No. 691,012.

Patented Jan. 14, 1902.

E. L. SIBLEY.

EYELETING MACHINE.

(Application filed Apr. 8, 1901.)

(No Model.)

Fig. 1.

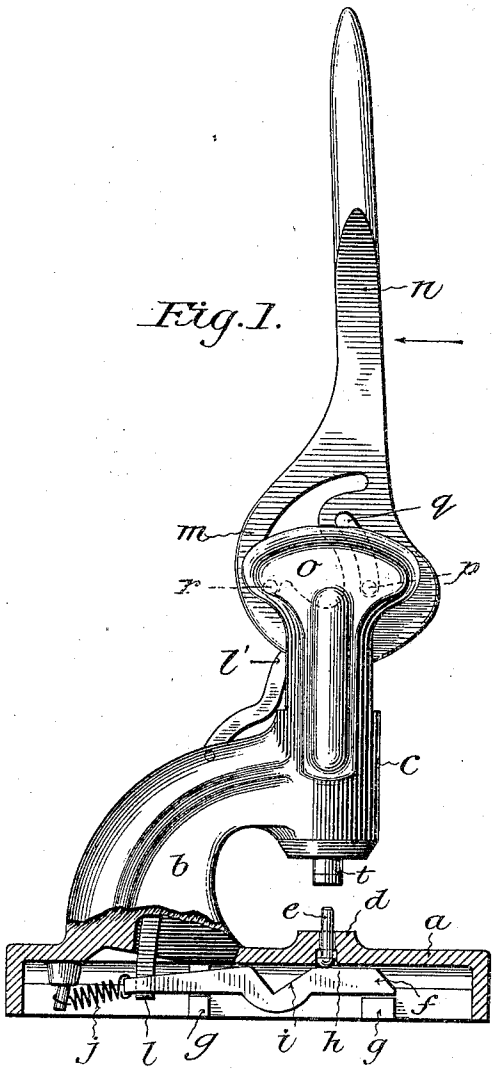


Fig. 2.

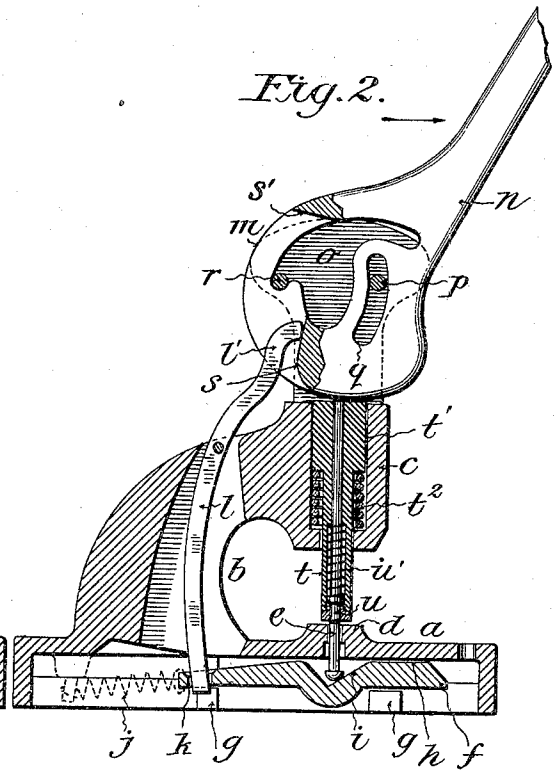
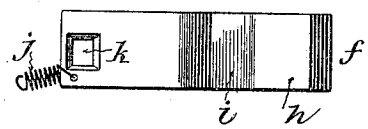


Fig. 3.



Witnesses:

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by Wm. N. Finnell.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD L. SIBLEY, OF BENNINGTON, VERMONT.

EYELETING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 691,012, dated January 14, 1902.

Application filed April 8, 1901. Serial No. 54,911. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. SIBLEY, a citizen of the United States, residing at Bennington, in the county of Bennington and State of Vermont, have invented a certain new and useful Improvement in Eyelet-Presses, of which the following is a full, clear, and exact description.

This invention relates more particularly to a press designed for use in setting eyelets or rivets of the class represented in my Patent No. 358,225, granted February 22, 1887, and known on the market as "Challenge" eyelets; and the object of the invention is to provide a positive movement in both directions for the sliding plate containing an incline, by means of which the punch is held in place to drive the eyelet through the paper or other material and is allowed to drop into the bed of the machine when the eyelet or rivet is to be upset.

