United States Patent

Gilmore

[15] **3,671,066**

[45] **June 20, 1972**

[54] BAG LOCK ASSEMBLY

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[22] Filed: **Jan. 25, 1971**

[21] Appl. No.: **109,449**

[52] **U.S. Cl.**.....**292/228,** 292/254, 292/341.15, 292/DIG. 50, 24/221 R, 24/230 TC

[51] **Int. Cl.**.....**E05c 3/04**

[58] **Field of Search**.....292/254, 218, 304, 59, 228, 292/DIG. 50, 341.15; 24/210, 211, 230 TC, 221 R, 221 K, 201 S

[56] **References Cited**

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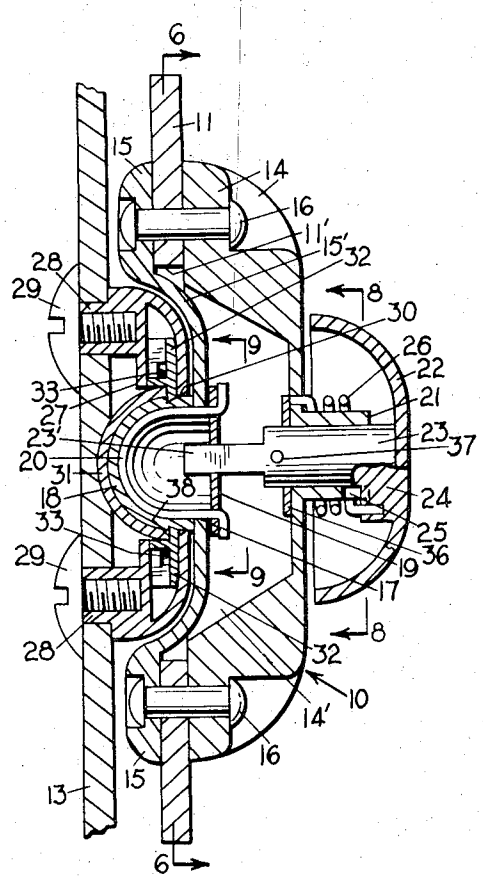
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Primary Examiner—Richard E. Moore
Attorney—L. R. Geisler

[57] **ABSTRACT**

A lock designed for a bag having a flap extending over part of the top and part of the outside face of one wall of the bag, the lock consisting of a portion on the bag wall and a cooperating companion portion on the flap, the portion on the flap of the bag being so positioned as to overlie and mate with the portion on the bag wall, the two portions so constructed that the portion on the bag wall will be locked within the portion on the flap when the flap is pressed against the bag wall. When the two portions are locked in this manner they can be unlocked only by giving a 90° turn to a locking knob on the outer portion.

