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G. E. MURPHY

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WEATHERPROOF PADLOCK

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Fig. 1.

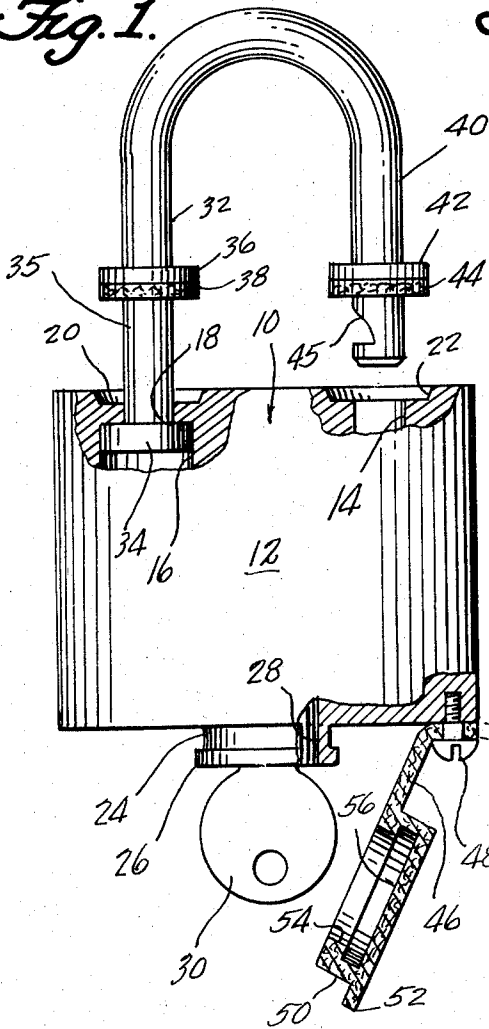


Fig. 2.

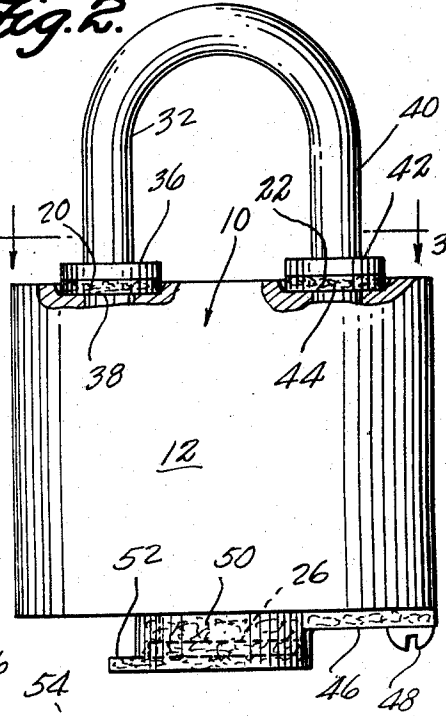


Fig. 4.

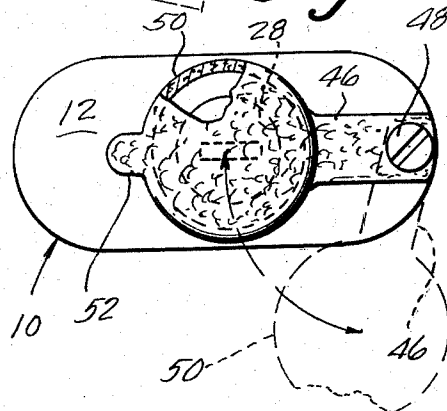
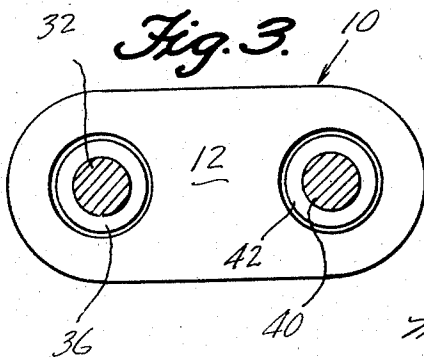


Fig. 3.



