Dec. 7, 1943. D. A. BRENNAN 2,336,061

FILING DEVICE

Original Filed June 21, 1939 2 Sheets-Sheet 1

Fig. 1.

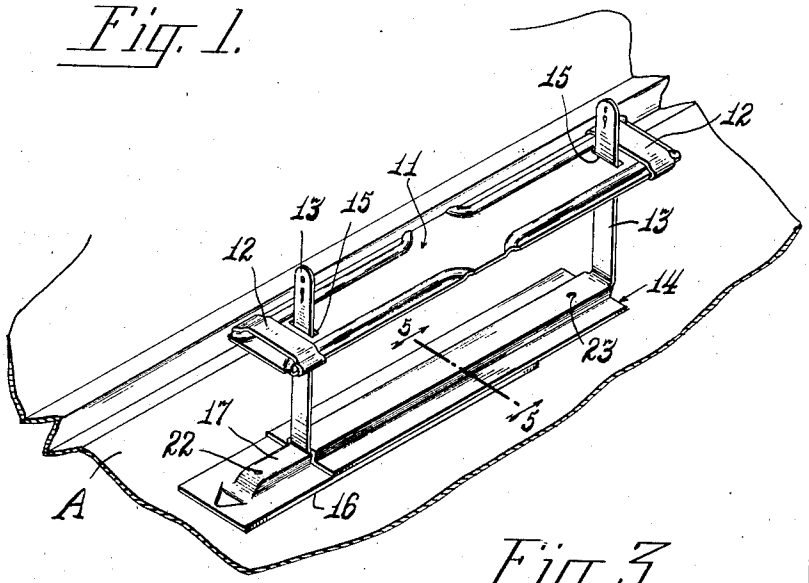


Fig. 3

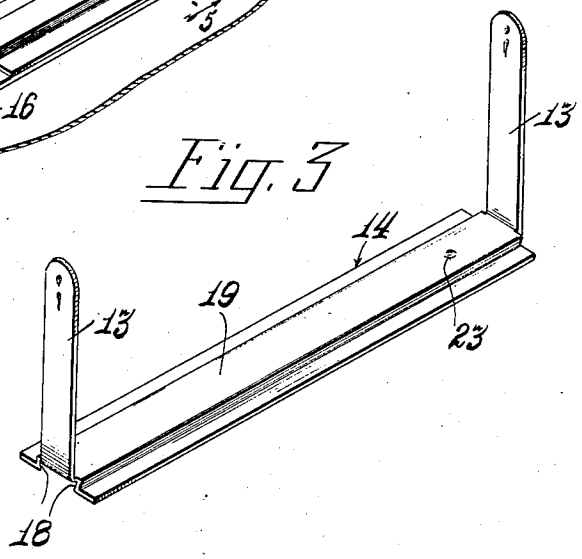


Fig. 2.

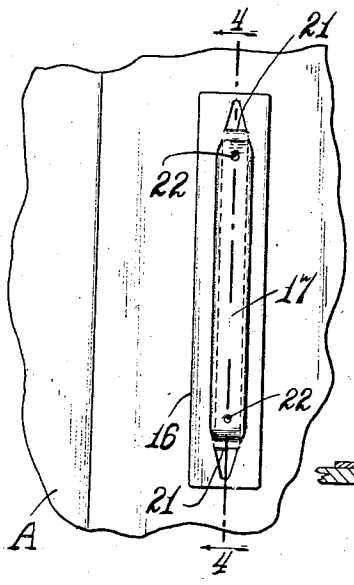


Fig. 4.

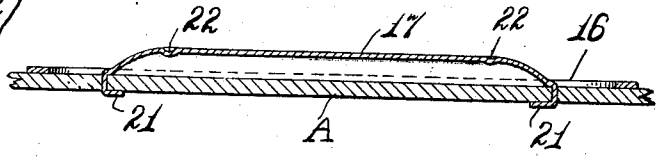
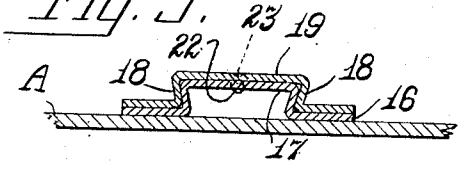


Fig. 5.



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Dec. 7, 1943. D. A. BRENNAN 2,336,061

FILING DEVICE

Original Filed June 21, 1939 2 Sheets-Sheet 2

Fig. 6.

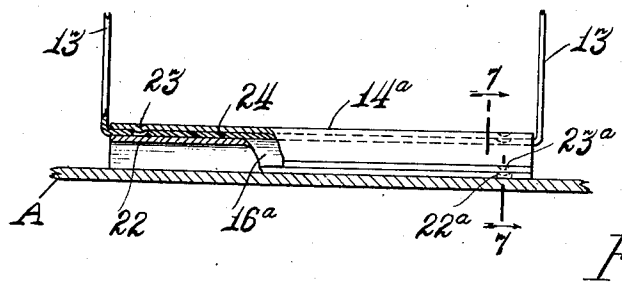


Fig. 7.