1 Claim, 9 Drawing Figures



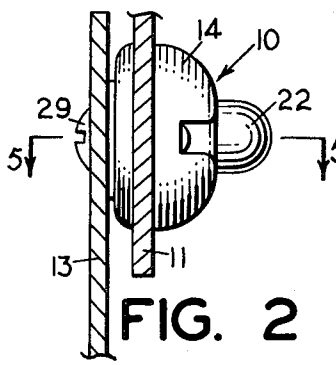


FIG. 2

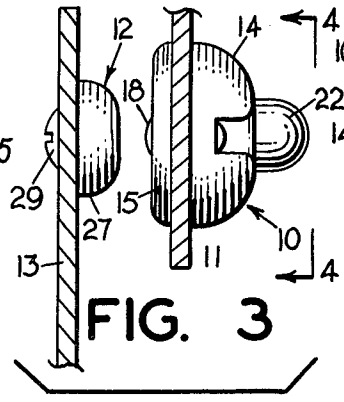


FIG. 3

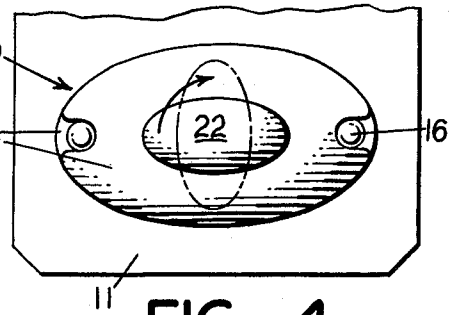


FIG. 4

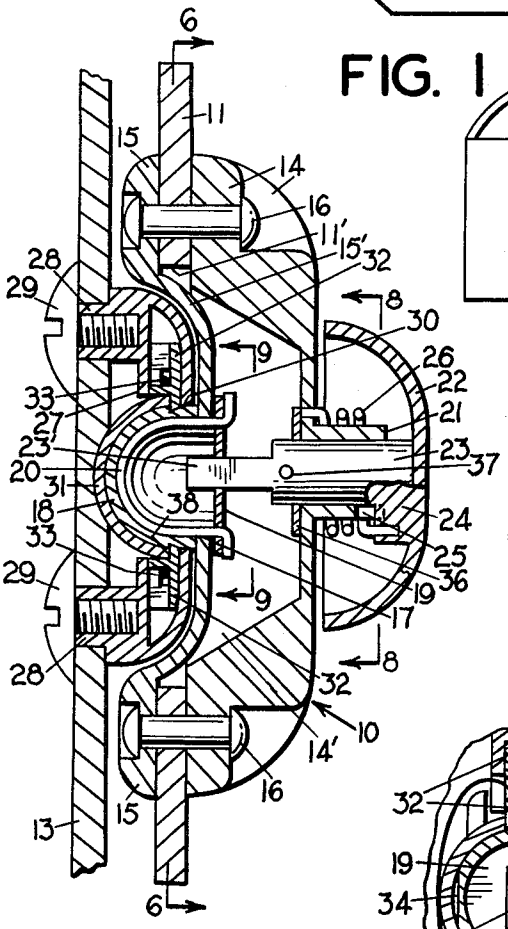


FIG. 5

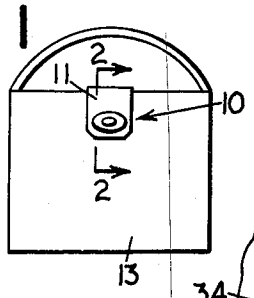


FIG. 1

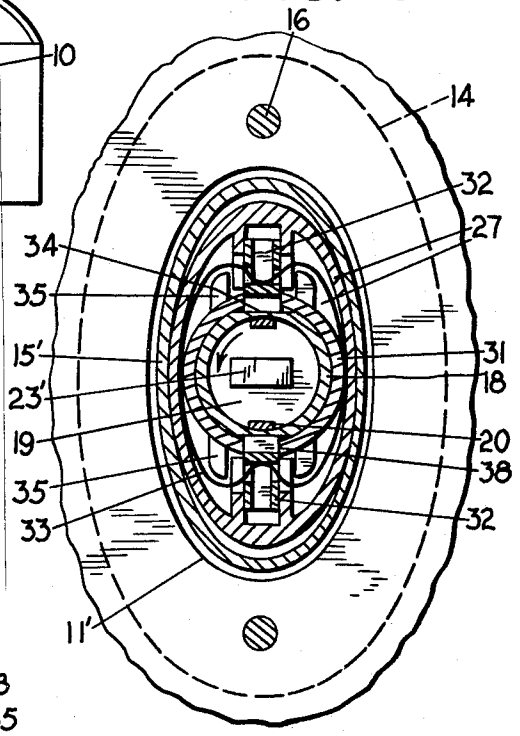


FIG. 6

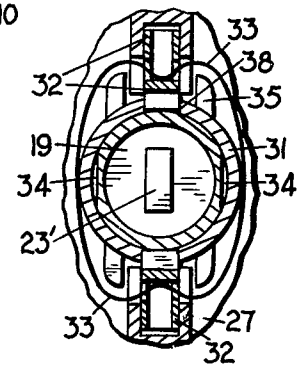


FIG. 7

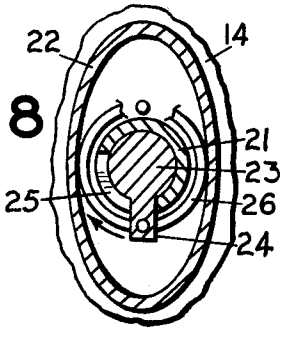


FIG. 8

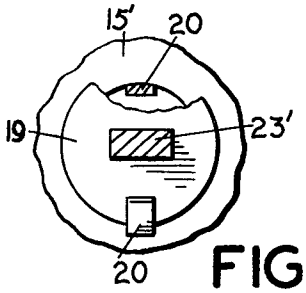


FIG. 9

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BAG LOCK ASSEMBLY

BACKGROUND OF THE INVENTION

The principal object of the invention is to provide improved latching means for bags, such as brief cases, satchels, and especially women's bags and purses, so arranged that when the outer overlying flap of the bag is pressed into contact with the outside face of the adjacent main wall the locking of the flap to the main wall will occur automatically.

