Feb. 21, 1933. A. O. HOOK 1,898,053

INKWELL

Filed April 7, 1932

Fig. 1

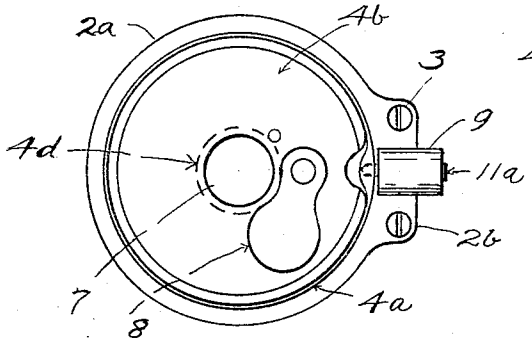


Fig. 2

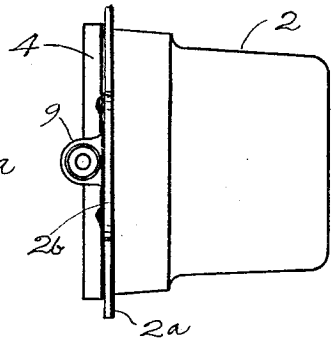


Fig. 3

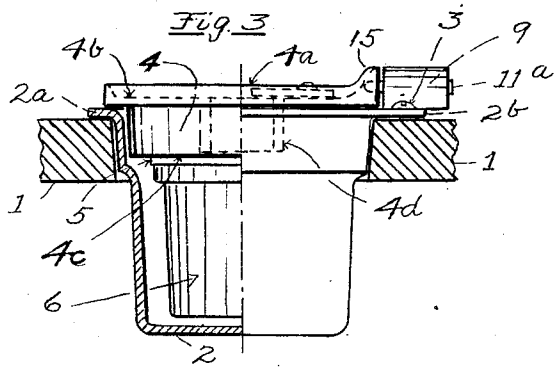


Fig. 4

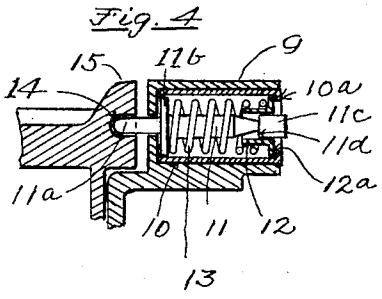


Fig. 5

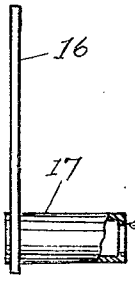
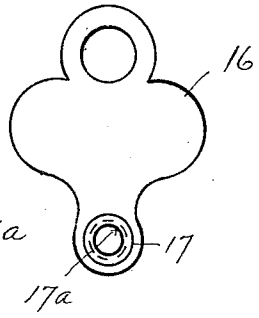


Fig. 6



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UNITED STATES PATENT OFFICE

AUGUSTUS O. HOOK, OF BOSTON, MASSACHUSETTS

INKWELL

Application filed April 7, 1932. Serial No. 603,772.

My invention relates to inkwells adapted to be removably positioned in desks or similar furniture and more especially aims to produce an inkwell intended for use in schoolroom desks, and positioned thereon in an opening provided in the corner of the top board of the desk.

One object of my invention is to provide, as a part of the inkwell, means extending into the interior of the desk and protecting said well from injury or accidental dislodgment through the contact of books or other articles thrust within the desk; another object is to incorporate in the construction of said well locking means for securing the same in its proper position, so as to prevent the removal or displacement thereof by an unauthorized person. A further object is also to provide locking means having incorporated therein certain desirable features of construction calculated to prevent such mischievous activities on the part of the scholars or others, as plugging the key opening by the introduction of chewing gum or other foreign matter.

With the foregoing useful objects in view I have devised an inkwell intended for the purposes above mentioned, and I will now proceed to describe and explain the same with reference to the drawing accompanying this specification and forming part of this application. In said drawing:

Figure 1 is a top view of an inkwell embodying my invention.

Figure 2 is an elevation of the same.

Figure 3 is a side elevation partly in section, showing the ink pot within said container with the locking means forming a part thereof.

Figure 4 is an enlarged view in longitudinal section showing details of the locking device.

Figure 5 is a side view of the key for operating my locking device, partly in section.

