friction-roller, *b*, and a gage, E, the stud *a*, constructed with a groove, *c*, to receive the edge of the ear, whereby the eye of the wire can be formed and fastened in the ear without injury to the same, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 12th day of September, 1876.

HENRY S. REYNOLDS. [L. S.]

Witnesses:

E. F. KASTENHUBER,  
JAMES L. NORRIS.