

C. W. Clewley,
Making Eyelets.

N^o 79, 105.

Patented Jun. 23, 1868.

Fig. 1.

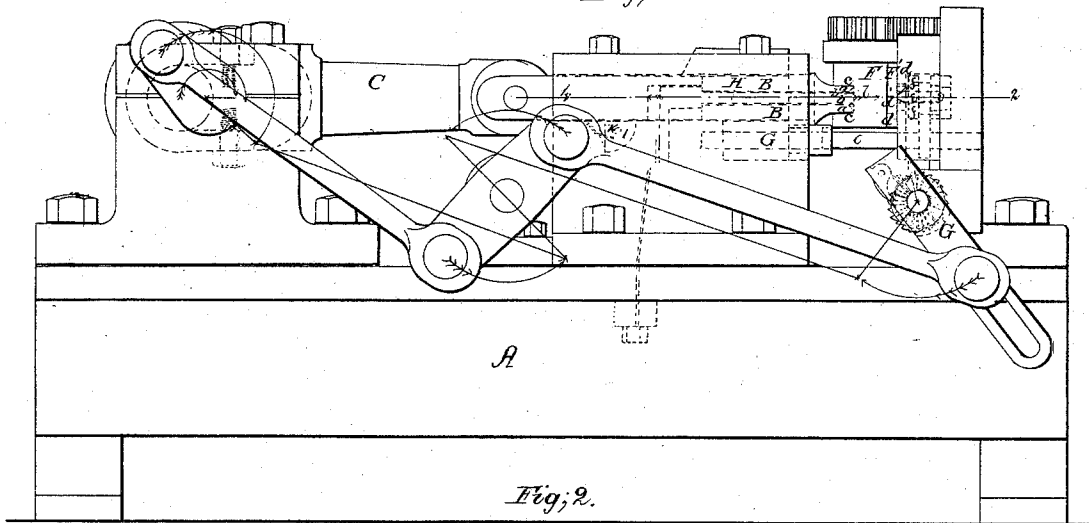


Fig. 2.

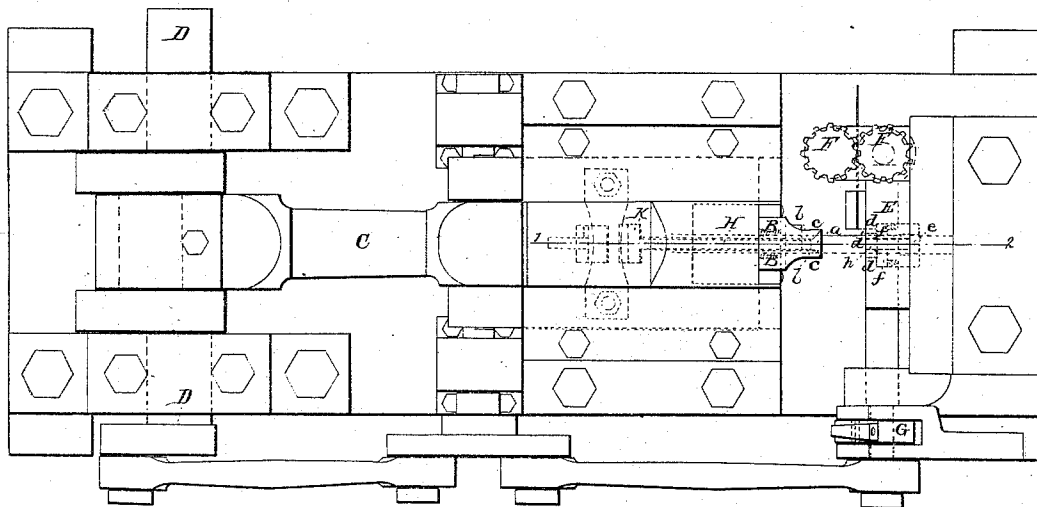
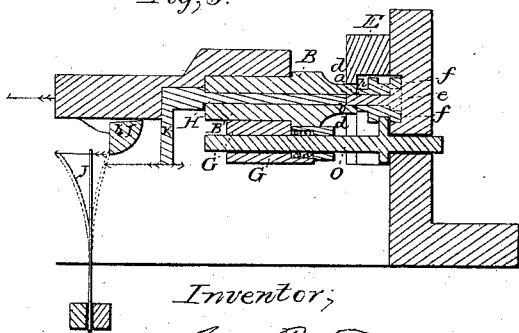


Fig. 3.



Witnesses;
Benj. F. Thompson
John T. Austin

Inventor;
Geo. P. Tew Administrator

United States Patent Office.

GEORGE P. TEW, OF CRANSTON, ADMINISTRATOR OF CHARLES W. CLEWLEY, DECEASED,
ASSIGNOR TO AMERICAN EYELET COMPANY, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 79,105, dated June 23, 1868.

IMPROVEMENT IN EYELET-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Be it known that CHARLES W. CLEWLEY, late of Cranston, in the county of Providence, and State of Rhode Island, and now deceased, did, while in full life, invent certain new and useful Improvements in Machines for Making Eyelets; and I, GEORGE P. TEW, of Cranston, in said county and State, administrator upon the estate of said CHARLES W. CLEWLEY, do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a side elevation.

Figure 2 is a plan.

Figure 3 is a section on the line 1-2 in fig. 2.

