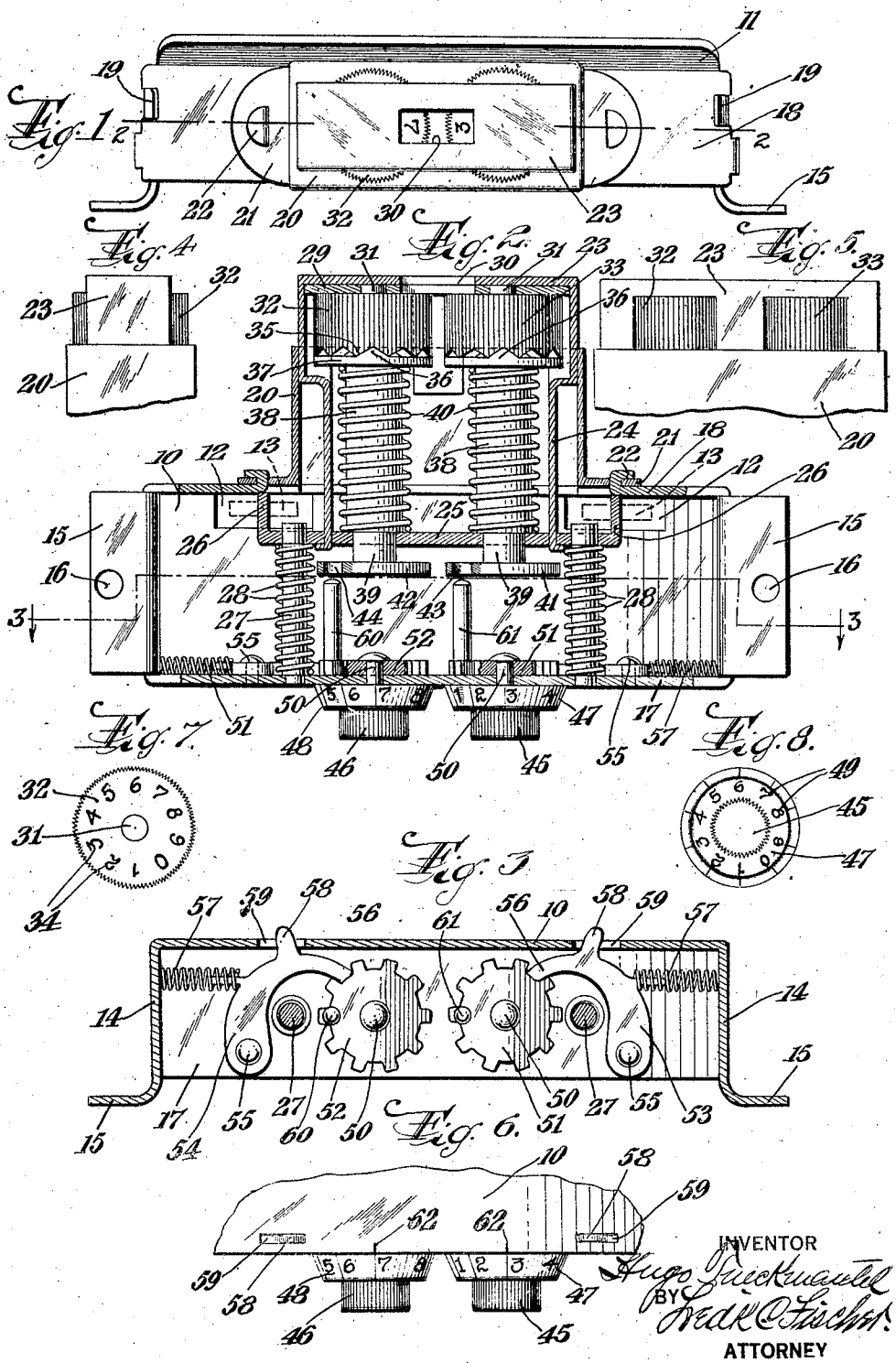
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COMBINATION LOCK FOR BAGS

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COMBINATION LOCK FOR BAGS.

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This invention relates to combination locks of keyless, permutative type, and more particularly to such as are applicable to that class of containers generically denominated as bags.

One of the objects of the invention is to provide a lock having a coupled pair of slidable plungers, each independently adjustable by rotation into a definite predetermined position with reference to characters thereon, indicative of concealed stops which prevent opening the lock, except the plungers are in such predetermined position.

A further feature is in the provision of means whereby each stop is permutatively mounted and held rigidly in adjusted position, the stops also being provided with characters indicating their position and accessible from the interior of the container to which the lock is applied.

