W. A. COOKE, Jr.

FILE, LOOSE LEAF BOOK, OR THE LIKE.

APPLICATION FILED APR. 26, 1915.

1,285,048. Patented Nov. 19, 1918.

Fig. 1.

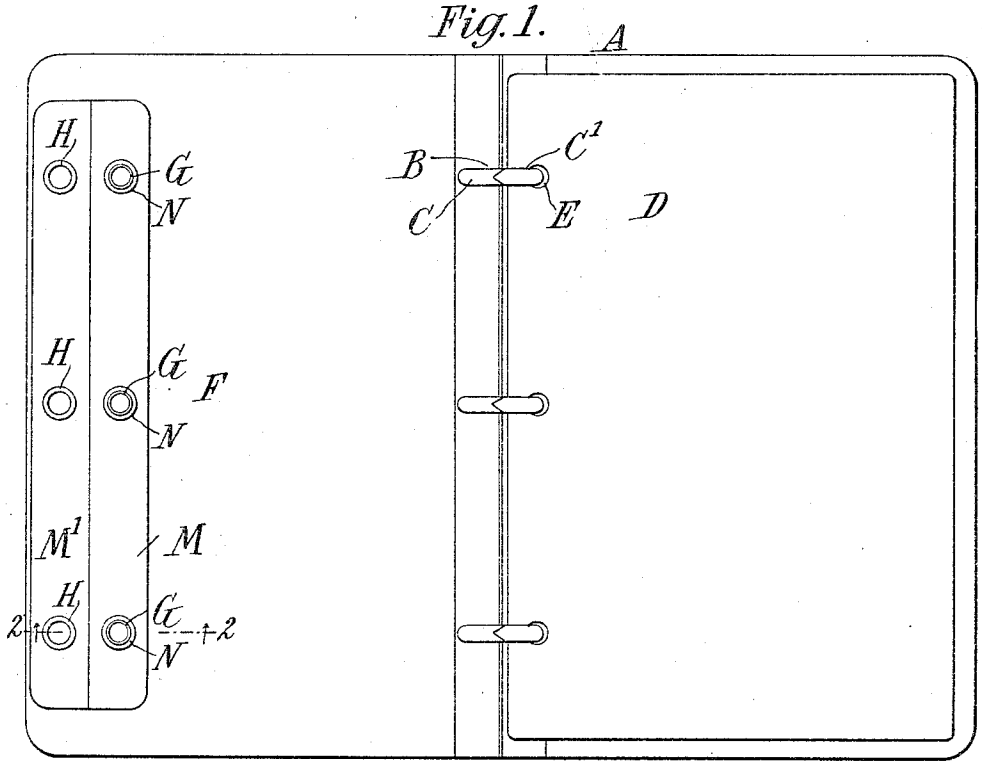


Fig. 2.

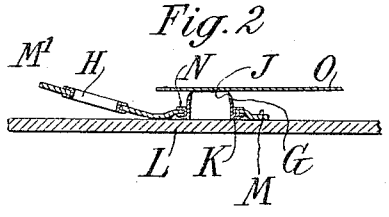
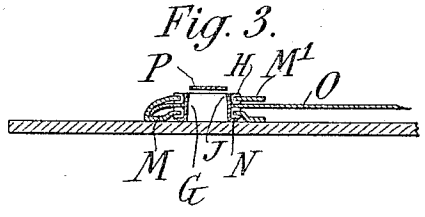


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FILE, LOOSE-LEAF BOOK, OR THE LIKE.

1,285,048. Specification of Letters Patent. Patented Nov. 19, 1918.

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To all whom it may concern:

Be it known that I, WILLIAM A. COOKE, JR., a citizen of the United States of America, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Files, Loose-Leaf Books, or the like, of which the following is a specification.

This invention relates to files, binders, loose leaf books or similar devices, and aims to provide certain improvements therein. The invention is particularly directed to a perforating means for the sheets to be filed or used in connection with loose leaf books or similar devices.

Various types of perforating means have heretofore been proposed. In certain patents heretofore issued to me, I have shown and described certain perforating means which are adapted for individual files for correspondence. In the common form of such files, flexible prongs are used which receive the papers, and the perforations according to such patents are made by the aid of apertures which are formed in some part of the binder, usually in combination with an apertured flap which is pressed down over the sheet to be perforated, and a pencil or other instrument is passed through the apertures and sheet. Such devices are admirably adapted for the filing of correspondence, but are not as well adapted for use in connection with loose leaf books or other structures wherein the papers are subject to repeated replacements and severe usage. This arises from the fact that the puncture is made by forcing apart the fibers of the paper, and not by cutting a circular blank from the paper. In those constructions of the prior art which actually cut a round hole in the paper by removing a portion of the material, the mechanism employed is expensive, heavy and cumbersome. It usually comprises a pair of solid cutting pins, the working faces of which are formed by grinding the ends at right angles to the body of the pin, thereby making a circular shearing edge. The co-acting part comprises a metal die also having a shearing edge, and usually a lever is employed for forcing down the die. Such structures are not at all adapted for loose leaf books or the like, and are so expensive as to prohibit their common use in many types of binders.

