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W. D. LAUNDER

2,455,069

TUBE LOCK

Filed July 17, 1946

FIG. 1.

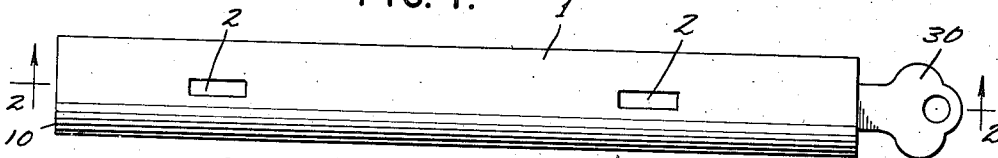


FIG. 2.

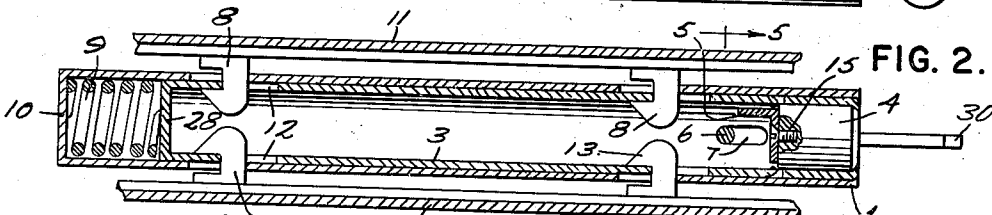


FIG. 3.

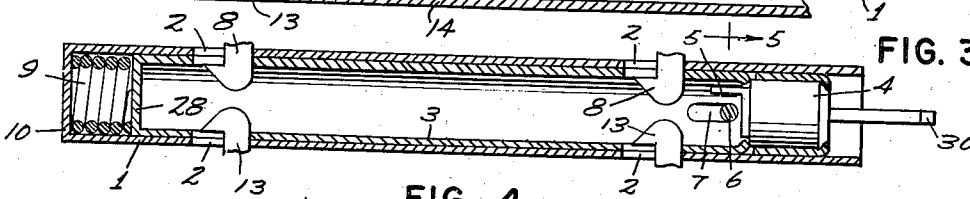


FIG. 4.

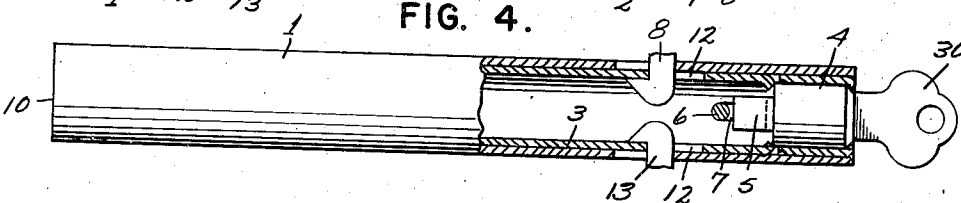


FIG. 5.

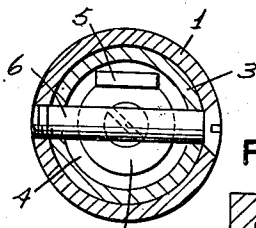


FIG. 6.

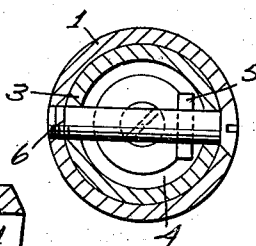


FIG. 8.

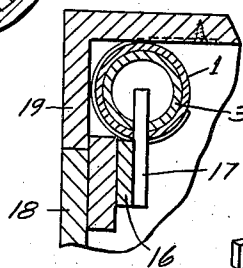


FIG. 7.

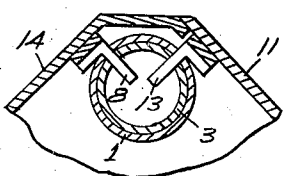
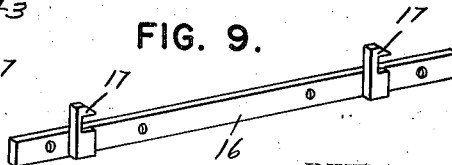


FIG. 9.



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UNITED STATES PATENT OFFICE

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TUBE LOCK

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1 Claim. (Cl. 70-77)

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This invention relates to locks and latches, and more particularly to a device adapted for use on boxes, trunks, cabinet drawers, and the like.

It is an object of the invention to provide a simple latching and locking device which can be readily applied to tool boxes used by mechanics, trunks, file cabinet drawers, and the like.

A further object is the provision of a spring lock having a construction which enables it to be easily attached to boxes, suitcases, trunks, etc., without material alteration.

