March 31, 1931. A. LAMARTHE 1,798,945

CLOSING DEVICE

Filed May 3, 1930

Fig. 2

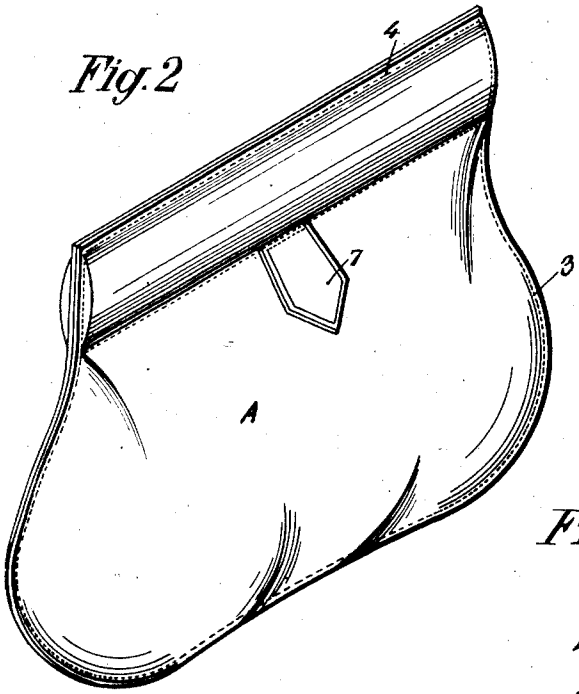


Fig. 3

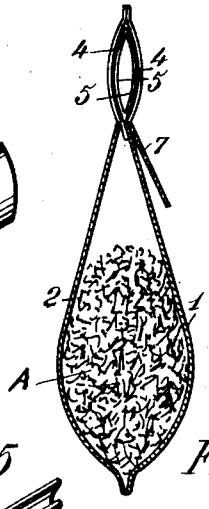


Fig. 1

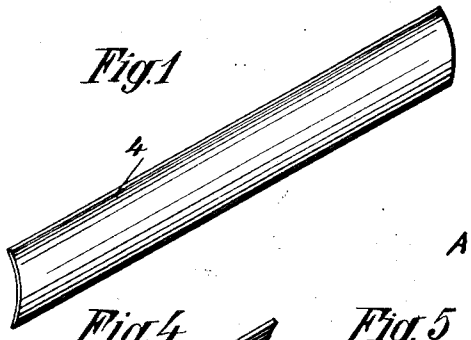


Fig. 4

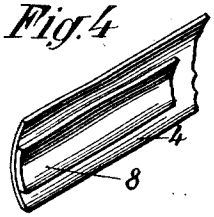


Fig. 5

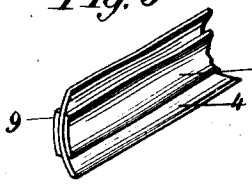
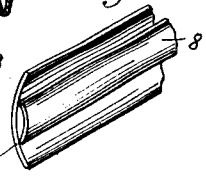


Fig. 6



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UNITED STATES PATENT OFFICE

ALFRED LAMARTHE, OF PARIS, FRANCE

CLOSING DEVICE

Application filed May 3, 1930, Serial No. 449,465, and in France September 17, 1929.

The present invention has for its object to provide a hermetic and rapid closing device which may be used more particularly for closing bags, purses, tobacco pouches or other similar articles, and in general for closing any flexible opening in any suitable article.

It has already been proposed to effect the closing of articles of this type by arranging a spring in the upper portion of the opening and along both of its edges, the said spring being constituted by a metal wire or a flat strip in the form of a spring. In such devices, it is merely necessary to exert a pressure on the ends of the said springs in order to effect their opening, and consequently that of the article, the closing of which they are to ensure.

Such devices, however, present a great disadvantage in that they do not enable an absolutely hermetic and reliable closing to be ensured. In fact, the springs employed exhibit the same degree of elasticity, whether one tries to bend them out of their plane either to the one side or to the other, and they do not come together with sufficient force to ensure the said hermetic closing, which nevertheless it is indispensable to realize.

An attempt has been made according to the present invention to remedy this disadvantage, and to this end it has been imagined to utilize, as springs, the steel bands of slightly incurved, right section which are used at the present time for the manufacture of tape measures or for other purposes.

When attempts are made to bend these steel bands out of their plane and on the side of their convex portion, by pressing on their ends, they exhibit considerable elasticity. If, on the contrary, attempts are made to bend them on the side of their concavity they exhibit considerable rigidity.

By virtue of these properties, the said springs, once they have been mounted in the sides bounding the opening to be closed, ensure a very hermetic closing of the said opening.

Firstly owing to their absolute rigidity in the direction of their concavity and of the force which they exert on the sides of the pouch;

Secondly, owing to the fact that the said springs have two very distinct lines of contact between them, corresponding to each of their extreme longitudinal edges and thus ensure two hermetic closing joints instead of one.