INVENTOR.
George E. Murphy,
BY

McMarow, Berman + Davidson
ATTORNEYS.

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WEATHERPROOF PADLOCK

George E. Murphy, Auburn, Mass.

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2 Claims. (Cl. 70—51)

This invention relates generally to locking devices, and more particularly has reference to a padlock so designed as to be weatherproof, thereby to prevent the interior of the padlock from rusting or otherwise corroding.

Padlocks that are exposed to the weather tend to rust over a period of time, or otherwise deteriorate to a point that prevents them from being used with maximum efficiency. The life of the padlock, thus, is appreciably shortened, requiring replacement thereof at frequent intervals. Alternatively, if the lock is not opened and closed frequently, it sometimes happens that the lock rusts fast in its locking position, and resists all efforts to open the same when the key associated with the lock is used. In such event, the lock must be sawed off, and this of course is not only time-consuming, but often involves substantial expense in labor and in the cost of a replacement lock.

In view of the above, it is proposed to provide a padlock so designed as to be sealed to the maximum extent against the admission of moisture to the interior thereof. In this way, it is proposed to provide a lock that will be designed for regular exposure to the elements with minimum possibility of deterioration over a period of time.

Another object is to provide a padlock that will be proportioned for use in any situation in which a padlock not formed according to the present invention is already used, so that the lock according to the present invention can be readily substituted for existing locks.

Another object is to provide improved means not only for sealing the lock about the hasp legs, but also, for sealing the key-receiving opening of the lock, whereby the lock will be effectively sealed both at its upper and at its lower ends.

Another object is to provide a padlock so designed that the seal thereof about the legs of the hasp will be automatically compressed, responsive merely to movement of the hasp to its locking position.

Another object is to impart the above mentioned desirable characteristics to a padlock while permitting manufacture of the same at a cost that compares favorably with that of conventional locks not having the desirable characteristics of the invention.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawings wherein:

Figure 1 is a front elevational view of a lock according to the present invention, in open position, portions being shown in section, the key being inserted, the sealing cap for the key cylinder being shown in full and dotted lines in different positions which it may assume while in its unsealing position;

Figure 2 is a view similar to Figure 1 in which the key has been removed, the lock closed, and all parts are in their sealing positions;

Figure 3 is a transverse section on line 3—3 of Figure 2; and

Figure 4 is a bottom plan view of the lock, the cap

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being in sealing and unsealing positions in full and dotted lines respectively, said cap being partially broken away.

Referring to the drawing, in detail, generally designated 10 is a lock according to the present invention, having the conventionally shaped lock body 12. In accordance with the invention, body 12 is formed with transversely spaced longitudinal bores 14, 16 adjacent the opposite sides of the body. Bore 16 is of greater diameter than bore 14, but has a restriction or reduced-diameter portion 18 opening into a shallow recess 20 formed in the adjacent or upper end surface of body 12. A similar recess 22 is formed in said upper end surface concentric with and in communication with bore 14.

Integrally formed with the body 12 at the lower end thereof, or otherwise rigid with the body is a protrusion or boss 24 of low height, the outer end of which has a circumferential, outwardly projecting flange or collar 26.

Formed in the protrusion is the key-receiving slot 28. This receives the key 30. In this connection, no attempt will be made herein to provide any details or information as to the internal locking mechanism, since this of course is old and does not comprise part of the invention. In the usual manner, the hasp of the lock engages at its opposite ends in the body in the manner shown in Figure 2, automatically locking in this position. By rotation of the key, the hasp is unlocked and moves of its own accord or is readily movable to the Figure 1, unlocking position.

The hasp of the lock has been designated 32 and is of inverted J-shape, having at one end a cylindrical enlargement or head 34 swivelled in bore 16. The lock has a first or longer leg 35 on which head 34 is formed, leg 35 being rotatable and longitudinally shiftable in restriction 18. Integral or otherwise made rigid with leg 35 intermediate the ends thereof is a sealing collar 36 the diameter of which corresponds closely to that of the shallow recess 20. A compressible, annular washer of neoprene, or any other suitable leak-preventive, compressible gasket material is extended about leg 35, and may be cemented or otherwise secured to the underside of collar 36.

