April 9, 1929. A. VON AUW 1,708,811

LOOSE LEAF DEVICE

Filed June 2, 1927

Fig.1.

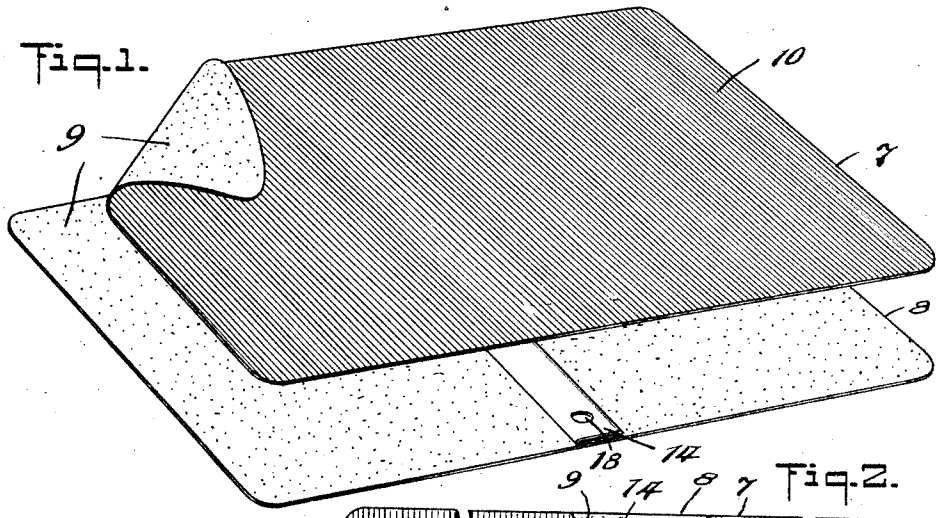
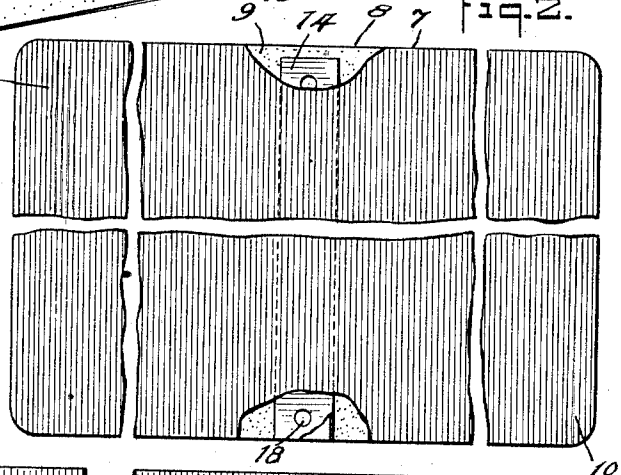


Fig.2.



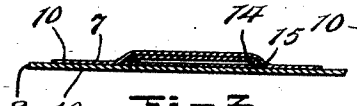


Fig.3.

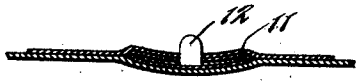


Fig.4.

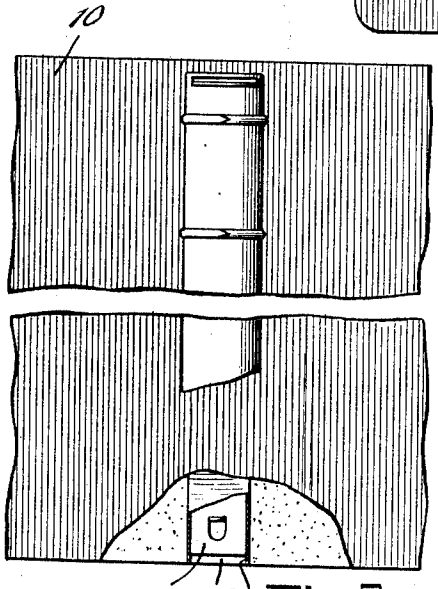


Fig.5.

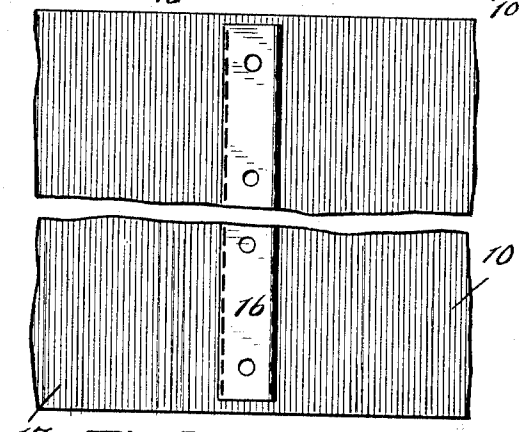


Fig.6.

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Patented Apr. 9, 1929. 1,708,811

UNITED STATES PATENT OFFICE.

ALWIN VON AUW, OF BROOKLYN, NEW YORK, ASSIGNOR TO BOORUM & PEASE COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

LOOSE-LEAF DEVICE.

Application filed June 2, 1927. Serial No. 196,076.

This invention relates to loose leaf devices and more particularly to flexible covers therefor in which the back and sides are made of leather. One of the objects of this invention is to provide a flexible leather cover for loose leaf devices which can be manufactured economically and without wastage. Another object of the invention is to make a leather cover loose leaf device which has few parts, is simple to manufacture, absolutely flexible, and of an improved appearance. According to this invention the cover and back are made of plies of leather with the flesh sides cemented together and preferably integral from edge to edge of the cover. Wherever the specification or claims speak of leather it should be understood to include leather and leather-like substitutes.

