Nov. 10, 1959 S. M. MOBERG 2,912,269

HASP SEAL

Filed Jan. 16, 1958

Fig. 1.

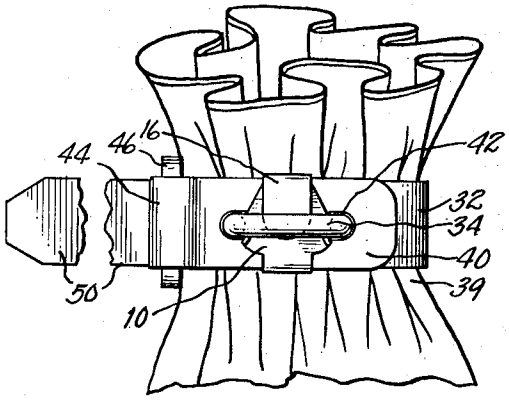


Fig. 2.

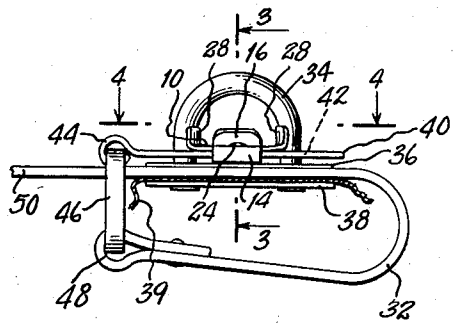


Fig. 3.

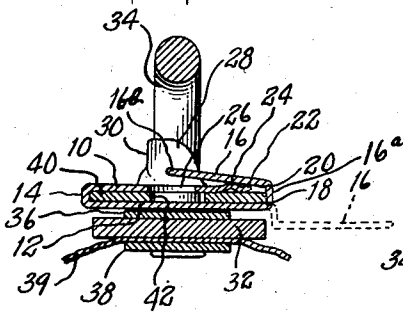


Fig. 4.

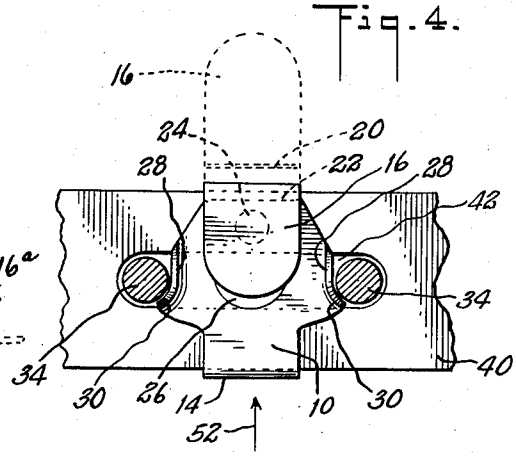


Fig. 5.

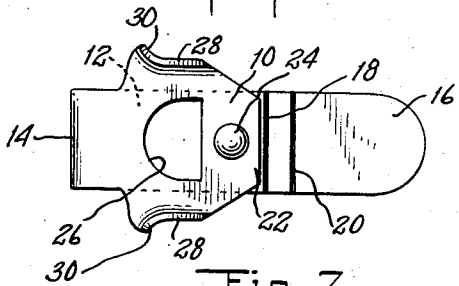


Fig. 6.

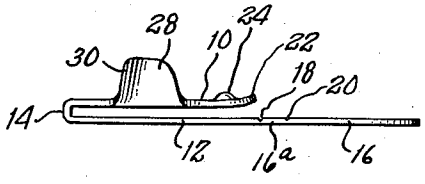
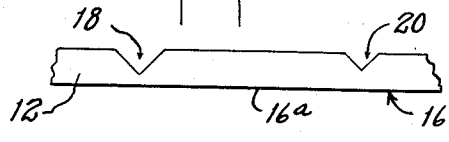


Fig. 7.



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HASP SEAL

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Application January 16, 1958, Serial No. 709,360

5 Claims. (Cl. 292—307)

This invention relates to hasp seals and, more particularly, to a device which may serve in place of a padlock or other positive locks such as have hitherto normally been used in association with hasps. It is particularly useful with a hasp such as is employed on a strap for closing the neck of a mail bag such as is presently in governmental mail service and is illustrated as employed in that relation without, however, limiting the invention to that particular application.

