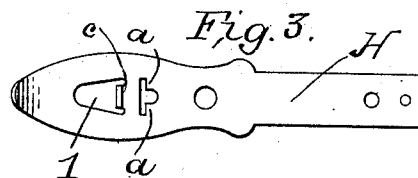
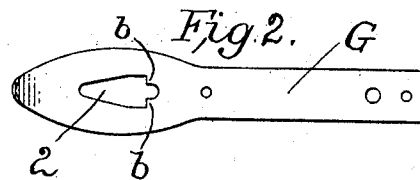
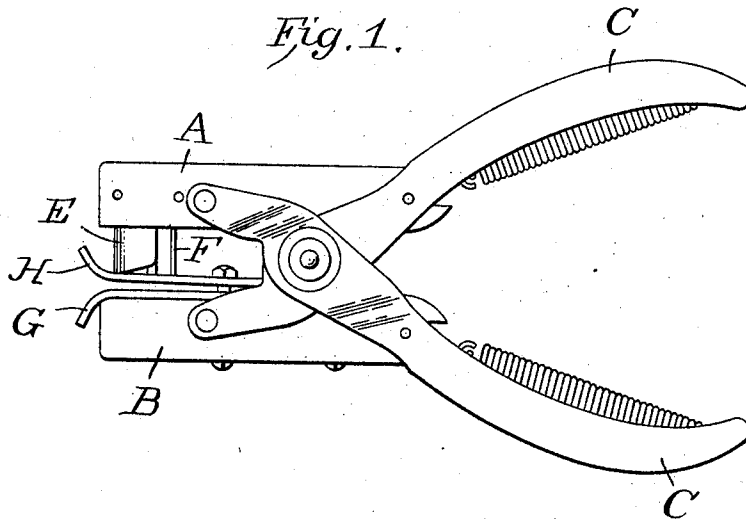


W. HOWARD.
PAPER FASTENER.
APPLICATION FILED MAR. 24, 1910.

980,525.

Patented Jan. 3, 1911.



Attest:

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UNITED STATES PATENT OFFICE.

WARREN HOWARD, OF LA CROSSE, WISCONSIN.

PAPER-FASTENER.

980,525.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed March 24, 1910. Serial No. 551,345.

To all whom it may concern:

Be it known that I, WARREN HOWARD, a citizen of the United States, residing at La Crosse, Wisconsin, have invented certain new and useful Improvements in Paper-Fasteners, of which the following is a specification.

My invention is an improvement upon the device for fastening together a plurality of sheets as disclosed in an application of George P. Bump, filed May 14, 1909, Serial Number 495985. The device made the subject of said application includes a pair of jaws, one movable preferably in relation to the other, with a cutter carried by one jaw for forming a tongue and having a slit adapted to form a transverse slit adjacent the base of the tongue, the slit having an eye, a folder being utilized to tuck the end of the tongue through the eye in the slit so that upon the withdrawal of the slit from the sheets the end of the tongue will be drawn back through the slit.

The device as disclosed in the application aforesaid includes a shear plate and a stripper plate, but in practice it has been found that the openings in these plates have not been of the best form to properly support the paper in the shearing and stripping action, and it is the object of the present invention to improve the shear and stripper plates so as to support the paper in the shearing and stripping action and prevent tearing or mutilating the paper and thus secure a more perfect fastening.

In the accompanying drawing, Figure 1 is an elevation of the device made the subject of the Bump application aforesaid in its commercial form. Fig. 2 shows the improved form of shear plate, and Fig. 3 the improved form of stripper plate.

In Fig. 1 the jaws are shown at A, B, and the handles at C, D. The tongue cutter is shown at E, and the needle or slit at F, all as in the above application aforesaid. The shear plate is shown at G and the stripper plate at H. The sheets to be fastened together are placed between the shear and stripper plates and the tongue cutter passes through the corresponding recesses 1, 2, in the stripper and shear plates, but instead of the shear plate having an opening of the configuration shown in the Bump application referred to I form the opening in my improved plate as in Fig. 2 by extending inwardly into the line of the opening, shoulders

b, b, with a space between having a rounded wall. The stripper plate, instead of having the rectangular opening shown in the old form, has an opening as shown in Fig. 3, slightly more than enough to allow the slit to pass through and likewise having shoulders *a, a*, with a space between having a curved end wall. In other words, instead of having the larger openings shown in the old form, which do not serve to properly support the paper, I reduce the size of these openings and extend inwardly shoulders to bear upon and support the paper, leaving an intermediate space between the shoulders to allow for the passing of the tongue in the withdrawal of the same.

I do not limit myself to the particular shape of the front wall *c* of the opening in the stripper plate, as this may be straight or curved without changing the effect.

It will be understood that the slit operates in rear of the tongue cutter and extends transversely in respect to the tongue cutter to form the slit in the paper in rear of the tongue and transversely to the length thereof. The slit has an eye and the folder moves the end of the tongue into the eye of the slit so that the slit may draw the end of the tongue through the slit. The shoulders on the perforated plate extend along the sides of the slit part way from each end of the slit toward each other but with a space between them for the passage of the end of the tongue.

What I claim is:—

1. In a paper fastener device of the type described herein, a tongue cutter, a slit, shear and stripper plates, openings formed in said plates through which the tongue is drawn and shoulders *a a* and *b b* formed respectively on the stripper and shear plates with spaces between for the withdrawal of the tongue, substantially as described.
2. In a paper fastener device and tongue cutter, a slit and a plate having an opening therein for the passage of the slit, said opening having shoulders on the margin extending longitudinally of the side of the slit and part way toward each other from opposite edges of the slit, leaving an opening midway of the length of the slit between said shoulders, substantially as described.
3. In a paper fastener device, a tongue cutter, a slit in rear of the tongue cutter and extending transversely in respect to the

tongue cutter to form a slit in the paper in rear of the tongue, and transversely to the length thereof, said slitter having an eye, a folder to move the end of the tongue into
5 the eye of the slitter so that the slitter may draw the tongue through the slit, and a plate having an opening with shoulders extending along the side of the slitter and with a

space between them for the passage of the end of the tongue, substantially as described. 10
In testimony whereof, I affix my signature in presence of two witnesses.

WARREN HOWARD.

Witnesses:

E. S. CONE,

TOBIAS SVENSON.