In the drawings:

Fig. 1 is a perspective view of a cover made according to my invention before the two plies of leather are glued together;

Fig. 2 is a plan view of the two plies of leather after being glued together, the top ply being partly broken away to show the cloth loop between the plies;

Fig. 3 is an edge view of the back of the cover shown in Fig. 2;

Fig. 4 is an edge view of the cover after the back plate has been placed in position;

Fig. 5 is a partial plan view of the ring metal in the cover, partly broken away to show the relation of the parts; while

Fig. 6 is a plan view of a modified form of cover showing a cloth loop fastened inside both plies of leather.

Flexible covers for loose leaf devices have heretofore been either of the single-ply integral leather type or of the built-up type having a leather outside, a cardboard stiffening and a lining. This built-up type requires a large number of steps in its manufacture and is not a wholly desirable product in that the covers while somewhat flexible are apt to crack or snap and show permanent creases. The single-ply leather cover is objectionable because of the tremendous wastage of leather in its manufacture and because it is generally necessary to stitch through the leather at the back in order to fasten the ring metal to the leather. The wastage in leather is due to imperfections in the hides such as so-called "butchers' cuts" or the thinned or roughened spots which are found on the flesh side of even the finished leather. According to the present invention it is proposed to use in the place of a single piece of leather two pieces of leather 7, 8 of the same size as a single piece but thinner than the single ply and these two pieces are cemented together with the flesh sides together. By thus cementing together the flesh sides 9, 9 which is where the imperfections occur, almost the entire wastage is eliminated. Furthermore, it is not necessary—in fact it is undesirable to finish the flesh sides. By thus gluing the flesh sides together while still rough, the two pieces are more firmly cemented together. It should be noted that different kinds of leather can be used for the two surfaces. Thus for instance, cow hide can be used on the outside and sheep skin on the inside, or any other combinations of kinds or colors, if desired. The outer or smooth sides 10, 10 can be grained as desired. It should also be noted that by employing these lighter pieces of leather the cost of the raw material is reduced in addition to the elimination of wastage. If desired, the inner ply need not extend across the space where the ring metal is to be fastened and then smaller pieces can be used for that ply. The edges of these two plies of leather are easily burnished until they give the appearance of a unitary ply and the resulting material has the feel, sound and life of a single piece of leather.

It has also been discovered that the assembly of the ring metal with the cover can be very much simplified and improved by means of making this two-ply integral cover in a certain manner. This improved construction is obtained by placing the back plate 11 between the two plies of leather and allowing the prongs 12 of the backplate to project through the inner ply and grip the ring metal or other leaf-retaining structure. This is preferably accomplished in the following manner. A cloth or paper loop 14 of sufficient width to permit insertion of the backplate in it is placed between the two integral plies of leather before they are glued together. The loop is so located that when the two plies are glued together, the loop lies up and down at what is to be the back of the book. It will be noted that by laying the loop between the two plies of leather and then gluing the plies together there is an opening 15 up the back of the cover into which the backplate can be inserted. This opening can be formed without the use of a

loop, if desired, by not putting cement or glue on the surfaces of the plies of leather at the back except at the top edges. This loop is automatically closed at the top edge of the back of the cover by virtue of the gluing together of the two plies of leather, inasmuch as the loop does not extend out quite flush with the edges of the leather. There is therefore no question of closing up the upper end of the loop. The lower end of the loop should preferably be flush with the lower edges of the back of the two plies of leather, thus leaving the loop open for insertion of the backplate from the lower end. After the backplate has been inserted and the upstanding prongs 12 of the backplate put through the inner ply of leather, glue is placed in the opening of the loop and the edge of the two plies of leather cemented together at this point, thus sealing the backplate completely between the two plies of leather. If desired the loop 16 can be sewed on the smooth or grained surface 10 of the inner ply 17 as shown in Fig. 6.

It will thus be observed that the backplate is firmly held from movement in either direction, being held at all its edges by the two plies of leather cemented together. It is also held from movement by its prongs which grip the integral inner ply of leather between it and the ring metal. The strength and simplicity of this construction will be obvious, and the neat appearance of having the ring metal held down directly on to the integral inner ply is another obvious advantage. Furthermore, it should be noted that all difficulties of gluing leather to metal have been avoided, the backplate simply lying in the loop. If desired, holes or slots can be punched through the inner ply of leather at the points where the prongs are to project through that ply. Holes 18 for the prongs may also be punched through a side of the loop.

What I claim is:

1. In a method of making a loose leaf device the steps of spreading glue on one side of each of two plies of leather, each ply being integral from edge to edge of the cover which they are to compose, laying an open loop of flexible material on one of said glued surfaces where the back is to occur, gluing said two plies of leather together, inserting a backplate having prongs in said open loop from one end, and causing the prongs of the backplate to project through one side of the loop and one of the plies of the cover, and fastening a leaf-retaining structure to said prongs, substantially as described.

2. A loose leaf device having a flexible cover composed of two plies of leather with their flesh sides glued together, each ply being integral from edge to edge of the cover, in combination with an open loop lying between the two plies at the back of the cover and a metal backplate inside said loop with prongs projecting through said loop and said inner ply of leather, said prongs being adapted to grip a leaf-retaining structure.

3. A loose leaf ring book having a flexible cover made of two plies of leather glued with their flesh sides together containing a cloth loop glued between them and a metal backplate inside said loop, in combination with a ring metal held on the inner face of the cover by prongs on said backplate projecting through holes punched in the inner ply of the leather.

In testimony whereof I have signed my name to this specification.

ALWIN VON AUW.