Other purposes, such as the stop retaining devices, convenience in changing the combinations, ease of operation, security attained and comely appearance, are accomplished by the novel construction, combination and arrangement of parts hereinafter described and shown in the accompanying drawing, constituting an important part of this disclosure, and in which:—

Figure 1 is a top plan view of an embodiment of the invention as designed for bag application.

Figure 2 is a longitudinal sectional view taken substantially on line 2—2 of Fig. 1.

Figure 3 is a sectional view taken on line 3—3 of Fig. 2.

Figure 4 is a partial end view of the upper portion of the lock.

Figure 5 is a front view of the same parts.

Figure 6 is a fragmentary front elevational view of the lower central portion of the lock.

Figure 7 is a plan view of one of the plungers in detail.

Figure 8 is a similar but slightly modified view of one of the plunger stop dials.

The lock casing as shown in the drawing resembles ordinary bag lock casings in shape and appearance and consists of an oblong rectangular box like structure, having a front plate 10 formed to present an angularly outstanding flange 11 and containing a pair of spaced elongated openings 12 in its upper margin, adjacent the flange 11, these openings being freely receptive of looped keepers 13 fixed on the opposed bag frame member.

The casing ends 14 have outturned flanges 15 provided with openings 16 by which the structure is secured to one of the bag frame members, preferably on the inner surface so as to be enclosed when the bag frames are together.

A bottom plate 17 is integrally inturned from the front 10 and a top plate 18, directly back of the flange 11, is secured to the end elements by bent prongs 19 in the usual manner.

A rectangular guide casing 20, superposed centrally on the top plate 18, is provided with flanged feet 21 having openings to receive prongs 22, bent over and clinched to hold the guide casing in rigid fixed relation.

A plunger 23, partially open at the front and rear, is freely slidable in the guide 20, the end walls 24 of the plunger being offset inwardly, as shown in Fig. 2 and extend into the casing to rigidly engage a bar 25 having bolts 26 upturned at its ends, these bolts being movable closely adjacent across the center of the openings 12 to engage the keepers 13.

A pair of spaced posts 27, riveted in the bottom plate 17 extend upward through the bar 25, near its ends, to act as guides, and encircling the posts are coiled spiral springs 28 pressing the bar upwardly and normally holding the bolts in an engaging position.

In the upper part of the plunger 23 is a plate 29 having a central rectangular opening in register with a similar opening 30 in the cover element of the plunger.

Also in the plate are mounted pintles 31 formed on the outer ends of knurled cylinders 32 and 33, each bearing on their outer end surfaces a circular row of characters 34, as the numerals 0 to 9, the same being visible, one of each pair at a time, through the openings 30, see Fig. 1.

The lower, inner ends of the cylinders are formed with radial angular teeth 35, and engageable in any of the teeth spaces are detents 36 raised from collars 37 encircling the upper ends of spindles 38 fixed axially in the cylinders, these collars being held against rotation in the plunger 23, but free to move up and down upon the spindles.

The inner ends of the spindles are reduced in diameter, their reduced portions 39 being revoluble in the lock bar 25 and between the

bar and undersides of the collars 37 are coiled expansion springs 40 encircling the spindles and holding the detents 36 in engagement with the teeth of the cylinders 32, 33, thereby retaining them frictionally from movement when in adjustment.

A pair of discs 41, 42 are respectively fixed on the reduced ends of the spindles, the disc 41 corresponding with the cylinder 33 and the disc 42 corresponding with the cylinder 32, and each disc is provided with a single opening 43 and 44 respectively.

Below the bottom plate 17 are a pair of knurled knobs 45, 46 formed with dials 47, 48 carrying characters 49, similar to the characters 34, and having stems 50 revolubly mounted in the bottom plate 17, in register with the axis of the spindles 38, and secured rigidly in notched discs 51, 52 the teeth spaces of which correspond in number and location with the numerals on the dials.

A pair of pawls 53, 54 are pivoted at 55 on the inner surface of the bottom plate 17, the free ends 56 of the pawls engaging the teeth spaces in the discs 51, 52 and are held normally in such engagement by coiled compression springs 57; the pawls are further provided with finger grips 58 extending outward through opening 59 in the casing front plate 10, permitting the knobs, dials and notched discs to be turned when released from the pawls.

Posts 60, 61 are fixed rigidly in the discs 51, 52, the same extending nearly to the discs 41, 42 and are so arranged with reference to the numerals on the dials 47, 48 that they can be rotated into position to enter the openings 43, 44 of the cylinder carried discs 41, 42 when the latter are adjusted to receive them.

