July 13, 1943. E. KRIEGSMAN 2,324,004

PAPER FASTENER

Filed Sept. 2, 1942

Fig. 1.

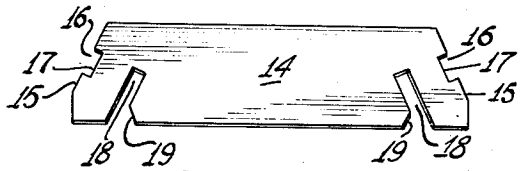


Fig. 2.

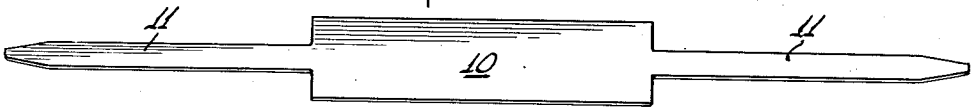


Fig. 3.

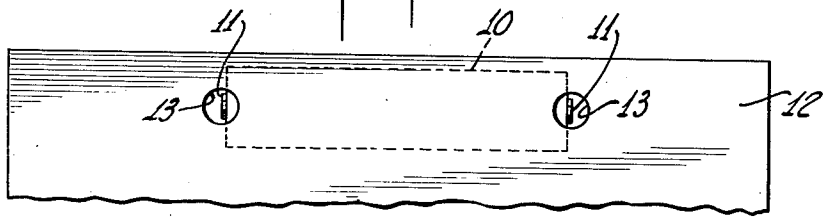


Fig. 4.

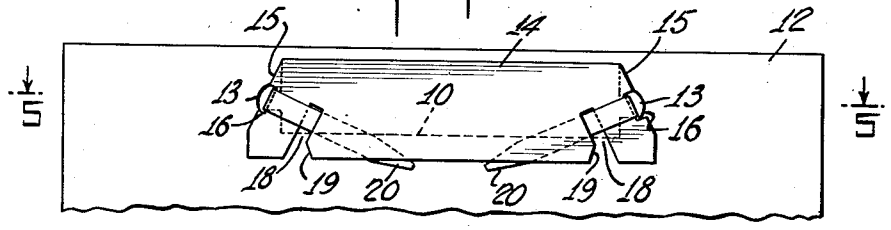
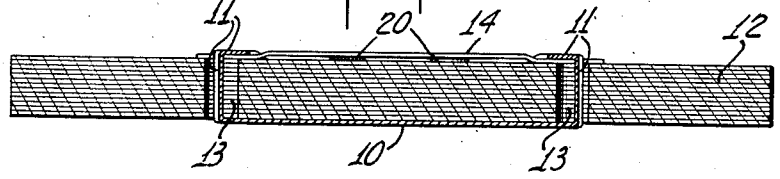


Fig. 5.



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UNITED STATES PATENT OFFICE

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PAPER FASTENER

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Application September 2, 1942, Serial No. 457,011

5 Claims. (Cl. 24—153)

This invention relates to certain improvements in fasteners of the type used for binding sheets of paper or the like.

Fasteners of this type generally comprise a bottom or back member having flexible tongues that are bent upright to pass through perforations in the paper sheets, and a top or front member for securing the free ends of the tongues, the paper sheets being bound or clamped between the two members.

Heretofore both members of such fasteners have been made of metal, the top member being usually formed with channels in which the bent-over ends of the tongues lie and with sliding pieces that hold the ends in place, or with hooks or like raised portions under which the ends are inserted.

Metal fasteners of this character are not only relatively costly and bulky, but they are subject to the disadvantages, among others, that they are apt to cut or tear the paper upon insertion or removal of the sheets, and that they may injure the hands or break the finger nails of the persons using them.

It is an object of the present invention to overcome these objections by the provision of non-metallic fasteners of the type described that are made wholly of paper or like fibrous material.

Another object is to provide fasteners that are inexpensive to manufacture, the construction being such that the parts of the fasteners may be readily die-cut or stamped from flat sheet or strip material without requiring any bending in their manufacture.

A further object is to provide fasteners that are simple to manipulate, and that have paper tongues which will not hurt the hands or cut the paper sheets.

A still further object is to provide fasteners the parts of which will lie flat against the sheaf of papers bound therein and will occupy a minimum amount of space in filing the papers.

It is also an object of the invention to provide fasteners that can be repeatedly opened and closed with little effort, and without developing objectionable bends or kinks in the tongues such as frequently occur with the use of metal fasteners.

