

July 5, 1932.

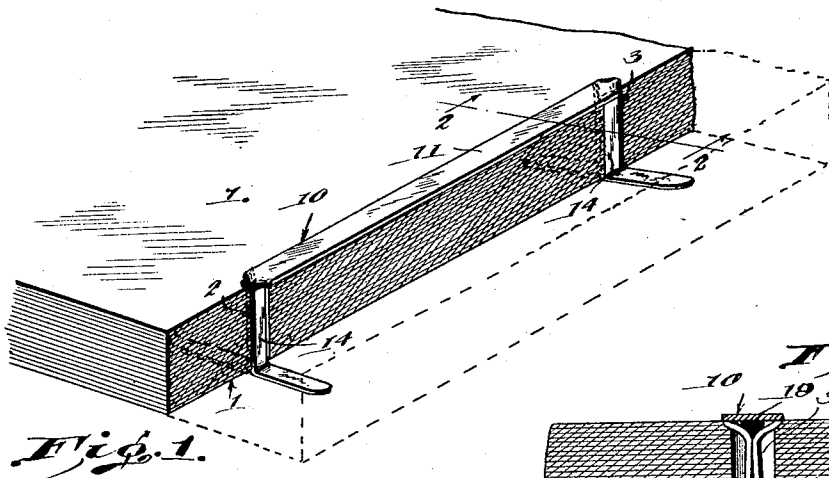
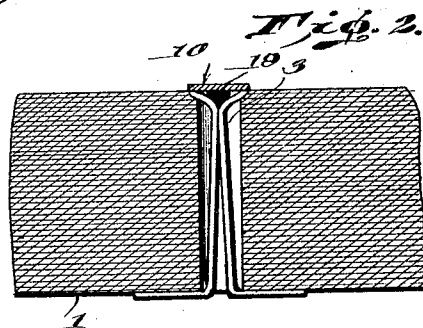
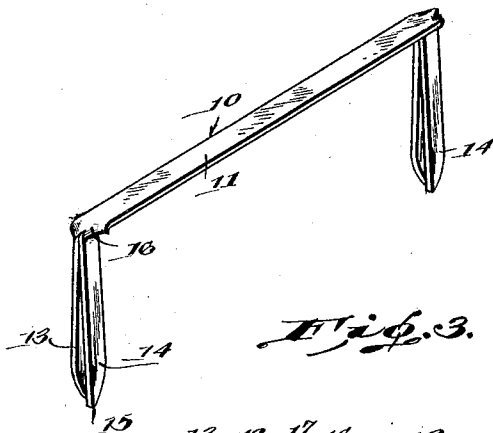
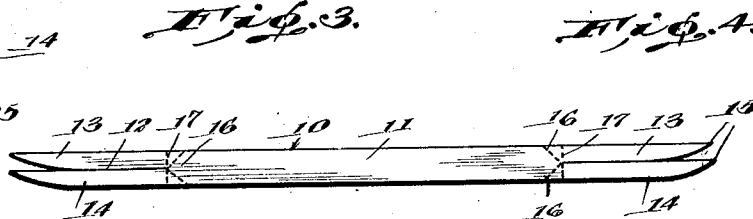
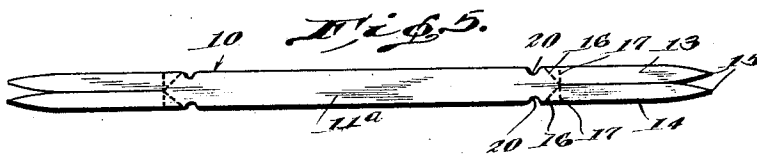
M. BOY FRANK