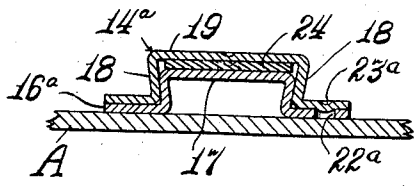


Fig. 8.

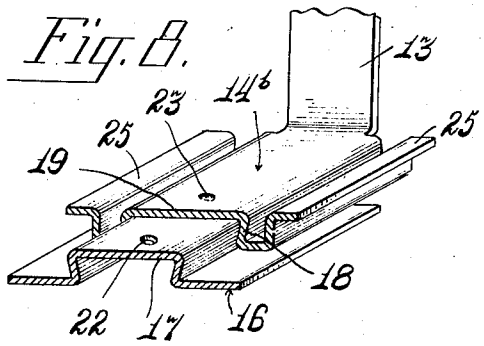


Fig. 9.

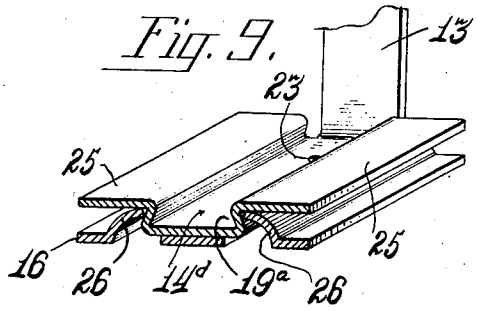


Fig. 11.

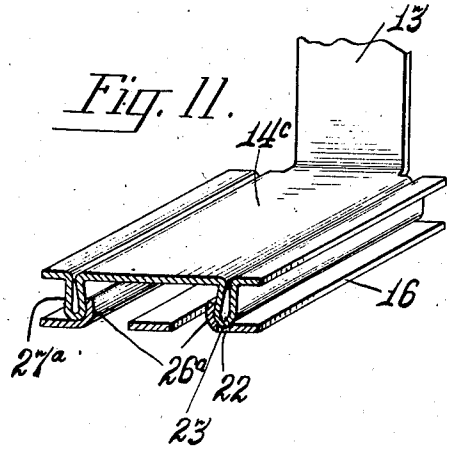
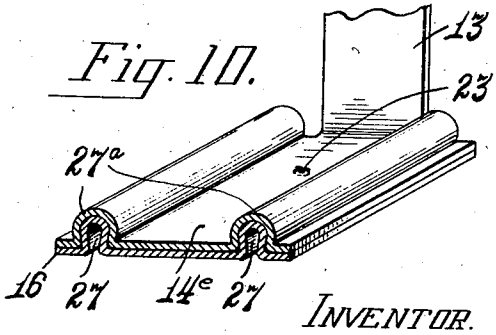


Fig. 10.



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UNITED STATES PATENT OFFICE

2,336,061

FILING DEVICE

Daniel A. Brennan, deceased, late of Chicago, Ill., by Elmer L. Zwickel, executor, Chicago, Ill., assignor to Acco Products, Inc., Long Island City, N. Y., a corporation of New York

Original application June 21, 1939, Serial No. 280,267. Divided and this application April 20, 1942, Serial No. 439,694

15 Claims. (Cl. 129—25)

This application is a division carved out of application Serial No. 280,267, filed June 21, 1939, now Patent No. 2,280,184, dated April 21, 1942.

The invention relates to improvements in fastening devices and more particularly to paper fasteners including means to detachably secure the base thereof to file folder or backing.

An object of the present invention is to provide a paper fastener base, of a type having bendable sheet receiving prongs, with novelly formed means to co-act with novel means on a file folder or backing to detachably secure a file of sheets carried on said base to the backing; said means consisting of interengaging parts arranged to keep the assembly a minimum thickness.

Another object of the invention is to provide a base of the type adapted to be mounted in a file folder or backing with means to hold the bound sheets spaced from the mounting to facilitate association and disassociation of the parts without damaging the sheets.

Another object is to provide novelly constructed paper fastener bases and file mounting means which are inexpensive to make, simple to operate, and highly efficient in use.

Another object is to provide a fastener of the character described which does not materially increase the thickness of the file.

The foregoing and such other objects of the invention as will more fully appear hereinafter as the description proceeds, will be more readily understood from a perusal of the following specification, in which reference is had to the accompanying drawings, wherein:

Fig. 1 is a perspective view of a fastener showing its base attached to a portion of a file folder or backing.

