Aug. 2, 1927. 1,637,832

M. A. MILLER

FASTENING DEVICE FOR PAPERS

Filed Jan. 13, 1926

Fig. 1,

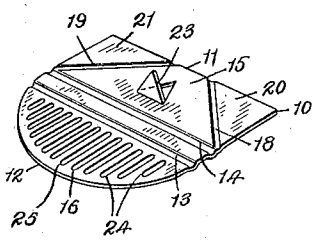


Fig. 2,

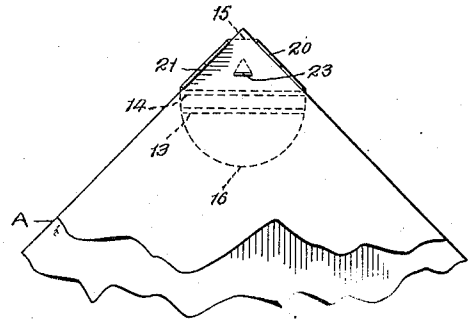


Fig. 3,

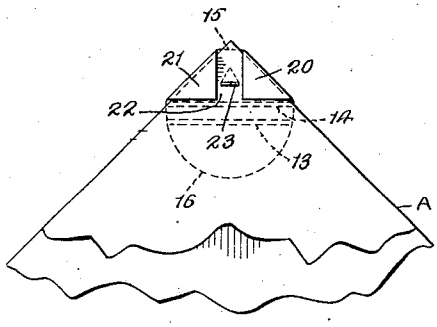


Fig. 4,

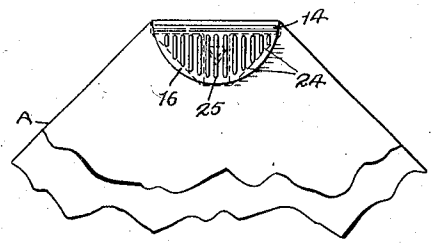


Fig. 5,

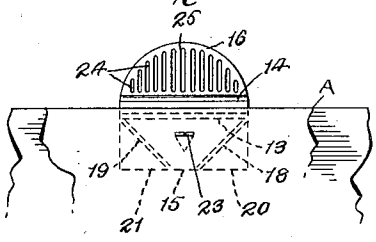


Fig. 6,

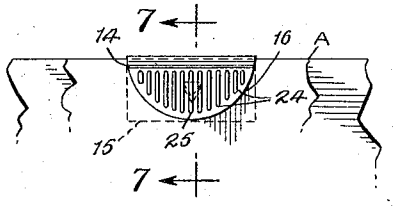
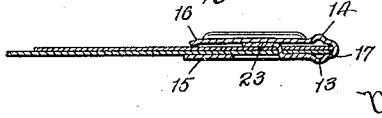


Fig. 7.



INVENTOR

Michael A. Miller

BY

W. T. Criswell.

ATTORNEY

Patented Aug. 2, 1927. 1,637,832

UNITED STATES PATENT OFFICE.

MICHAEL A. MILLER, OF LONG ISLAND CITY, NEW YORK.

FASTENING DEVICE FOR PAPERS.

Application filed January 13, 1926. Serial No. 80,987.

This invention relates more particularly to a class of holding devices or clips.

My invention has for its object primarily to provide a fastener adapted to be employed for removably holding together sheets of paper or other material against accidental separation and loss for reference thereto as occasion requires, and which is of a form designed to be applied either to a corner or to one of the side edges of the papers for enabling the device to be advantageously used to meet various requirements with respect to the related positions of the sheets or to the subject matters thereon.

The fastener is made of a plate of pliable sheet metal for being folded to provide two leaf members for receiving therebetween the paper to be secured, and the plate may be formed to provide the leaf members of appropriate shapes. When the device is of a type for being applied to the side edges of papers, one of the members is provided with a protruding prong for penetrating and for being bent upon the paper and covered by the second member when also folded upon the paper toward the first named leaf member. When the device is of a form for fastening together the corners of papers, one of the leaf members is folded to provide a triangular pocket to receive the papers, and one of the walls of the pocket is divided into spaced parts. Protruding from the second wall between the spaced parts of the first wall is a prong for penetrating and for being bent upon the paper by contact of the second leaf member when folded toward the pocket.