In operation, the dials are set to bring any two selected numerals, as for instance 3 on disc 47 and 7 on disc 48, to register with marks 62 on the front plate 10, this being accomplished by releasing the pawls and manipulating the knobs, which are held from rotating by the pawls when in any desired adjustment.

It will be understood that when the bag is enclosed these dials are concealed in the interior of the bag, and are wholly unobservable.

To open the bag it is necessary to rotate the cylinders 32, 33 into position to disclose the same numerals, viz 3 and 7, through the opening 30 in the top of the plunger 23.

When this has been done the disc openings 43, 44 will be in register with the posts 61, 60 so that the plunger 23 can be pressed inwardly, carrying with it the bar 25 and bolts 26, permitting the bag to be opened.

Obviously when the disc openings 43, 44 are not in register with the posts, the latter will abut against the lower surface of the discs 41, 42 and positively prevent depression of the plunger 23 and consequently prevent opening of the bag.

It is therefore necessary to know the combination of numbers at which the dials 47, 48 have been set in order to open the bag, as obviously the cylinders should be rotated to bring other than the selected numbers into view for safety purposes.

It will be seen that a large number of permutative changes may be made in the settings and that complete security may be attained.

The foregoing disclosure is to be regarded as descriptive and illustrative only, and not as restrictive or limitative of the invention, of which obviously an embodiment may be constructed including many modifications without departing from the general scope herein indicated and denoted in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A combination lock for bags comprising a casing, a plunger slidably mounted therein, bolts carried by said plunger, means for normally retaining said bolts in locked position, a pair of cylinders rotatable in said plunger, a disc having a single perforation carried by each of said cylinders, characters on said cylinders disposed relatively to the perforations in said discs, dials revoluble on said casing in axial alinement with said cylinders, and posts fixed in said dials movable into and out of registration with the perforations in said discs, whereby said plunger may be controlled.

2. A combination lock for bags comprising a casing, a plunger slidably mounted therein, bolts actuated by said plunger, means for resiliently raising said plunger, cylinders rotatable in said plunger, a disc rigidly carried by each cylinder, each disc having a single marginal opening, posts movable in a circular path below said discs, means for changing the position of said posts, and means whereby said discs may be adjusted to permit entrance of said posts into the disc openings, whereby the plunger may be depressed.

3. A combination lock for bags comprising a casing, a plunger slidably mounted therein, bolts actuated by said plunger, means for resiliently raising said plunger, cylinders rotatable in said plunger, a disc rigidly carried by each cylinder, each disc having a single marginal opening, posts movable in a circular path below said discs, means for alining said posts with the openings in said discs, means for retaining said posts in any selected adjustment, and means for adjusting said discs to cause registration of the openings therein with said posts.

4. A combination lock for bags comprising a casing, a plunger slidably mounted

therein, bolts carried by said plunger, means for normally retaining said bolts in locked position, a pair of cylinders rotatable in said plunger, a disc having a single marginal opening carried in fixed relation by each cylinder, means on each cylinder to indicate the position of the opening therein, knob actuated dials rotatable in said casing in register with said cylinders, notched discs actuable by said dials, means for independently retaining said discs in adjusted position, and a post fixed in the periphery of each disc said posts extending adjacent the first named discs and enterable into the openings therein when in register, thereby controlling movement of said plunger.

5. A combination lock for bags comprising a casing, a plunger slidably mounted therein, bolts carried by said plunger, means for normally retaining said bolts in locked position, a pair of cylinders rotatable in said plunger, a disc having a single marginal opening carried in fixed relation by each cylinder, means on each cylinder to indicate the position of the opening therein, spring actuated detents to retain said cylinders in their adjusted positions, knob actuated dials rotatable mounted on said casing, notched wheels operated by said dials, spring controlled detents engageable with said wheels, the notches in said wheels corresponding to numerals on said dials, and a post fixed in each wheel to intercept the movement of said disc, whereby said plunger is prevented from operation except the openings in said disc are in register with said posts.

6. A lock comprising a shell, a keeper-engaging mechanism therein, means for actuating said mechanism, visible permutation means for setting said actuating means against movement, and auxiliary visible permutation means for actuating the keeper-engaging mechanism.

7. A lock comprising a shell, a keeper-engaging mechanism therein, means for actuating said mechanism, visible permutation means for setting said actuating means against movement, means for retaining said visible permutation means in any selected adjustment, and auxiliary visible permutation means for actuating the keeper-engaging mechanism.

This specification signed and witnessed this 23rd day of December, 1925.

HUGO TUECKMANTEL.