The object of the present invention is to provide a cutting device which is of exceedingly simple construction and so cheaply manufactured as to add little to the cost of the book or file to which it is applied. In its preferred form the invention comprises a thin, tubular member which forms one of the cutting parts, and a co-acting member in the form of a metal bushing, such members being preferably mounted with relative flexibility, and one member being adapted to be pressed down over or into the other by the finger of the operator. Uusually two pairs of such devices are employed, and the flexibility of mounting is such that the perforations are made successively. The invention includes certain other features of improvement which will be hereinafter more fully described.

Referring to the drawings, which illustrate one form of the invention,

Figure 1 is a plan of a loose leaf book in open position, and showing my improved construction.

Fig. 2 is a sectional view on the line 2—2 in Fig. 1.

Fig. 3 is a view similar to Fig. 2 at the end of the cutting operation.

Referring to the drawings, let A indicate a binder as a whole, that shown being a conventional type of loose leaf book. The filing members (of which three are shown) are indicated at B and are shown as comprising mating prongs C C′ adapted to be separated to permit the introduction of the loose sheets D, which latter are formed with perforations or holes E. It is important in this type of binder especially that these holes be fairly clean-cut and formed by removing a part of the paper.

The perforating device provided by my invention is shown in its preferred form at F. Essentially it comprises one or more members G, which may be fixed to the cover of the binder, and one or more complementary members H which are adapted to be moved into alinement with the members G and pressed down over the latter. The members G are shown as thin, tubular members, preferably of sheet metal, the upper part J of which forms a cutting edge. In order to adequately support the member the lower portion is preferably formed as a flange K which bears against the cover L or against an intermediate sheet of paper or the like. To hold the members G in place I prefer to use a strip, such as M,

which may conveniently serve for all of the members G, and preferably the strip M is provided with eyelets N closely fitting the members G and pressing down upon their flanges K. By gluing or cementing the strip M in place, the members G are held firmly in position. Preferably the strip M is folded at its middle and one side, such as M', is left free so that it constitutes a flap or carrier for the complementary members H. The members H preferably comprise thin sheet metal bushings, which are provided with flanges embracing the flap M'. When the flap M' is moved to the closed position shown in Fig. 3, each of its members H alines with a member G, the relative proportions of the members being such that the members H fit closely around the members G, as illustrated in Fig. 3.

If a sheet of paper, such as O in Figs. 2 and 3, be placed over the top of the member G, and the member H pressed down upon it by the finger of the operator, it will be found that a clean-cut hole is produced in the paper by removing a circular disk P (Fig. 3) therefrom. It is to be noted that in perforating the sheet no attempt is made to cut all of the perforations at once, but each member H is individually operated by the finger until the total number is made. The force required to perforate a series of perforations is hence divided, and as the construction is such that the finger may be placed directly over the member H in each case, the pressure is uniformly exerted around the entire member and the operation of perforating is greatly facilitated. Hence the flap M' is not made of rigid material, but is constructed of flexible material such as pasteboard or heavy paper, in order that the operation of one perforator shall not in any way affect that of the other, so that the perforations may be successively made.

In practising the invention I have found that the ordinary brass eyelets may be utilized for both the members G and H. Thus the members G may be formed of such eyelets before the turning of the second flange, the shank of the eyelet being left upstanding. If desired, the cutting edge of the eyelet may be sharpened, but preferably the eyelets are made of such thin metal that their edges are sharp enough for the purpose. The members H are preferably made of similar eyelets, except that the usual double flanges are formed during the operation of attaching them to the flap M'. They should be of such a size as to fit snugly around the cutting edges of the members G.

The entire perforating device is of trivial cost, and occupies practically no space in the binder or loose leaf book. Furtnermore, it does not require any perforation of the cover or other part of the binder. It is hence admirably adapted for loose leaf books wherein a sheet often becomes torn out and it is desired to turn the sheet around and perforate its opposite side. The invention provides for the first time, so far as I am aware, a perforating device as distinguished from the puncturing device, which is of such shape, construction and compact form as to render it applicable to binders and loose leaf books of all types.

While I have shown and described one form of the invention, it will be understood that I do not wish to be limited thereto, since various changes may be made thereto without departing from the spirit of the invention.

What I claim is:—

1. A perforating device for files, binders, loose leaf books or the like, comprising an eyelet having an upstanding shank and a flange, and a strip provided with an eyelet encircling said shank and fixed to said support.

2. A perforating device for files, binders, loose leaf books or the like, comprising an eyelet having an upstanding shank and a lower flange, a strip carrying an eyelet surrounding said shank and fixed to said support, and a flap carrying a complementary eyelet adapted to be pressed down over said shank.

3. A perforating device for files, binders, loose leaf books or the like, comprising an eyelet having an upstanding shank, a second eyelet adapted to be pressed down over said shank to perforate an interposed paper sheet, and a sheet of flexible material having a free strip or marginal portion carrying said second eyelet, and having a fastened strip or portion, said fastened portion fastening said eyelet with the shank between it and a portion of the file, binder or the like.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM A. COOKE, Jr.

Witnesses:
W. T. GARLAND,
M. S. MIDDLETON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."