A further object is the provision of a locking and latching device comprising telescoping tubes provided with means for releasing latching engagement by simply pressing on a cylinder lock in one of the tubes.

These and other objects are attained by the novel construction and arrangement of parts hereinafter described and illustrated by the accompanying drawings, forming a part hereof, and in which:

Fig. 1 is a plan view of the latching and locking device embodying the invention.

Fig. 2 is a sectional view taken on line 2-2 of Fig. 1, showing the device in a latched position.

Fig. 3 is a view similar to Fig. 2, showing the device in an unlatched position.

Fig. 4 is a view showing the device in a locked position.

Fig. 5 is a sectional view taken on line 5-5 of Fig. 2 showing the device in an unlocked position.

Fig. 6 is a similar view showing the device in a locked position.

Fig. 7 shows the application of the device to a mechanic's tool box.

Fig. 8 shows an application of the device to a mechanic's tool box of another shape, or to other boxes, suitcases, cabinet drawers, and the like.

Fig. 9 perspective view of a latch bar used in the device.

Referring to the drawings, the latching and locking device is shown to comprise an outer tube 1, one end of which is closed at 10, and supported on the inside of a wall of a box, or other enclosure to be latched, and the other end open and passing freely through another wall of the box. The outer tube 1 is provided with two or more slots 2 adapted to receive latch hooks 8 and 13. Telescoped in the outer tube 1 is an inner tube 3, closed at 28 and abutting a compression spring 9 which abuts the end 10 of tube 1. The other end of tube 3 is open and has screw threaded therein a cylinder lock 4,

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having a rotatable barrel 15, having a projecting lug 5 adapted to engage a pin 6 fixed in the tube 1 and in a slot 7 in the tube 3. The tube 3 is provided with slots 12 through which the hooks 8 and 13 pass.

As shown in Fig. 7 and Fig. 2, the hooks 8 and 13 are attached at right angles to the walls 14 and 11 of a common type of mechanic's tool box.

In operation, when it is desired to unlatch the device to open the box, the lock 4 is pressed in to force the tub 3 back against the action of the spring 9, thus allowing the hooks 8 and 13 to pass freely through the slots 12 and 2. (See Fig. 3.) Relieving pressure on the lock will allow the spring to return the tube 3 to the position shown in Fig. 2. It will be noted that the lug 5 is in the position shown in Fig. 5, that is, parallel to the pin 6. The device is latched when in the position shown in Fig. 1 and Fig. 2.

When in the position shown in Fig. 1, the device can be locked by using the key 30 to rotate the barrel 15 to place the lug 5 at right angles to the pin 6, which prevents inward movement of the tube 3. The slot 7 also limits movement of the tube 3.

In Figs. 8 and 9, the device is shown applied to a box, file drawer, or the like, in which there is a body 18 having a cover 19. The body 18 has attached thereto by screws or other means, a bar 16, to which are attached hooks 17, parallel to the bar. A locking and latching tube is supported by the cover. The operation is similar to that described above.

The latching and locking device can be used for file cabinets, desk drawers, suitcases, and in many cases, as is obvious. It is simple in structure, positive in operation, and inexpensive to manufacture.

The above description is to be considered as illustrative and not limitative of the invention of which modifications can be made without departing from the spirit and scope of the appended claim.

The invention having been described, what is claimed is:

A latching and locking device for attachment to a first member for securing a second member thereto comprising in combination an outer elongated cylindrical sleeve adapted to be attached to one of the members and having a latch-hook receiving slot therein, an inner sleeve telescopingly slidable within said outer sleeve and having a longitudinal slot, a pin diametrically fixed to said outer sleeve and passing through said longitudinal slot for holding said inner sleeve

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against rotary movement relative to said outer sleeve and for limiting axial sliding movements of said inner sleeve in said outer sleeve, said inner sleeve being provided with a latch-hook receiving slot in the plane of, and adapted to register with, the latch-hook receiving slot in said outer sleeve whereby said latch-hook receiving slots are shifted into and out of register with each other by inward and outward sliding movement, respectively, of said inner sleeve relative to said outer sleeve, a latch hook adapted to be secured to the other of the members, said latch hook being adapted to pass through said latch-hook receiving slots when in register with each other and to be held therein when said slots are moved out of register, spring means between the ends of said sleeves for yieldingly opposing inward movement of the inner sleeve, thereby yieldingly holding said latch-receiving slots out of register with each other and said

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latch means against disengagement from said slots, a cylinder lock having a rotatable barrel and secured to one end of said inner sleeve, a lug secured to the rotatable barrel of said cylinder lock and adapted to be rotated into and out of the plane of said diametrical pin, whereby said inner sleeve is held against inward movement or freed for said movement, respectively.

WILLIAM D. LAUNDER.

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