On the sixth day of September, A. D. 1859, there were granted by the United States, to the said CHARLES W. CLEWLEY, certain Letters Patent of that date, and numbered 25,318, for an improvement in machines for making watch-rims, &c., whereby there was secured to the said CLEWLEY the combination, substantially as described in the schedule accompanying the same, of the male and female plungers for the purposes therein set forth.

And afterwards, on the nineteenth day of June, A. D. 1860, there were also granted by the United States, to the said CHARLES W. CLEWLEY, certain other Letters Patent of that date, and numbered 28,737, for an improvement in the devices for making the rims of watch and locket-cases, whereby there was secured to the said CLEWLEY the combination of a die-cutter and a plunger, substantially as described in the schedule accompanying the same, for the purposes therein set forth.

And the said CLEWLEY being so possessed of said Letters Patent for said inventions and improvements, conceived the idea that the two subjects of invention could themselves be combined together and incorporated into a machine for making eyelets, and with that view he produced the machine hereinafter described, which embodies the inventions above named, and certain improvements and additions hereinafter particularly mentioned, to enable the two classes of instruments used in making locket-rims to work together in combination, to effect the making of an eyelet.

In the accompanying drawings, A is the rectangular bed or frame upon which the parts of the machine are mounted.

A reciprocating motion is given to the compound instrument, B, presently to be described, in any convenient way, and in this instance by means of a link, C, connecting the same with a crank upon the main shaft D.

The compound instrument referred to consists of a die, *a*, and female cutter, *b*, substantially the same as that described in the above-mentioned patent, granted to the said CLEWLEY, June 19, A. D. 1860, and numbered 28,737; but in addition, the outside of the die constitutes a male cutter or plunger, *c*, to act in combination with the stationary cutter, *d*, to cut out from a strip the planchets or circular disks of metal from which the eyelets are to be formed.

E is a block of steel, formed with a circular opening, *d'*, which has a cutting-edge. The opening corresponds in diameter with the diameter of the male cutter *c*, which is to enter therein. In the centre of this opening stands a fixed stud or punch of steel, *e*, made sufficiently tapering to correspond with the die *a*, and to give the interior form to the eyelet. It has also a tip, *h*, at the extreme end, which is cylindrical, and whose office is to act in combination with the female cutter *b*, to punch out the bottom of the eyelet, and is the equivalent of the plunger described in said patent, numbered 28,737, with the difference that in this case the punch is stationary.

The rear portion of the block E is cut away as shown in fig. 3, to give room for the collar *f* which surrounds the stud *e* for a portion of its length, and the office of which is to turn the flanch of the eyelet, and at the proper time to strip it off the stud. This collar, in combination with the stud *e*, is substantially the male and female plunger described in the said CLEWLEY's patent above mentioned, dated September 16, 1859, and numbered 25,318.

We will now suppose the strip of metal stock to be presented by means of the feeding-rollers F F', which are geared together and operated by a ratchet-motion, G, connected with the main shaft, and arranged in a way familiar to all machinists, so as to cover the circular opening in the block E.

The compound instrument B, consisting, as already stated, of a male cutter, *c*, a die, *a*, and a female cutter, *b*, comes forward, and the male cutter *c*, in combination with the female cutter *d*, in the stationary block E, cuts out a planchet.

This planchet, by the continued onward movement of B, is shaped by the tapering portion of the stud *e*, in combination with the die *a*, into a bell-shaped cup. The cylindrical tip *h* acting as a male cutter, in combination with the female cutter *b*, at the same time punches out the bottom. The rim of the planchet is also at the same time turned so as to form a flanch by the aid of the face of the collar *f*.

The eyelet is now formed, but remains upon the tip *h* of the stud *e* until the collar *f* strips it off. The collar is made to do this office as B retreats, by means of the rod O, connected at one end with the reciprocating cross-head G', and at the other end with the collar.

Inasmuch as the small circular disk which is cut from the bottom of the eyelet, remains at the bottom of the die, it is necessary to expel the same before the next eyelet is formed. This is effected by the piston-rod H, which is fitted to slide easily in the axis of the compound instrument B, and is capable of moving forward when suitably impelled into the die *a* from the rear. As the cross-head G' is retreating, a projecting block, I, pivoted to its under slide, strikes against a flat spring, J, and bends it backward until the line in which the block travels becomes a tangent to the arc described by the end of the spring, when the latter is released and strikes the bent shank *k* of the piston a blow, which causes it to dart forward and drive out the disk from the die.

As the cross-head moves forward again, the block I, which has its opposite face rounded, and has also a slight rocking motion on its pivot *k*, is enabled to override the end of the spring, and be in position to repeat its function upon the next return of the cross-head.

What is claimed as the invention of the said CHARLES W. CLEWLEY, and is sought to be secured by Letters Patent, is—

1. The compound instrument B, composed of a male cutter, *c*, a die, *a*, and a female cutter, *b*, in combination, constituting the moving instruments in the formation of an eyelet, substantially as described.
2. The combination of the above-described compound instrument B with the stationary female cutter *d*, "former" *e*, male cutter *h*, and collar *f*, substantially as described.
3. The piston H, in combination with the die *a*, arranged and operated substantially as described, for the purposes specified.

GEO. P. TEW,

Administrator on Estate of Charles W. Clewley.

Witnesses:

BENJ. F. THURSTON,
JOHN D. THURSTON.