A further object of the invention is to provide a fastening device for papers of a simple and efficient form which may be made in appropriate sizes and shapes.

With these and other objects in view, the invention will be hereinafter more fully explained with reference to the accompanying drawing forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views, and will then be pointed out in the claims at the end of the description.

In the drawing, Figure 1 is a perspective view of one form of fastening device embodying my invention.

Fig. 2 is a fragmentary view showing a number of papers with the device in partly folded position for fastening one of the corners of the papers together.

Fig. 3 is a fragmentary view showing another step in the folding of the device for fastening the papers.

Fig. 4 is a fragmentary view showing the device when completely folded for fastening the corners of the papers.

Fig. 5 is a fragmentary view showing the device in unfolded position when applied to one of the side edges of a number of sheets of paper.

Fig. 6 is a fragmentary view showing the device in complete folded position on the side edges of the papers, and

Fig. 7 is an enlarged sectional view taken on the line 7—7 of Fig. 6.

The device is made from a plate of pliable sheet metal to provide a blank 10 which may be of any suitable size and shape, though the blank illustrated is formed to provide one end portion of a substantially rectangular shape, as 11, and to provide the other end portion of an approximately semi-circular shape, as 12. Two spaced parallel ribs or scorings, as 13, 14, may be formed in the blank at the intersection of the rectangular end portion 11 with the semi-circular end portion 12 for enabling the blank to be folded to provide a leaf member 15 and a second leaf member 16 and for enabling the part of the blank between the ribs 13, 14 to bend in the formation of a groove, as 17 Fig. 7, for receiving the sheets of papers, as A, when the device is used.

The leaf member 15 is also scored or ribbed, as at 18, 19, from the ends of the rib 13 on converging inclines so that their second ends terminate in spaced relation at the central part of the edge of the leaf member 15 opposite to the rib 13. The portion of the leaf member 15 between the rib 18 and the contiguous corner of the leaf member provides a flap member 20 of a triangular shape, and the portion of this leaf member between the rib 19 and the adjacent corner of the leaf member provides another flap member 21 also of a triangular shape. As shown, the flap members 20, 21 are proportioned and so positioned that when folded on the ribs or scorings 18, 19 toward the center of the leaf member 15 these flap members will be in spaced relation. A pocket, as 22, is thereby provided between the flap members and the

opposing wall of the leaf member for receiving the corners of the papers.

In the central part of the leaf member 15 between the flap members 20, 21 is a tooth or prong 23 of preferably a triangular shape which is formed by being struck from the metal and then bent angularly upward with its pointed end protruding between the flap members.

The leaf member 16 embraces the portion of the blank between the rib member 13 and the curved edge 12 of the blank, and this leaf member is of a size so that when folded upon the papers toward the leaf member 15 it will engage and bend the prong 23 to overlapping position on the papers as well as covering the prong for preventing the fingers of the person manipulating the device from being injured by the prong. In order to stiffen the leaf member 16 when made of very thin sheet metal I may provide on the member a number of spaced ribs, as 24, which extend from the rib 13 to nearly the curved edge of the leaf member for overcoming tendency of the leaf member to curl. The central rib may be arranged for serving as a guide 25 by contacting the point of the prong 23 to cause it to properly bend upon the papers.

When the device is used for attaching together the corners of a number of sheets of the papers A, as shown in Figs. 2, 3, 4, the flap members 20, 21 of the leaf member 15 are flexed right angularly upward in the direction of the prong 23. The lapping corners of the sheets of papers are then arranged, as indicated in Fig. 2, between the upwardly protruding flap members, and the papers are caused to be penetrated by the prong. The flap members are then folded on the papers toward the prong, as indicated in Fig. 3, and by folding the device on the rib 14 toward the leaf member 16 the papers will also be likewise folded. By pressing the leaf member 16 toward the flap members 20, 21 the prong 23 will be contacted by the guide 25 and bent upon the papers, and the leaf member 16 will cover the prong as well as covering the flap members.