Designated at 40 is the shorter leg of the hasp, and rigid with the same intermediate opposite ends of said shorter leg is a collar 42 to the underside of which is secured an annular, compressible gasket 44. The usual laterally opening notch 45 is provided in the leg 40, this being engageable by the locking mechanism within the body 12, when the hasp is in its locking position shown in Figure 2.

The construction is such that when the hasp is in its locking position of Figure 2, it causes the gaskets 38, 44 to seat in recesses 20, 22. The gaskets are compressed, for the reason that the hasp will not lock unless it moves downwardly, that is, toward the body 12, a prescribed distance. When the hasp moves toward the body to this extent, gaskets 38, 44 must necessarily be compressed. This provides an effective seal about the hasp.

A sealing cap is provided for covering the key-receiving slot. This includes a flexible tongue 46, having an opening at one end receiving the screw 48 threadedly engaged in the body. Tongue 46 is integral with a circular cap element 50. Tongue 46 is connected to the cap element in the plane of one face of the cap element. The cap element has its recess 54 opening upon this face.

In the plane of the other face of the cap element is a tab 52, diametrically opposite the tongue 46. This is to facilitate lifting of the cap off the protrusion 24, and also facilitate movement of the cap to its sealing position over said protrusion or boss.

The cap element 50, as previously noted, has a recess 54, and this is undercut as at 56, and is thus adapted to receive the collar 26. The flexible, somewhat resilient

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nature of the material of the cap element, which material can be plastic, rubber, or the like, permits the same to snap into place over the boss 24 in the position shown in Figure 1. At the same time, there is sufficient resiliency in the cap to permit the same to be lifted off the boss to the Figure 1 position.

Once the cap has been lifted off the boss, it is rotatable upon the screw 48, as for example to the dotted line positions shown in Figures 1 and 4 respectively. In these circumstances, the key can be freely entered into the key-receiving slot 28.

It will be seen that the device provides an effective seal for both ends of the lock, sealing all apertures against moisture that otherwise might travel to the interior of the lock body. Not only is there a seal provided about the legs of the hasp, but also, there is an effective seal provided at the key-receiving end of the lock body. The final result is to provide a waterproof lock that can be exposed to the full force of the elements with maximum resistance to internal corrosion.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation, and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. In a lock, a body having hasp-receiving bores; a hasp mounted in the body for movement to and from a locking position, said hasp including spaced legs, one leg being engageable in one bore and the other leg being engageable in the other bore; and gasket means on the respective legs compressing against the body in the locking position of the hasps, said body having shallow recesses receiving the gasket means in the locking position of the hasp, said gasket means of each leg comprising a collar rigid with and extending about the leg so as to constitute an unyielding, annular abutment upon the leg, and a gasket solidly formed of a compressible material

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and secured to the collar in face-to-face contact there-with between the collar and body, said body having a surface opposite said abutment and constituting a second abutment, for compression of the gasket between the abutments defined by the collar and lock body respectively, in the locking position of the hasp.

2. In a lock, a body having hasp-receiving bores; a hasp including spaced legs, one leg being engageable in one bore and the other leg being engageable in the other bore; gasket means on the respective legs compressing against the body in the locking position of the hasps; a protrusion on the body having a slot adapted to receive a key for the lock; and a sealing cap carried by the body and removably engageable over said protrusion to seal the same against passage of moisture into the slot, said cap including a tongue rotatably connected to the body in spaced relation to the protrusion and a recessed cap element adapted to receive the protrusion in one position to which the tongue is rotated, said cap element having a recess receiving the protrusion, said recess of the cap element being undercut, the protrusion being formed with an outwardly directed flange engageable in the undercut portion of the recess, said sealing cap being wholly formed of a flexible, resilient material, whereby to effect flexure of the tongue longitudinally following rotation of the same to said one position, in a direction to shift the cap element bodily toward the protrusion, the flexible, resilient material of the sealing cap further being effective for temporary deformation of the cap element to an extent sufficient for snapping of said flange into the undercut recess.

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