The accompanying drawing shows by way of example, which is not limiting, a form of construction of the subject-matter of the invention.

In the drawing:

Figure 1 is a detail view of a steel band of incurved, right section.

Figure 2 is a perspective view of a tobacco pouch provided with a closing device according to the invention.

Figure 3 is a cross section of the said tobacco pouch when closed.

Figures 4, 5 and 6 are section views of one of the closing springs in three constructions of the invention.

In these figures A is a tobacco pouch of leather, skin, fabric or other suitable material, formed for example of two sides 1 and 2 connected together by a seam 3 or otherwise, and thus forming a pouch which is open in its upper portion.

Each of the sides 1 and 2 of the sides of the pouch is provided inside and near the upper opening of the said pouch with a spring 4 like that shown in Figure 1, that is to say, formed of a steel band with a slightly incurved, right section. The said springs 4 may be held on the corresponding side of the pouch by means of a covering band 5 of leather, skin, fabric or other material.

The two springs 4 are preferably arranged at the same height and so that their concave portions are facing one another. In this way, as an examination of Figure 4 will readily show, an absolutely hermetic joint is obtained between the two edges of the opening of the pouch.

In order to open the said pouch, it is sufficient to exert a pressure with the fingers on the ends of the springs 4, for the latter move apart in their middle portion, producing the opening of the pouch. It is sufficient to

cease exerting pressure on the ends of the springs, or simply to release one of the said ends for the pouch to close automatically and to remain hermetically closed owing to the force exerted by the springs on the sides of the pouch.

It should be observed that the two springs 4 come into close contact with their upper and lower edges at the same time, thus forming two superimposed hermetic closing joints one above the other, which cannot be obtained with any of the existing devices.

In order to facilitate the opening of the pouch, the said pouch may be provided with a tab 7, on which a pull may be exerted by one of the hands, while the fingers of the other hand press against the ends of the springs 4.

In order to prevent the opening or bending of the springs produced by pressure on each of the edges of the pouch or other article from producing an angle that is acute and always in the same place, which may ultimately result in a breaking of the springs, a second spring 8 may be added in the hollow portion of each spring 4, as shown in Figure 4, the said second spring being narrower, more rigid and of flat or incurved shape, with the object of ensuring that the opening or bending of the main springs will be of rounded shape and not triangular, and also to facilitate the closing of the pouch or other article by increasing the strength of the main springs, so as to avoid any risk of breaking the said main springs.

The second spring 8 may likewise consist of a steel band of incurved, right section, the curvature of which, however, is preferably in a direction contrary to that of the spring 4 so as to prevent the two main springs 4 which border the opening from bending in the same direction instead of apart to effect the opening of the article when the fingers are pressed on their ends (Figure 6).

Each of the springs 4 or several springs 8 may be doubled inwardly.

A third spring 9, likewise narrower and more rigid may even be provided, resting against the outer portion of the main spring 4, as shown in Figure 5.

The two or three springs thus placed one against the other on each side of the opening of the pouch may be connected together at their ends by a metal eyelet, and may be provided if desired with a piece of parchment, leather or fabric placed astride their end edges and intended to protect the ends of the articles to which they are fixed.

What has been said hereinbefore regarding tobacco pouches likewise applies of course to bags of any shape or arrangement whatsoever (handbags, bags for provisions), purses or any like article, the closing of which it is desired to ensure.

I claim:

1. A rapid and hermetic closing device for bags, purses, tobacco pouches and other like articles, consisting of two steel bands of incurved, right section, each disposed on one of the sides of the opening, which is to be hermetically closed, so that their concave portions face one another, and their upper and lower edges come respectively into close contact, while ensuring two superposed lines of hermetic closure.

2. A hermetic and rapid closing device for bags, purses, tobacco pouches and other like articles, constituted by two steel bands of incurved, right section, each being arranged on one of the sides of the opening which is to be hermetically closed, so that their concave portions are facing one another and their upper and lower edges come respectively into close contact while ensuring two superposed lines of hermetic closure, each spring being doubled inwardly by a narrower spring of flat or incurved shape.

3. A hermetic and rapid closing device for bags, purses, tobacco pouches and other similar articles, constituted by two steel bands of incurved, right section, each being arranged on one of the sides of the opening which is to be hermetically closed, so that their concave portions are facing one another and their upper and lower edges come respectively into close contact thus ensuring two superposed lines of hermetic closure, each spring being doubled inwardly and outwardly by a narrower spring of flat or incurved shape.

4. hermetic and rapid closing device for bags, purses, tobacco pouches and other similar articles, constituted by steel bands of incurved, right section, each being arranged on one of the sides of the opening which is to be hermetically closed, so that their concave portions are facing one another and their upper and lower edges come respectively into close contact, thus ensuring two superposed lines of hermetic closure, each spring being doubled inwardly by a narrower spring likewise of incurved shape, the curvature of which is turned in a direction opposite to that of the main spring.

In testimony whereof I have signed this specification.

ALFRED LAMARTHE.