An important object of this invention is the provision of means for holding a hasp closed against unintentional opening without, however, employing a padlock or equivalent positive locking means.

Another important object is the provision of a seal for use in holding a hasp closed, which seal may be quickly applied and quickly removed.

Another important object is the provision of hasp-closing means which are very light in weight and, hence, very desirable for use on mail bags such as are carried by airplane.

Another important object is the provision of a hasp seal which embodies means for preventing loosening of a hasp plate in relation to a hasp eye until the seal has been given a very substantial bend to open it. Such bending, occurring at a line of weakness in the seal, causes such substantial weakening thereat as to cause the seal to break apart if any attempt were made to reapply it to a hasp and to bend it to close it.

Another important object is the provision of abutment means in such a hasp seal which leaves a locking tongue of the seal spaced sufficiently from a portion thereunder to enable the fleshy part of a user's finger to engage the end of the locking tongue sufficiently to open the seal without any difficulty.

Another important object is the provision of such a hasp seal which uses very little metal and which may be manufactured economically, whereby the total cost of such seals is kept at a minimum.

The foregoing and other more or less obvious objects are accomplished by this invention of which a preferred embodiment is shown, for illustrative purposes, in the drawing, without, however, limiting the invention to that particular embodiment.

In the drawing:

Figure 1 is a fragmentary, elevational view of the upper end of a bag with a strap applied thereto and a hasp on said strap held closed by a seal according to the present invention, the said seal being shown in its completely closed condition.

Fig. 2 is a side elevational view of such a strap, hasp and the closed seal in approximately the conditions in which they would be when about the neck of a bag, a part of which is fragmentary shown in cross section.

Fig. 3 is an enlarged, sectional view of said hasp and closed seal substantially on the line 3—3 of Fig. 2.

Fig. 4 is a similarly enlarged view which is in section with respect to a hasp eye and which shows the closed seal in top plan view, the section being substantially on the line 4—4 of Fig. 2.

Fig. 5 is a top plan view of the seal in open condition as before being applied to a hasp.

Fig. 6 is a side elevational view of said open seal as viewed from the bottom of Fig. 5.

Fig. 7 is a greatly enlarged view of a portion of Fig. 6.

Referring first to Figs. 5, 6 and 7, the seal is formed of suitable sheet metal having characteristics enabling it to be formed and to function in the manner hereinafter described. The seal comprises an overlying portion **10** and an underlying portion **12** which is in spaced parallelism to the portion **10**, the spacing being maintained by a connecting portion **14** which integrally and quite rigidly interconnects the portions **10** and **12**. The device further includes a locking portion **16** which, in the seal as delivered by the seal manufacturer and before use, is in the nature of a coplanar extension of the underlying portion **12**. The locking portion **16** adjoins the underlying portion **12** at a score line **18** which extends transversely, completely across the width of the material of which the portions **12** and **16** are formed. The locking portion **16** has a score line **20** spaced from and parallel to the score line **18**, defining therebetween a narrow, supplemental locking portion **16***a*. The reason for the difference shown in the drawing in the depths of the score lines **18** and **20** will be made clear in the further description of this device.

It may be noted, particularly from Fig. 5, that the portions **12** and **16** may be of the same width, although said portions could be of different widths, and, more particularly, the portion **16** could be somewhat narrower than portion **12** to use less metal and minimize weight. The overlying portion **10**, however, should preferably be shaped approximately as shown in Fig. 5, and the width of an intermediate part of portion **10** should be quite closely related to the dimensions of the eye of a hasp with which the seal is made to be used.

The end or tip **22** of overlying portion **10** is preferably flared upwardly or outwardly slightly, and, quite close to the tip **22** and preferably at the center of the longitudinal line of the metal strip of which the device is formed, there is provided an abutment **24** pressed upwardly from the sheet metal of which the device is formed. A central area of the overlying portion **10** may be cut away, as at **26**, to minimize the use of metal in the device and to minimize weight. This cut-away portion does not weaken the device to the extent of impairing its strength or operation. At opposite sides of the cut-away area **26** the portion **10** extends upwardly, forming wings **28** which, at their ends nearest to the connecting portion **14**, are flared outwardly, as at **30**, as shown in the drawing.