Other advantages of the invention will appear from the following description thereof, reference being had to the accompanying drawing, in which—

Figure 1 is a view in perspective of the top or front member of my improved fastener;

Fig. 2 is a similar view in perspective of the bottom or back member thereof;

Fig. 3 is a plan view showing perforated sheets positioned on the tongues of the bottom member;

Fig. 4 is a plan view of the device with paper sheets fastened therein; and

Fig. 5 is a vertical sectional view taken on the line 5—5 of Fig. 4.

Having reference now to the drawing, the numeral 10 indicates the bottom or back member of the device which member is of the customary form, having pliable or flexible tongues 11 extending outwardly from both ends, except that it is made of paper instead of metal. I have found that Kraft paper may be satisfactorily used, especially Kraft paper impregnated with resins or the like, since such paper has both the requisite strength and pliability to permit of bending the tongues repeatedly without breaking or tearing them. In use, the tongues are bent upright, as usual with such devices, and the papers 12 to be fastened or bound are placed thereon with the tongues passing through the perforations 13 in the paper sheets. While I have shown a separate back member, it is to be understood that the back member may be secured to, or form an integral part of, a folder or binder in which the papers are to be filed or bound.

The top or front member, indicated generally by the reference numeral 14, may be made of heavier weight Kraft paper, fibre board, or the like. This member as shown has sloped or inclined ends 15 each formed with a notch 16 that has an inclined straight inner edge 17 over which the upstanding ends of the tongues 11 are bent downwardly. Extending inwardly from the lower edge are two oblique slots 18, one adjacent each end 15 and substantially parallel thereto as well as to the inner edges 17 of the notches. It will be observed that the top member 14 is uniplanar, that is to say, that it has no raised or sunken portions, thereby enabling it to be made inexpensively from sheet or strip stock.

In using the fastener, after the papers 12 have been set on the tongues 11, the top member 14 applied in place, and the upstanding ends of the tongues bent downwardly over the notch-edges 17, the bent ends of the tongues are inserted in the slots 18 to underlie the inner edges 19 thereof and with the free ends 20 of the tongues lying flat on the top sheet. To facilitate insertion of the tongue-ends 20 into the slots, the lower ends of the slot-edges 19 are preferably cut away as shown in the drawing.

I have found that so far as firmly binding the papers is concerned, the best results are obtained where the inclination of notch-edges 17 and the slots 18 forms an angle with the perpendicular of not more than about thirty degrees, usually about twenty-seven degrees, although this angularity may be subject to variation.

From the foregoing description it will be seen that the present invention provides a very simple, compact, and inexpensive device for easily, securely, and efficiently binding together a sheaf of papers, or the like.

It is to be understood that various modifications in the details of construction herein set forth, and illustrated in the drawing, may be made without departing from the scope of the invention as defined in the claims.

What I claim is:

1. A paper fastener of the character described comprising a flat non-metallic bottom member having laterally extending bendable tongues, and a flat non-metallic stop member having oblique end portions over which the tongues may be bent, and oblique slots in one longitudinal edge substantially parallel to the oblique ends into which slots the free ends of the bent tongues may be inserted under the top member.

2. A paper fastener of the character described comprising a flat bottom member of strong flexible fibrous material having laterally extending bendable tongues, and a flat top member of stiff fibrous material having oblique end portions over which the tongues may be bent, and oblique openings substantially parallel to said end portions into which the free ends of the tongues may be inserted to lie under the top member.

3. A paper fastener of the character described comprising a flat bottom member of relatively flexible paper having laterally extending bendable tongues, and a flat top member of relatively stiff paper having a notch in each end formed with an oblique inner edge over which the tongues may be bent, and a pair of oblique slots in one longitudinal edge, one adjacent each end and substantially parallel to the proximate notch-edge, for insertion therein of the free ends of the bent tongues.

4. A top member for a paper fastener of the character described comprising a flat body of stiff fibrous material having oblique ends each provided with a notch having an oblique inner edge, and a pair of oblique slots in one longitudinal edge, one adjacent each end and substantially parallel to the proximate oblique notch-edge.

5. A top member for a paper fastener of the character described comprising a flat uniplanar body of stiff paper, or the like, having a notch with an oblique inner edge at each end, and a pair of oblique slots in one longitudinal edge, one adjacent each end and substantially parallel to the proximate oblique notch-edge, said notch-ends and slots having an obliquity of not more than about thirty degrees.

EDWIN KRIEGSMAN.