As is well-known, it is not unusual for women to fail to close their purses or bags securely after they have opened the same for the purpose of taking out money or other contents, especially if the opening of the bag is done hurriedly and if other articles are being carried along with the purse or bag. Opened bags in crowded shopping districts are a recognized source of revenue for pickpockets.

Various types of fasteners comprising two portions which are secured together when one is pressed against the other are well-known, the best known of these probably being the common snap fastener, such as that used on gloves. However, with such fasteners the two portions can be unsecured from each other merely by pulling one from the other.

U.S. Pat. to Church, No. 1,298,892, issued Apr. 1, 1919, shows a fastener of this general class which has an added latch so that the two portions can be separated only when pressure is specially applied to the latch, the top of which latch extends through the socket portion. However, with the lock of the present invention the unlocking requires the manual turning of a control knob 90°, instead of merely applying pressure to an exposed latch.

Other known locks can be unlocked by the turning of a locking member carried by one of the cooperating portions of the lock assembly but, on the other hand, these locks do not become automatically locked merely by the pressure of one portion against the other.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention provides a suitable and practical lock for a purse or bag which will not only become locked when the two cooperating portions of the lock are brought into contact under ordinary closing pressure, but which portions will then remain firmly locked until unlocked by special manual operation.

In the drawings:

FIG. 1 is a front view of a bag equipped with the lock assembly of the present invention;

FIG. 2 is a sectional elevation taken on line 2—2 of FIG. 1, drawn to a larger scale, showing a side elevation of the lock assembly in locked position;

FIG. 3 is a side elevation of the lock assembly, similar to FIG. 2, but with the lock assembly shown in unlocked position and thus with the cooperating halves or portions of the entire lock assembly slightly separated;

FIG. 4 is a front face view of the outer half portion of the lock assembly taken on line 4—4 of FIG. 3, the actuating finger knob being shown in full lines in normal position and in broken lines as temporarily rotated to unlocking position;

FIG. 5 is a section through the entire closed lock assembly taken on line 5—5 of FIG. 2, but drawn to a larger scale;

FIG. 6 is a section through the outer portion of the lock assembly taken on line 6—6 of FIG. 5;

FIG. 7 is a fragmentary section similar in part to FIG. 6 but showing the outer portion of the lock assembly in temporary unlocking position;

FIG. 8 is a section through the actuating knob on the outer portion of the lock assembly taken on line 8—8 of FIG. 5; and

FIG. 9 is a fragmentary section on line 9—9 of FIG. 5.

Referring first to FIGS. 1 to 4 inclusive, the entire lock assembly comprises two separate portions, namely an outer portion 10, which is mounted on the outer flap or cover flap 11 on the bag, and an inner portion 12, which is mounted on the main wall 13 of the bag facing the cover flap 11.

The outer portion 10 of the lock assembly includes a front housing member 14 and a rear housing member 15 (see also FIG. 5) located on opposite faces of the cover flap 11 respectively and extending over a cutout portion 11' on the cover flap. The front and rear housing members 14 and 15 have their peripheries in registration with each other and are secured together by rivets 16. Preferably, but not necessarily, these housing members are oval in shape as shown. The end portions of the housing member 14 are leveled into reduced thickness sections to accommodate the rivets 16.

The wall of the rear housing member 15 of this outer portion 10 is formed with a central recessed part 15' which extends in through the cut-out portion 11' of the cover flap 11 and the front housing member 14 is formed with a rearwardly open chamber 14' into which this wall recess 15' of the rear housing member 15 extends partway as shown in FIG. 5. Preferably, this recess 15' is also oval in shape as indicated in FIG. 6.