A hasp, best illustrated in Fig. 2 as associated with a mail-bag strap **32**, comprises a hasp eye **34** the reduced ends of which have washers **36**, **38** associated therewith, the washer **36** being at the outer side of the strap **32** and the washer **38** being at the inner side of a neck portion **39** of a bag to which the strap is secured. The reduced ends of the hasp eye **34** extend through washer **36**, strap **32**, bag portion **39** and washer **38**, and the extremities of the hasp eye are suitably riveted or flattened to hold the eye firmly upon the strap and the bag with the strap and bag portion clamped between the washers **36** and **38**.

The hasp includes, also, a hasp plate **40** having a slot **42** through which the hasp eye **34** extends. Plate **40** is hingedly connected at **44** to one side of a rigid, elongate band **46**, the other side of which is hingedly interconnected at **48** to a loop formed on one extremity of the strap **32**. The other end **50** of said strap is adapted to extend through the band **46** to bring the hasp

eye 34 into a position in which it may extend through the slot 42 of the hasp plate.

In use, the strap 32 extends loosely about the neck of the bag before the latter is closed. To close the bag, the strap end 50 is pulled through the band 46 to tighten the strap as a loop around the neck of the bag. This tightening brings the eye 34 close enough to the band 46 that the hasp plate 40 may be swung over the eye 34 to cause the latter to enter and pass substantially through the slot 42 in a manner well understood in relation to the operation of a hasp.

To secure the hasp against unauthorized opening, the seal, in its open condition as illustrated in Fig. 5 and as indicated partly in full lines and partly in broken lines in Fig. 4, is moved laterally of the strap 32 or, i.e., in the direction indicated by arrow 52 in Fig. 4, to cause the locking portion 16 of the seal to move between hasp plate 40 and washer 36 into and through the eye 34.

Continuance of the described lateral movement of the seal causes the overlying portion 10 of the seal to pass above or in overlying relationship to the hasp plate 40 until such lateral movement of the seal into place is terminated by abutment of connecting portion 14 with a side edge of the hasp plate 40. Then, to lock the seal in place, the locking portion 16 is manually bent angularly upwardly and then downwardly about the score lines 18 and 20, from its Fig. 6 position to its position shown in full lines in Fig. 3. This causes the supplemental locking portion 16*a* to assume a position substantially perpendicular to the underlying portion 12 of the seal and causes the locking portion 16 to come into position over the overlying portion 10 of the seal.

In pursuing its described movement, the locking portion 16 approaches, but does not reach, parallelism or, i.e., intimate face-to-face association with the portion 10 because of the presence of abutment 24, which has the effect of leaving the free end 16*b* of the locking portion spaced to some extent above the top surface of the portion 10 and in a position directly within the eye 34. Said spacing is sufficient that a fleshy part of one's fingertip may extend between the end 16*b* and the overlying portion 10 to enable the locking portion 16 to be bent upwardly and back toward its original coplanar relationship with the underlying portion 12 when it is desired to remove the seal.

When the seal is fully closed or sealed as in Figs. 2, 3 and 4, the wings 28 of the seal, as well as the flared portions 30 thereof, are in close association with the opposite arms of the hasp eye 34. By reference to Fig. 2, it may be seen that the wings 28 impart to the overlying portion 10 of the seal a substantial height dimension the effect of which is that the wings 28 extend in the mentioned close association with the opposite arms of the hasp eye 34 from a point close to the hasp plate 40 to a point at the arch portion of the eye 34. In that condition, it will be understood that the wing portions 28 within the hasp eye render it impossible to swing the hasp plate 40 toward an open position to any material extent.