The device is employed for fastening together one of the side edges of sheets of paper, as shown in Figs. 5, 6, 7, by arranging the papers so that their edges are midway between the ribs 14 and 15 of the device, and the papers are pressed for causing them to be penetrated by the prong. The leaf member 15 will then lie flat upon one face of the papers. The leaf member 16 is then folded over the edges of the papers toward the leaf member 15, and during this movement the guide 25 will engage the prong 23 which in turn will be bent upon the papers for securing them between the leaf members. The prong will also be covered by the leaf member 16 to prevent pricking a person when the papers are subsequently handled, and the free edges of the papers will be disposed in the groove 17 of the folded device.

In the foregoing description, I have embodied the preferred form of my invention, but I do not wish to be understood as limiting myself thereto, as I am aware that modifications may be made therein without departing from the principle or sacrificing any of the advantages of this invention, therefore, I reserve to myself the right to make such changes as fairly fall within the scope thereof.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A paper fastener, comprising a plate of pliable sheet metal foldable to provide two leaf members for receiving therebetween the paper to be secured, and one leaf member having a protruding prong for penetrating and for being bent upon the paper by contact of the second leaf member when folded upon the paper toward said first named leaf member, said one leaf member also being provided with ribs extending diagonally thereacross to provide triangular corner portions at opposite sides of said one leaf, each of said corner portions being foldable onto said one leaf along lines coinciding with its adjacent diagonal rib, said last mentioned portions being spaced to receive between the edge portions thereof the prong member, when said portions and said prong are in the folded position.

2. A paper fastener, comprising a plate of pliable sheet metal foldable to provide two leaf members for receiving therebetween the paper to be secured, an intermediate portion disposed between said leaf members, ribs formed in said plate and running along opposite sides of said portion, said ribs and said intermediate portion forming a pocket for the edge of the papers when the plate is in the folded position, and a protruding prong struck from one of the leaf members for penetrating the paper, said prong so positioned for being bent upon the paper and covered by the second leaf member when also folded upon the paper toward the first named leaf member.

3. A paper fastener, comprising a plate of pliable sheet metal foldable to provide two leaf members, one having spaced inwardly bent flap members to overlap the paper to be secured and having between the flap members a protruding prong for penetrating and for being bent upon the paper by contact of the second leaf member when also folded upon the paper toward said flap members.

4. A paper fastener, comprising a plate of pliable sheet metal foldable to provide two leaf members, one substantially rectangular with two of its corners being bendable in spaced relation to overlap the paper to be

secured and having a prong protruding between the bent corners for penetrating and for being bent upon the paper by contact of the second leaf member when folded toward the bent corners.

5. A paper fastener, comprising a plate of pliable sheet metal foldable to provide two leaf members, one having a triangular pocket to receive the paper to be secured and one of the walls of the pocket divided into two spaced parts, and a prong protruding from the second wall of the pocket between the parts of the first named wall for penetrating and for being bent upon the paper by contact of the second leaf member when folded toward the pocket.

6. A paper fastener, comprising a plate of pliable sheet metal foldable to provide two leaf members, one having a triangular pocket to receive the paper to be secured and one of the walls of the pocket divided into two spaced parts, a prong protruding from the second wall of the pocket between the parts of the first named wall for penetrating and for being bent upon the paper by contact of the second leaf member when folded toward the pocket, and the second mentioned leaf member having means for guiding the bending movement of the prong in a determined direction.

7. A paper fastener comprising a first plate, a second plate foldable with respect thereto, said first plate being provided with a rib diagonally disposed across each one of two opposite corners of said first plate, the said corners of said first plate being foldable along said ribs onto the main portion of said first plate with the edges of said folded portions in spaced relation with respect to each other, and a prong formed in said first plate and foldable by said second plate to lie between said edges of said folded portions.

8. A paper fastener comprising a first plate, a second plate foldable with respect thereto, a pair of spaced parallel ribs being formed between said plates whereby a pocket is formed when the first and second plates are folded with respect to each other, said first plate being provided with a rib diagonally disposed across each one of two opposite corners of said first plate, the said corners of said first plate being foldable along said ribs onto the main portion of said first plate with the edges of said folded portions in spaced relation with respect to each other, and a prong formed in said first plate and foldable by said second plate to lie between said edges of said folded portions.

This specification signed and witnessed this 12th day of January A. D. 1926.

MICHAEL A. MILLER.