Fig. 2 is a fragmentary plan view of the folder showing the fastener mounting member thereon.

Fig. 3 is a perspective view of the base illustrated in Fig. 1.

Fig. 4 is a longitudinal sectional view of the mounting member, taken on line 4—4 of Fig. 2.

Fig. 5 is a sectional view taken on line 5—5 of Fig. 1.

Fig. 6 is a side elevational view of a modified form of fastener base, shown in partial section.

Fig. 7 is a sectional view taken on line 7—7 of Fig. 6.

Fig. 8 is a fragmental view, in perspective, of another modification.

Fig. 9 is a fragmental perspective view of another modified form of the invention.

Fig. 10 is a fragmental perspective view of another modification.

Fig. 11 is a view, in perspective, of a fragment of another modification.

Throughout the description, like numerals identify corresponding parts.

The compressor 11, shown in Fig. 1, is illustrative of many types of compressors available for prong fasteners and may consist of an elongated strap of stiff material having latches 12 movable longitudinally to hold prongs 13 of an associated base member 14 bent over the compressor after said prongs have been passed through registering holes in a sheaf of papers (not shown) and apertures 15 in the compressor. In the structures illustrated, the base members 14 are formed to co-operate with a mounting member 16 to facilitate ready attachment to a folder or backing sheet A.

In the specific embodiment shown in Figs. 1 to 5 inclusive, the interlocking formation on the mounting member 16 may consist of a longitudinally extending rib 17, which tapers in cross-section from the top of the rib to the body of the mounting member, forming a rib of substantially dove-tailed cross-section, as best shown in Fig. 5. Thus, the vertically inclined walls of the rib 17 slant inwardly toward the body of the mounting member 16 forming retaining grooves for slidably engaging the complementary parts 18 of the base 14.

The base 14 is provided with a complementary longitudinally extending rib 19, of dove-tailed cross-section, having inwardly inclined side walls 18 for interlocking with the rib 17 of the mounting member. In use, the base member, with or without an attached sheaf of papers, is arranged at one end of the mounting member and then slid longitudinally to engage the mounting member rib 17 in the under side of rib 19. The upper surface of the base rib 19 forms a bearing surface for one side of the sheaf of papers which are secured together by means of the prongs 13.

Suitable tangs 21 preferably are provided on the mounting member 16 to pierce the backing A for securing said mounting member in place. One or both ends of the longitudinally extending ribs of the mounting member and of the base preferably are provided with complementary depressions and projections 22 and 23 located to engage with each other to retain the parts against free sliding movement, but the projection 23 is adapted to be cammed out of one of the corresponding depressions by the application of force exerted longitudinally.

In the modified form illustrated in Figs. 6 and 7, the prongs 13 are formed of the extended

ends of a metal strip 24, which is a separate element from an attaching member 14a, similar in form to the base 14 just described. The intermediate portion of the strip 24 is confined between the mounting member 16a and the interlocking attaching member 14a, either of which parts may be provided with interlocking depressions and projections 22, 22a and 23, 23a, respectively.

In 14d the embodiments illustrated in Figs. 8 and 9, the bases 14b and 14a are provided with transversely and upwardly projecting flanges 25, which are adapted to greatly increase the area of bearing surface of the base over that of the proceeding forms. In these devices the flanges 25 also serve to prevent undue tearing out of the bottommost paper in the sheaf. In the device shown in Fig. 9, the base has a downwardly projecting longitudinally extending dove-tailed rib 19a, and the mounting member 16 has upwardly and inwardly extending co-extensive flanges 26 struck out of the body of the mounting member to provide a slidable interlocking connection between said mounting member and the base.

Referring to Fig. 10, the interlocking sliding formations in this modified form comprise relatively narrow re-inforcing ribs 27—27a, which also taper in cross-section from the top of the rib toward the body of the mounting member 16. The tops of the ribs 27a, on the base 14e, provide surface for the sheaf of papers and accordingly hold said sheaf above the plane of the mounting member.

In the embodiment illustrated in Fig. 11, the base 14c is formed like that of Fig. 10, except that the ribs 27a project from the bottom face thereof to define a longitudinal channel in the bottom face of the base. The mounting member 16 is of a form similar to that of Fig. 9, except that the flanges 26a are curled outward to engage the opposed faces of the ribs.

It will thus be observed that a plurality of forms of fastening devices are provided which may be economically manufactured and which include provisions for detachably securing the binding or fastening device to a backing sheet or file. The bound sheaf of papers may be readily removed from the file for use or for placing in another file without disarranging the papers, and the bound papers may be as easily replaced in the file by properly locating the interlocking formations on the mounting member 16 and the base 14 and sliding one member relative to the other.