The invention consists of a sliding-plate incline normally held by means of a spring beneath the punch and positively moved in both directions by means of a trip-lever, which is actuated by the punch-lever, all as I will proceed now more particularly to set forth and finally claim.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation with the bed of the machine partly broken out and the parts shown in the position for punching. Fig. 2 is a vertical section with the parts shown in position for upsetting the rivet or eyelet and the near side of the punch-lever broken away to show the rear slotted portion of the cam. Fig. 3 is a top plan view of the sliding-plate incline detached.

The bed *a*, overhanging neck *b*, and head *c* may be of usual construction. In an anvil *d* on the bed is arranged the punch *e*, having a head, as shown, and which head works within a suitable opening therefor in the bottom of the anvil. Beneath this punch is arranged the sliding-plate incline *f*, supported upon lugs *g* and having the flat surface *h*, against which the head of the punch rests in the act of inserting the eyelet in the material, and having the incline *i*, down which the punch drops when it is desired to upset the eyelet or rivet, as respectively shown in Figs. 1 and 2. This sliding plate is normally pulled to the rear by a spring *j*, so as to present its flat surface *h* beneath the punch, and said plate is provided with a hole *k*, which receives the end of a trip-lever *l*, pivoted in the neck *b* and having its upper end *l'* projected into the slot in the rear portion of the cam *m* of the punch-lever *n*. This punch-lever is pivoted between ears *o* of the head *c* by means of the pin *p*, entering the slot *q*, and a stop-pin *r* is used to limit the forward and backward throw of the said punch-lever. Adjacent to the slot in the cam *m* is a cam-surface *s*, which coöperates with the trip-lever *l* when the punch-lever is thrown forward to upset the eyelet or rivet in order to positively move the sliding-plate incline *f* forward to present its surface *i* beneath the punch and permit the punch to recede under the action of the plunger *t*.

Any tendency of the sliding plate to stick and refuse to return under the action of the spring when once moved forward is overcome by the positive movement of the trip-lever *l*, effected by the engagement therewith of the shoulder *s'* of the punch-lever when the punch-lever is thrown over backward, or to the left, Figs. 1 and 2, which movement of the trip-lever starts the return of the sliding plate and again renders the spring *j* effective. Thus one difficulty sometimes occurring in the present type of presses is overcome.

The form of plunger herein shown and preferred for use in this press comprises a plunger-tube *t'*, supported by a spring t^2, arranged within the head *c*, the said tube *t'* being adapted to receive a secondary plunger *u*, which is supported by a spring *u'*, which spring normally tends to retain the secondary plunger within the said tube *t'*. In the act of perforating the fabric and inserting the eyelet or rivet the secondary plunger *u* meets the stationary punch *e* and recedes within the slotted portion of the cam of the punch-lever; but in the act of upsetting or clenching the eyelet or rivet the solid portion of the cam comes into alinement with the secondary plunger, and thus the plunger as a whole opposes a solid face against the eyelet or rivet to be upset.

I do not limit my invention to the use of a

hole such as shown in plate *f* to effect engagement of the plate with the trip-lever, although that construction probably is as simple, cheap, and effective as any. Various substitutes for this connection may be used so long as they are capable of effecting the desired operation.

What I claim is—

1. An eyelet-press, having a plunger, a punch-lever provided with a shoulder, a punch, and a spring-pulled sliding-plate incline, combined with a trip-lever engaging a hole in the said sliding-plate incline and adapted to be engaged by the shoulder of the punch-lever to forcibly retract the sliding plate, substantially as described.

2. In an eyelet-press, a sliding-plate incline, having a hole in one end, a spring for normally drawing the said incline in one direction, and a trip-lever engaging the said hole, combined with a punch, a plunger, and a punch-lever having a cam-surface and a shoulder coöperating with the trip-lever, substantially as and for the purpose described.

3. An eyelet-press, comprising a sliding-plate incline, a spring for normally drawing the said incline beneath the punch, a trip-lever engaging a hole in said incline, a punch-lever having a slot, a shoulder, and an internal cam-surface with which said trip-lever coöperates, and a plunger, substantially as described.

4. In an eyelet-press of the class described, a sliding-plate incline and a trip-lever positively connected with the same, combined with means to actuate the trip-lever and through it the sliding-plate incline to insure the return of the said incline.

In testimony whereof I have hereunto set my hand this 5th day of April, A. D. 1901.

EDWARD L. SIBLEY.

Witnesses:

EDWARD L. BATES,

E. E. HART.