1,866,458

PAPER CLIP

Filed Feb. 17, 1931

2 Sheets-Sheet 1



WITNESS

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INVENTOR

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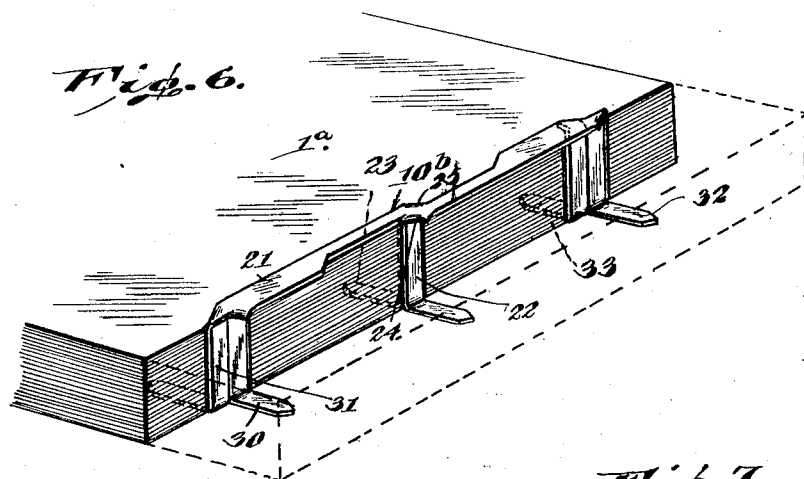
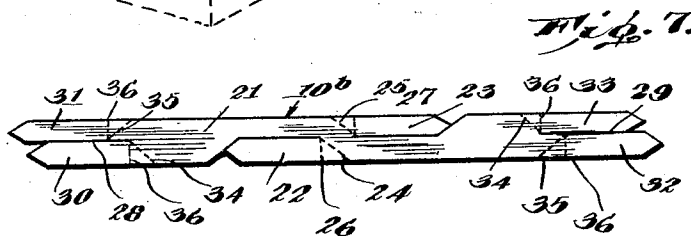
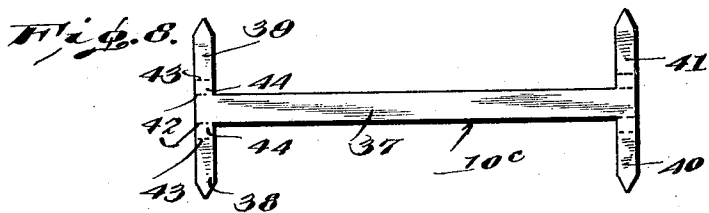
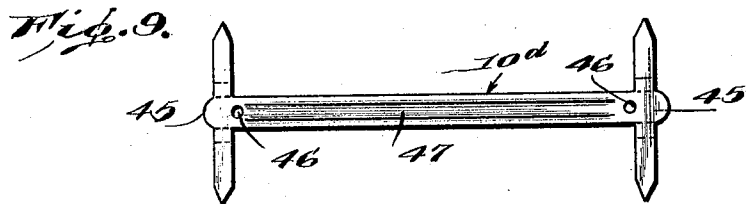
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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PAPER CLIP

Application filed February 17, 1931. Serial No. 516,422.

This invention relates to paper fasteners and more particularly to that type of fastener by means of which a plurality of papers are pinned and securely held together at spaced intervals by a single fastener.

A primary object of the invention is to so construct a fastener of this type that it will present a flat surface to the binding edge of the paper adapting it to be used close to such edge without danger of the fastener cutting through the edge of the paper.

Another object of the invention is to so construct such a fastener that when in use it will eliminate the formation of a knob or bulge on the outside of the parcel of bound papers, such a knob being very objectionable and annoying when filing several bound documents.

Another object of the invention is to provide a fastener constructed from a metallic strip or sheet of uniform width and thickness slit and bent to form the clamping member so that there will be a minimum waste of material in the formation of these devices.

In carrying out these objects, the invention is susceptible of a wide range of modification without departing from the spirit or sacrificing any of the advantages of the claimed invention; there being shown in the drawing for illustrative purposes a preferred and practical form, in which:

Figure 1 is a perspective view of a plurality of documents with this improved fastener shown applied;

Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1;

Fig. 3 is a detail perspective view of the fastener shown ready for use;

Fig. 4 is a plan view of one form of the blank from which the fastener is made; and

Fig. 5 is a similar view showing a slightly different form;

Fig. 6 is a view similar to Fig. 1 showing the application of another form of clip or fastener;

Fig. 7 is a plan view of the cut out blank from which the clip shown in Fig. 6 is formed;

Fig. 8 is a similar view of another form of clip; and

Fig. 9 is a similar view of still another form.

In the embodiment illustrated in Figs. 1 to 4 a stack of papers 1 is shown secured together by one of the fasteners 10 constituting this invention.

These fasteners 10 are cut from strips of bendable metal and are made of a length and width according to the purpose for which they are to be used, it being of course understood that they may be made longer or shorter as may be desired. The main or body member 11 as shown constitutes about one-half of the length of the strip from which the fastener is made and the ends of the strip are slit longitudinally as shown at 12 for about one-fourth of the length of the strip more or less to divide it into bendable tongues or fingers 13 and 14, two of which are formed at each end of the fastener as shown clearly in Fig. 4. After these tongues have been formed by slitting the strip and the free ends thereof pointed as shown at 15 to facilitate their insertion through the material in connection with which the fasteners are to be used. The tongues or fingers are bent at their junction with the body member 11 along the outwardly and rearwardly inclined lines shown at 16 and then bent transversely as shown at 17. These tongues or fingers are positioned with their flat faces facing outwardly from the sides of the back portion 11 as shown clearly in Fig. 3 so that when the fastener is inserted through the spaced apertures 2 and 3 in the stack of papers to be secured together these fingers or tongues will have their front faces arranged toward the edges of said papers and thus avoid all danger of cutting through said edges such as occurs when sharp edges are faced outwardly. It will thus be seen that the side edges of the tongues face longitudinally of the fastener in a plane at right angles to the side edges of the body portion and if desired a drop of solder 18 may be placed at the base of each prong where the bends occur to operate as reinforcement therefor.

