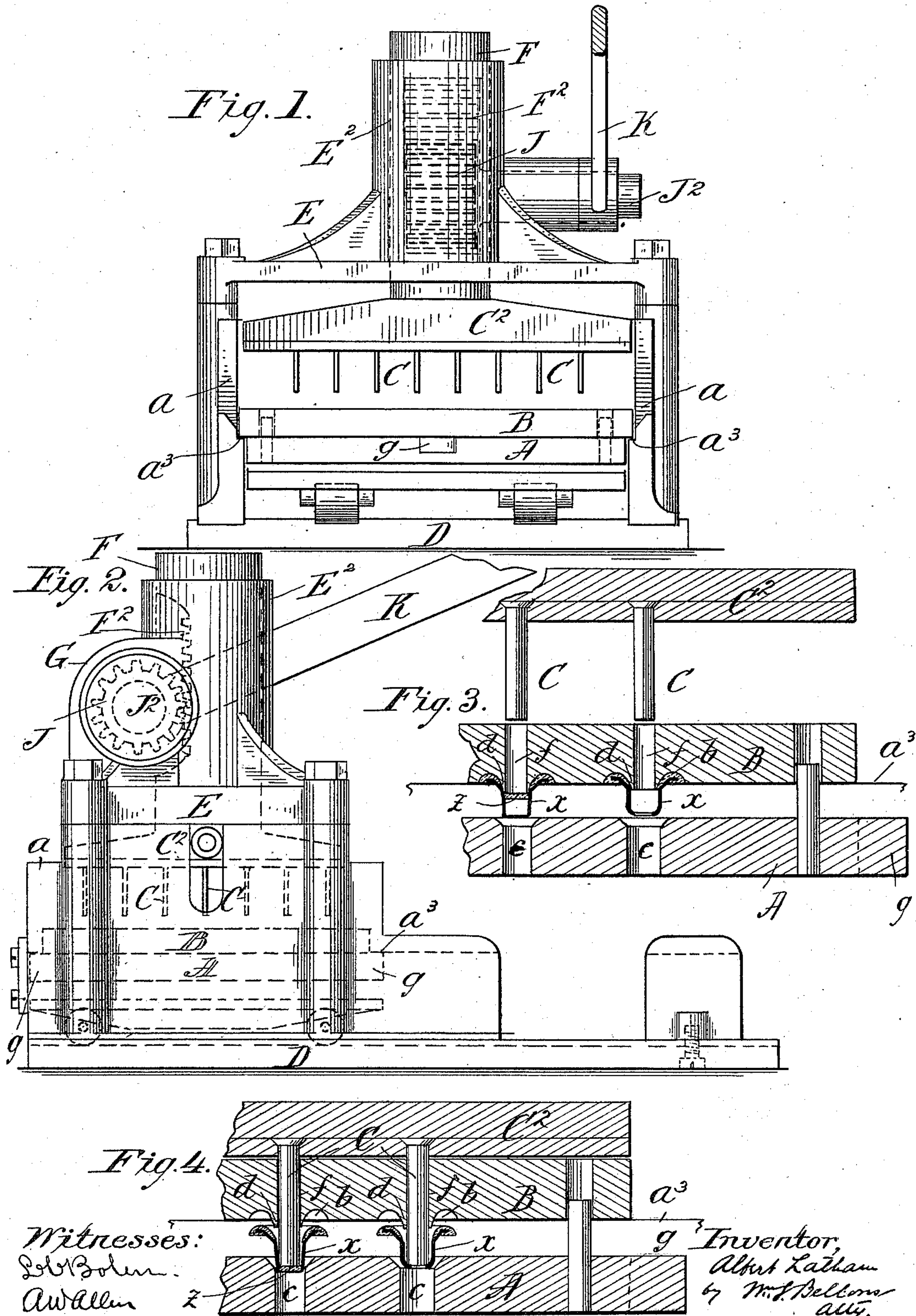


(No Model.)

A. LATHAM.
DIE FOR MANUFACTURING PLASTIC COVERED EYELETS.
No. 581,914. Patented May 4, 1897.



UNITED STATES PATENT OFFICE.

ALBERT LATHAM, OF SPRINGFIELD, MASSACHUSETTS.

DIE FOR MANUFACTURING PLASTIC-COVERED EYELETS.

SPECIFICATION forming part of Letters Patent No. 581,914, dated May 4, 1897.

Application filed July 14, 1896. Serial No. 599,070. (No model.)