The wall recess 15' in the rear housing member 15 of the outer portion 10 of the lock assembly has a center circular opening 17 (FIG. 5) from which a hollow substantially semi-spherical lock knob 18 extends. The inside diameter of this lock knob 18 corresponds to the diameter of the circular opening 17. A holding plate 19, having a peripheral diameter greater than that of the opening 17 in the recess 15', is mounted on the inside of the recess 15', and a pair of diametrically opposite fingers 20, which are rigidly secured within the lock knob 18, extend through slots in the holding plate 19 and have their extending ends turned over outwardly at right angles on the inside face of the holding plate 19. Thus the lock knob 18 and the holding plate 19 are secured together mounted on opposite faces of the wall recess 15' about the opening 17 and are rotatable with respect to the wall recess 15', rear housing member 15, and front housing member 14.

The front housing member 14 of the outer portion 10 of the lock assembly has an outward extending cylindrical boss 21 (FIG. 5) in axial alignment with the center of the opening 17 in the rear housing member 15 and in axial alignment with the lock knob 18. An oval-shaped finger knob 22 (see also FIGS. 2, 3 and 4) carries a centrally, inwardly extending stub shaft 23, the main portion of which is cylindrical with a diameter corresponding to the inside diameter of the cylindrical boss 21, as shown in FIG. 5. This stub shaft 23, adjacent its junction with the finger knob 22, is provided with a laterally extending rib 24. The outer end of the cylindrical boss 21 has a cut-out notch 25 (see FIG. 8) which extends for an arcuate distance of 90°, and the rib 24 engages this notch. The arrangement is such that the rotation of the finger knob 22 and the stub shaft 23 with respect to the housing member 14 thus is restricted to 90°.

A washer 36 (FIG. 5) extends around the stub shaft 23 inside the housing member 14, and a pin 37, extending transversely through the stub shaft 23, holds the stub shaft against being pulled outwardly from the boss 21 and thus combines with the rib 24 in holding the finger knob 22 in mounted position on the outside of the front housing member 14.

The inner end of the stub shaft 23 is reduced to form an extension 23' which is rectangular in cross section. The holding plate 19 is provided with a corresponding central rectangular aperture and the extension 23' of the stub shaft passes through this aperture. Thus rotation of the finger knob 22, stub shaft 23 and extension 23' with respect to the housing member 14 causes rotation of the holding plate 19 and lock knob 18 (FIG. 5), such rotation being limited to 90° as previously explained.

A coil spring 26 (FIG. 5) carried on the cylindrical boss 21, has one end secured in the lateral rib 24 of the stub shaft 23 and the other end secured in an aperture in the adjacent portion of the wall of the housing member 14. This spring is under tension at all times and acts to hold the finger knob 22, stub shaft 23, extension 23', and lock knob 18 in the normal position shown in FIG. 5 (and also in FIGS. 1, 2, 3 and 4), while permitting the finger knob 22, and thus the members connected with it, to be rotated against the force of spring 26,

such rotation being restricted to 90° by the engagement of the rib **24** of the stub shaft **23** with the notch **25** in the end of the cylindrical boss **21**.

The inner portion **12** of the entire lock assembly (FIGS. **3** and **5**) includes a housing **27**, the outer surface of which is shaped to correspond to the recessed part **15'** in the rear housing member **15** of the outer portion **10**. The housing **27** extends out on the front face of the main wall **13** of the bag for a distance approximately equal to the depth of the recess **15'** in the opposed housing member **15**. The perimeter of the housing **27** of the inner portion **12** is thus considerably smaller than the perimeter of the front and rear housing members **14** and **15** of the outer portion **10** of the assembly, causing the outer portion **10** to overlie the inner portion **12** of the assembly entirely when the lock assembly is closed. In the preferred form of the assembly as shown in the drawings, the housing **27** is also oval in shape. This housing **27** for the inner portion **12** of the lock assembly is secured in proper position on the wall **13** of the bag by means of a pair of internally threaded bosses **28** which extend through apertures in the bag wall **13** and which carry clamping screws **29** engaging the inside or opposite face of the bag wall as shown in FIG. **5**. Thus, these two screws **29** are the only part of the entire lock assembly located on the inside of the bag wall **15**.