One may remove the seal by placing the tip of his finger under the end 16*b* of the locking portion 16 and by swinging the latter (as viewed in Fig. 3) clockwisely from its full-line position to its broken-line position. During this movement the bend at line of weakness 20, because of the latter's shallowness, remains undisturbed. At line of weakness 18, however, because of the latter's depth, the supplemental locking portion 16*a* bends quite freely, clockwisely, relatively to the portion 12 of the seal; and this bending, following the initial bending which occurred when the seal was closed, almost certainly leads to breakage of the seal at the line of weakness 18. If such breakage does not then occur, some further swinging of parts 16 and 16*a* about the line of weakness 18 will bring about such breakage. Thereafter, the portions 10, 12 and 14 of the seal either fall away from the hasp or may easily be removed therefrom to enable the hasp to be opened.

It will be understood that if the relative strengths of the two lines of weakness were such that locking portion 16 would bend about line of weakness 20 rather than about line 18 upon an attempted opening of the device, the supplemental locking portion 16*a* would remain undesirably as a block to removal of the seal. It will also be clear that the lines of weakness 18 and 20 need not necessarily be cutout scorings as shown and described, but may be formed in any manner which will give them the described relative strengths enabling them to function as explained.

The tip 22 is turned up merely to facilitate application of the seal to the hasp plate and to make it less likely that said tip would catch at the slot 42 of the hasp plate when the seal is being applied to the hasp. Obviously, a seal according to this invention could function even if said tip is not turned up.

The present concept may be embodied in structures somewhat different than those disclosed herein without, however, departing from the invention as set forth in the following claims.

I claim:

1. A sheet-metal hasp seal comprising a flat overlying portion, a flat underlying portion, a connecting portion holding the two first-mentioned portions in spaced parallelism, and a locking portion integral with said underlying portion; said overlying and underlying portions being adapted to be positioned respectively over and under a hasp plate and to extend through and within a hasp eye extending through a slot in the hasp plate, and said locking portion being connected to said underlying portion at an area of weakness and thereby adapted to be bent about said area of weakness to a position over said overlying portion and to be broken from said underlying portion at said area of weakness upon repetition of such bending, said overlying portion having integral wings, at opposite sides thereof, arranged to extend upwardly into abutting relationship with an inside surface of the hasp eye to oppose movement of the hasp plate toward the outer end of the hasp eye.

2. A hasp seal according to claim 1, further including abutment means, coacting at intermediate areas of said overlying portion and said locking portion and provided on one of the two last-mentioned portions, for limiting the movement of the locking portion toward said overlying portion to maintain spacing between the latter and the tip of the locking portion.

3. A hasp seal for sealing a hasp eye and a hasp plate together with the hasp eye extending through a slot in the hasp plate, said seal comprising a strip of metal of substantially uniform thickness constituting, in the following-named order, a flat overlying portion, a connecting portion, a flat underlying portion and a locking portion; said overlying said underlying portions being retained by said connecting portion in spaced, approximately parallel relationship and being adapted to be positioned respectively over and under the hasp plate and to extend through the hasp eye, said locking portion adjoining said underlying portion at an area of weakness, thereby facilitating bending of said locking portion at said area of weakness and about the end of said overlying portion to a position over the latter and adapting said locking portion to break away from the remainder of the seal at said area of weakness upon repetition of such bending, and said overlying portion having spaced integral upstanding wings at opposite sides thereof adapted to extend upwardly from the hasp plate into abutment with an inside surface of the hasp eye to oppose material movement of the plate toward the outer end of the hasp eye.

4. A hasp seal according to claim 3, said wings flaring outwardly at their portions nearest to said connecting portion to reinforce them against bending relatively to said overlying portion.

5. A hasp seal according to claim 3, the area of said overlying portion between said wings being substantially flat, and a part of said locking portion being narrower than the space between said wings and adapted, upon such bending, to extend between said wings in overlying position above said area.

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Dedication

2,912,269.—*Sigurd M. Moberg*, Pompton Plains, N.J. HASP SEAL. Patent dated Nov. 10, 1959. Dedication filed Feb. 9, 1972, by the assignee, *E. J. Brooks Company*.

Hereby dedicates to the Public the term thereof remaining after Oct. 1, 1970.

[*Official Gazette July 11, 1972.*]