To enable the clip to be packed more closely notches 20 are formed in the opposite edges of the body portion adjacent the junction

with the tongues as shown in Fig. 5 to permit the clips to be bent at their points at an angle of about 45 degrees.

It is of course understood that the terminals of the tongues or fingers may be shaped as desired, in Fig. 4 they being shown curved on their opposite faces while in Fig. 5 they are curved on their opposed edges.

In the use of the fastener it may be applied as shown in Figs. 1 and 2 by inserting the pairs of tongues through the apertures in the pieces of paper to be connected and then the terminals bent laterally outward in opposite directions to clampingly engage the lower face or the face opposed to that on which the body portion of the clip lies.

In the form shown in Figs. 6 and 7 the clip 10b which is shown applied in Fig. 6 and in blank form in Fig. 7, is cut from a sheet of bendable metal in the form of a strip 21 of any desired width and length and is equipped intermediate its ends with pairs of tongues 22 and 23 any desired number of which may be used, one pair being here shown. These tongues 22 and 23 are cut out from the opposed side edges of the strip 21, longitudinally thereof with their free ends extending in opposite directions and preferably pointed at their terminals to facilitate their entrance in the paper to be confined. At their bases these tongues are bent obliquely along the lines 24 and 25 and folded on these lines and then are bent or folded transversely along the lines 26 and 27 whereby they are positioned in engaging relation with each other face to face and extended at right angles from the body of the strip ready for entrance into the paper as shown in Fig. 6. After these tongues have been inserted through a slit or opening in the paper to be bound their free ends are bent laterally outward in opposite directions as shown clearly in Fig. 6. This formation of tongues intermediate the ends of the strip adapts a strip of considerable length to be used and yet provides a sufficient number of binding elements for securing the leaves to be bound.

The ends of the strip 21 are slit longitudinally midway the width thereof as shown at 28 and 29 to form the two pairs of tongues numbered respectively 30 and 31, 32 and 33 which are also pointed at their free ends and are here shown one made longer than the other, the tongue 32 being longer than 33 and tongue 31 longer than 30 so that the long tongues are disposed on opposite sides of the clip. These tongues are bent at their inner ends or bases along oblique lines indicated at 34 and 35, the line of bending 34, being spaced inwardly from the line 35 and being at the base of the shorter tongue. The tongues 30 and 33 are bent along these oblique line 34 while the tongues 31 and 32 are bent along the lines 35 and are then bent along the transverse lines of folding 36 and

when so bent these tongues are arranged substantially in a plane at right angles to the body of the strip one in advance of the other, that is, one tongue of each pair being in advance of the other. This arrangement of the tongues positions the tongues in the same longitudinal plane, one in advance of the other, with their front faces arranged facing the sides of the clip so that when inserted in the paper such surfaces will be placed to resist the strain on the paper.

In the form shown in Fig. 8, the clip 10c is more practical when the prongs are to be short although this arrangement effects less economy in metal. The strip 37 of bendable metal has a pair of tongues at each end extending laterally in opposite directions and which are designed to be bent inward along the lines of fold 42 and then along the lines 43 whereby the portions 44 between these lines of fold or bending are arranged flat against the under face of the clip body and the body portion of the tongues extended at right angles to said body being spaced inwardly from the side edges thereof.

In the form shown in Fig. 9 which is similar to that shown in Fig. 8 extension lips or ears 45 project longitudinally of the clip 10d between the tongue members and facilitate bending of the body adjacent the bases of the tongues. To reinforce or strengthen these clips stiffening ribs 47 may be formed longitudinally thereof.

It is to be understood that these various modifications may be combined in various ways and that the clip may be used for securing sheets of any desired material and are in no way restricted to the use in connection with paper.

Without further description it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will, of course, be understood that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention or its scope as claimed.

I claim:

1. A paper fastener comprising a strip of sheet metal having tongues struck out of the side edges thereof intermediate its ends, the free ends of said tongues extending in opposite directions before being bent, said tongues being bent at their bases to arrange them with their front faces extending outwardly and one tongue lying against the other.

2. A paper fastener comprising a flat metal strip having parallel side edges and being provided with integral tongues, each tongue being bent to bring the faces thereof into a plane parallel with the side edges of the strip and between said side edges and the central longitudinal axis of the strip.

3. A paper fastener comprising a flat metal strip having parallel side edges, said strip being split at each end to provide integral tongues, each tongue being bent to bring the
5 faces thereof into a plane parallel with the side edges of the strip and between said side edges and the central longitudinal axis of the strip.

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