The housing **27** of the inner portion **12** of the lock assembly has a circular central opening **30** (FIG. **5**), the diameter of which is only slightly greater than the exterior diameter of the lock knob **18** carried by the outer portion **10** of the lock assembly. A substantially semi-spherical socket member **31** is secured on the inside of the housing **27** around the opening **30** and forms a seat for the lock knob **18** of the outer portion **10** of the lock assembly when the outer portion **10** is brought into engagement with the inner portion **12**. Pairs of spaced arms **35** (FIGS. **6** and **7**) extend outwardly from the rim of the socket member **31** and are welded to the inside of the housing **27** to secure the socket member **31** in the housing **27** at the opening **30**.

A pair of latch members **32** (FIGS. **5**, **6** and **7**) are slidably mounted within the housing **27** on diametrically opposite sides of the socket member **31**, and their beveled forward ends slide through slots **38** in the rim of socket member **31**. These latch members **32** are each formed with a forward wall which is engaged by an indented portion of a spring **33**, which normally maintains the latch members in the forward position shown in FIGS. **5** and **6** but permits them to be moved rearwardly a slight distance against the force of the spring into the position shown in FIG. **7**.

The lock knob **18** of the outer portion **10** of the lock assembly is provided with a pair of diametrically opposite grooves **34** (FIGS. **6** and **7**) on its outer surface for engagement by the beveled ends of the latch members **32** when the lock knob **18** in normal position moves into the socket **31**. This causes the automatic locking of the outer portion **10** to the inner portion **12** of the lock assembly. However, when the outer portion **10** is locked to the inner portion **12** in the manner above described, the rotating of the lock knob **18** of the outer portion **10** will bring portions of the surface of the lock knob **18** beyond the ends of the grooves **34** into engagement with the ends of the latch members **32** and cause the latch members to be thrust inwardly against the force of the spring, resulting consequently in the release of the lock knob **18** while temporarily in such rotated position. This releasing of the lock knob **18** is produced by manual rotation of the finger knob **22** on the outer portion **10** of the lock assembly against the force of its spring **26**.

Thus, when the bag is open or unlocked all that is necessary for locking the bag closed is to push the overlapping outer flap or cover flap **11** against the side **13** of the bag sufficiently to cause the lock knob **18** to seat itself in the socket **31**. The fact that the housing **27** of the inner portion **12** of the lock assembly is of a size and shape to fit into the recess portion **15'** of the rear housing member **15** of the outer portion **10** of the lock assembly, and the fact that the socket **31** and lock knob **18** are centrally located in the housing **27** and in the recess **15'** of the housing member **15** respectively, causes the lock knob **18** to be moved into the socket **31** without requiring any particular guidance, assuming of course that the inner portion **12** and the outer portion **10** of the lock assembly are mounted in proper positions on the bag wall and cover flap respectively.

When the bag is locked the outer surface of the front housing **14** and the finger knob **22** are the only members of the entire locking assembly which are exposed to view, and the lock assembly presents a very plain but attractive appearance. The unlocking of the bag can occur only when the finger knob is turned manually against the force of its spring and in one direction only. No inadvertent unlocking of the assembly is possible.

I claim:

A lock assembly for a bag having an outer flap overlying a main wall of the bag, said assembly consisting of a flap portion mounted on the flap and a companion portion mounted on the main wall, said flap portion comprising a front member on the outer face of said flap and a rear member on the inner face of said flap secured to and in registration with said front member, said flap having a cut-out portion enclosed by said front and said rear members, said front member provided with a central recess on its inside face, said rear member formed with a recessed portion extending forwardly through said flap cut-out portion and into said recess of said front member, a rearwardly extending locking knob rotatably and centrally mounted within said recessed portion of the said rear member, a shaft for said locking knob rotatably mounted in said front member, a finger knob on the forward end of said shaft, spring means holding said shaft and locking knob in normal position but allowing them to be rotated from said normal position against the force of said spring means, limit means limiting the rotation of said shaft and locking knob, said companion portion of said lock assembly consisting of a housing mounted on and extending forwardly from said main wall, said housing corresponding approximately in size and contour to said recessed portion of said rear member on said flap so as to mate therewith, whereby said housing will be readily and properly received into said rear member on said flap when said flap is thrust against said main wall, a socket in said housing for receiving said locking knob, and spring-actuated latch means and cooperating latch-engageable means in said socket and on said locking knob so arranged as to cause the locking knob to become locked by moving into said socket in normal position and to be unlocked in said socket only by being rotated from said normal position.

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