To all whom it may concern:

Be it known that I, ALBERT LATHAM, a citizen of the United States, and a resident of Springfield, county of Hampden, and State of Massachusetts, have invented certain new and useful Improvements in Dies for the Manufacture of Plastic-Covered Eyelets, of which the following is a specification.

This invention relates to improvements in means, operating in conjunction with the dies which are employed for applying plastic material on eyelets, for ejecting the covered eyelets from the dies with great rapidity and convenience and without the necessity for pounding or otherwise violently treating the delicately-constructed dies.

The invention consists in the combination, with a head-forming die having an axial perforation and an eyelet-receiving die, of an ejector movable through said perforation and operating to exert a pressure internally against a covered eyelet adhering in said head-forming die for dislodging it therefrom.

Reference is to be had to the accompanying drawings, in which—

Figure 1 shows in end elevation a machine comprising a support for the dies and the ejector adapted to operate in conjunction therewith. Fig. 2 is a side view of the same. Figs. 3 and 4 are vertical sectional views through the dies and showing the ejector.

In the drawings, A represents the eyelet-receiving die-plate, having, in multiple series usually, the holes or sockets *c* for the reception of the tubular shanks of the eyelet-shells *x*.

B represents the plate comprising the head-forming die, having also in multiplicity, as well known in this art, the annular concave head-forming depressions *b*, with the central bosses or studs *d* of an approximately conical form for forming or shaping the flaring mouths or upper openings of the eyelets. The die B, with the bosses *d*, has the central perforations *f*, through which the ejector-pins C move.

The ejector-pins are mounted on a suitable plate or carrier *C*² therefor, having combined therewith means for imparting thereto a reciprocatory movement, and these parts may be advantageously embodied in a machine of which they may be regarded as a part and which will be briefly described.

D represents a base having at opposite sides uprights *a a*, which support the elevated platform-like part E, having the hub *E*², through which plays the plunger F, on the lower end of which, beneath part E, is mounted the aforesaid carrier *C*² for the ejector-pin or series of ejector-pins C.

On the side of the hub *E*² is a hollow boss G, having mounted therein the pinion J, which meshes into the rack-teeth *F*² on the plunger. The pinion is carried on the arbor *J*², suitably journaled, and the arbor has the operating-lever K, whereby the ejector may be operated.

Below the ejector-carrier are ledges or rests *a*³ for the head-forming die B, so that the same may be supported with its perforations, which are axial relative to the head-forming portions of the die, coincident with the axis of the ejector-pins C.

When the die B rests on the ledges *a*³, the die A in which the shanks of the eyelets are disposed is unsupported, except such support as it receives by the adhesion of the eyelets between the dies from the die B, and by sufficient downward pressure, which may be applied against the die extensions *g g*, die A may be forced away from die B, leaving the eyelets adhering by their heads in the latter. Die A is slightly narrower than die B, so as to have its edges within the said supporting-ledges *a*³ *a*³, so that it may drop down away from die B.

Now by swinging the lever downwardly a certain distance the ejectors C will pass down through the perforations therefor in die B and will exert a forcing contact and pressure against and within the inwardly turned or tapered tubes of the eyelets or against the plastic material which has been pressed down within the tubular bodies of the eyelets. The ejectors thus detach the eyelets from the head-forming die B, they dropping therebelow upon whatever support is provided thereunder for their reception. The ejectors are then elevated, and should any of the eyelets adhere or bind on the ejector-pins they would be stripped therefrom as the ejector-pins retreat upwardly through the perforations in the head-forming die.

In Figs. 3 and 4 the right-hand eyelet-shell is shown as having its lower end inwardly turned, against which inner-turned part the

ejector-pin will strike in its descent, and in these views the left-hand eyelet is represented with a portion z of the plastic covering material therein as forced away from the quantity supplied for forming the eyelet-head, as well known in this art, and the ejector-pin, by contacting with this portion z of the plastic material inside of the eyelet-shell, will cause the dislodgment of the eyelet from the head-forming die.

The ejectors may be operated manually or by other mechanism than that hereinabove briefly referred to.

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

The combination with a head-forming die having an axial perforation, and an eyelet-receiving die, of an ejector movable through said perforation, and operating to exert a pressure internally against a covered eyelet adhering in said head-forming die for dislodging it therefrom, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 2d day of July, 1896.

ALBERT LATHAM

Witnesses:

ERNEST HARKER,
ORLANDO CECIL POWER.