Although various exemplary forms and adaptations of improved devices have been illustrated in the accompanying drawings and described in detail in the foregoing specification, it is to be understood; that, said illustrations and description are illustrative rather than restrictive; and that, each device may vary in structural details without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. A filing device, comprising a fastener for detachably binding a plurality of sheets having a pronged base portion, at least one longitudinal rib in said base portion substantially dove-tailed in cross-section, a mounting member, and means on said mounting member co-extensive with the rib side walls to co-operatively engage at least two of said side walls to detachably connect and retain said base in superposed relation on said mounting member.

2. A filing device, comprising a fastener for detachably binding a plurality of sheets having a pronged base portion, a longitudinal channel in the bottom face of said base portion substantially dove-tailed in section, a mounting member, and means on said mounting member to bindingly engage said channel when said base is seated on one face of the mounting member and detachably connect and retain said base in superposed relation on said mounting member.

3. A filing device, comprising a fastener for detachably binding a plurality of sheets having a base portion provided with a longitudinal substantially dove-tailed channel in its bottom face, and a mounting member having upwardly and outwardly inclined longitudinal wall portions for engaging in said channel when said fastener is slid longitudinally over one face of said mounting member to detachably connect and retain said base in superposed relation on said mounting member.

4. A paper fastener including a pronged base having a longitudinal channel extending from end to end, said channel being substantially dove-tailed in cross-section and adapted to have a binding-wedging engagement with means on an associated mounting member.

5. A paper fastener including a pronged base having at least one longitudinal channel extending from end to end, said channel being substantially dove-tailed in cross-section and adapted to have a binding-wedging engagement with means on an associated mounting member.

6. A paper fastener base comprising a substantially elongated strip of material having a bendable prong at each end and a longitudinal channel in its bottom face terminating at said prongs, said channel being dove-tailed in cross-section.

7. A member for detachably securing a paper fastener base to a backing sheet comprising an elongated piece of stiff sheet material, tangs struck downwardly from the body of said strip for securing the member to said backing sheet, and a longitudinal rib struck out of said member midway between its longitudinal edges having its side walls inclined upwardly and outwardly to frictionally and bindingly co-operate with a fastener base to detachably connect and retain said base in superposed relation on said mounting member.

8. A filing device, comprising a fastener for detachably binding a plurality of sheets having a pronged base portion, a longitudinal rib in said base portion substantially dove-tailed in cross-section, a mounting member, and means on said mounting member to co-operatively engage the side walls of said rib to detachably connect and retain said base in superposed relation on said mounting member.

9. A filing device, comprising a fastener for detachably binding a plurality of sheets having a pronged base portion, a longitudinal channel in the bottom face of said base portion substantially dove-tailed in section, a mounting member, and means on said mounting member to bindingly engage the inside face of the channel side walls when said base is seated on one face of the mounting member and detachably connect and retain said base in superposed relation on said mounting member.

10. A filing device, comprising a fastener for detachably binding a plurality of sheets having a base portion provided with a longitudinal substantially dove-tailed channel in its bottom face, a mounting member having upwardly and outwardly inclined longitudinal wall portions for en-

gaging in said channel when said fastener is slid longitudinally over one face of said mounting member to detachably connect and retain said base in superposed relation on said mounting member, and interlocking means on said base and said member to retard separation of the parts.

11. A paper fastener base comprising a substantially elongated strip of material having a bendable prong at each end, and a longitudinal channel in its top face terminating at said prongs, said channel being dove-tailed in cross-section.

12. A paper fastener base comprising a substantially elongated strip of material having a bendable prong at each end, an axial longitudinal channel in said base terminating at the prongs, said channel being dove-tailed in cross-section, and the longitudinal margins of said base being elevated above the bottom plane of the channel.

13. A mounting member and base for a paper fastener comprising a substantially elongated strip of material having a medial portion and a bendable prong portion at each end, an attaching member having a longitudinal channel to receive said medial portion, said channel being dove-tailed in cross-section, a mounting member, and means on said mounting member to co-operatively engage in said channel to detachably connect and retain the attaching member in superposed relation on said mounting member and secure the strip in place.

14. A filing device, comprising a fastener for detachably binding a plurality of sheets having a pronged base portion, a longitudinal channel in the top face of said base portion substantially dove-tailed in section, a mounting member, and means on said mounting member to bindingly engage the outside face of the channel side walls when said base is seated on one face of the mounting member and detachably connect and retain said base in superposed relation on said mounting member.

15. A filing device, comprising a fastener for detachably binding a plurality of sheets having a base portion provided with a longitudinal rib in its bottom face, and a mounting member having upwardly and inwardly inclined longitudinal wall portions for embracing said rib when said fastener is seated on one face of said mounting member and detachably connecting and retaining said base in superposed relation on said mounting member.

ELMER L. ZWICKEL.

Executor of the Estate of Daniel A. Brennan, Deceased.