Figure 6 is a plan view of the same.

Referring to the drawing: 1 is a portion of the top board of the desk having the inkwell entered through an opening bored therein. The inkwell comprises the cup-shaped container 2 formed with an outwardly turned lip, 2*a*, lying circumferentially around the edge of said opening, and adapted to rest on the upper surface of the top board 1, being secured to said top board, as by the screws 3 passing thorugh a flaring portion, 2*b*, of said lip.

The container 2 surrounds the ink pot which is inserted through the open upper end of the container. Said ink pot in its preferred form comprises a top portion, 4, of metal or of other suitable material formed with a flat upper flange, 4*b*, with a neck portion, 4*c*, projecting downwardly from the under side of the same, and of a diameter sized to fit closely within the open end of the container. Said top flange 4*b* is of sufficiently larger diameter than that of the open end of the container, so that the edge thereof extends over and rests on the lip 2*a* of the container, and thus supports the ink pot. Engaging said neck, 4*c*, as by co-operating threads (not illustrated in the drawing), with a leakage-preventing gasket, 5, between them is the lower portion, 6, of the ink pot, which is made preferably of glass, porcelain or other suitable material. The inkwell top flange is formed with a pen opening, 7, protected by the surrounding skirt 4*d*, together with a sliding cover, 8, carried on said flange, by which said opening can be closed when so desired; and it also is provided with a marginal bead, 4*a*, around its periphery which serves to prevent ink dropped from a dipped pen upon said top from spreading to the adjoining portions of the desk top.

While an ink pot mounted as above described within the surrounding container realizes one object of my invention, to wit, immunity from displacement or upsetting by contact with articles thrust into the interior of the desk by reason of the protection which the container affords, I prefer further to provide means for locking the well to the container to prevent the unauthorized removal of the same therefrom; and with that object in view, I provided the locking means hereinafter described.

On the flaring portion 2*b* of the lip of the container is carried a chamber, 9, with a cylindrical bore, having its axis directed to-

wards the center of the inkwell; said chamber being shown in section by Figure 4. In cases where (as is common) the container is formed of a soft metal, such as lead or an alloy thereof, a longitudinal sleeve, 10, is fitted within said chamber to form a lining therefor; said sleeve being of wear-resisting material and of substantially the same length as said chamber, with the aperture at its outer end slightly reduced in diameter by an inwardly extending lip or internal shoulder, 10*a*.

Within said chamber is the plunger, 11, of which the tip 11*a* is arranged to extend through and project beyond the inner end wall of said chamber (i. e. the end towards the center). A flange, 11*b*, carried on said plunger is arranged to contact with the interior face of said end wall and thereby serves to limit the movement of said plunger and the amount of the projection of said tip 11*a* beyond said end wall. The other, or outer end, 11*c*, of said plunger is located approximately at the outer end of said chamber, and a shoulder, 11*d*, is formed on the plunger shank adjacent to said end by the cutting away of said shank at that point.

A stud, 12, is slidably mounted on said end portion, which stud has a tubular neck, slidingly carried on the shank 11 and a base, 12*a*, slightly less in diameter than that of the bore of said sleeve so as to be slidable lengthwise therein. It is noted that the internal shoulder, 10*a*, at the outer end of said sleeve 10 serves to retain said stud 12 within the same; said shoulder 10*a*, the exposed portion of the base, 12*a*, of said stud, and the outer end, 11*c*, of the plunger on which said stud 12 is carried serving to close the outer open end of said chamber 9. Surrounding the shank of the plunger and interposed between the flange 11*b* and the base 12*a* of the stud 12 is the compression spring, 13, preferably of the spiral type.

In practice the plunger 11, spring 13 and stud 12 are assembled within said sleeve 10 with the base 12*a* of said stud contacting with the lip 10*a* at the end of said sleeve. The sleeve 10 and the parts so assembled therein are then forced into position in said chamber 9 with a tightness of fit which insures that the same will be securely retained therein.

Said spring 13 performs the double function of forcing the base 12*a* of said stud against the lip 10*a* at the outer end of said chamber 9, and thereby closing the same, and at the same time of exerting a force in the other direction which acts upon said flange 11*b* and thereby resiliently forces the plunger 11 and its tip 11*a* towards the center of the inkwell.

The tip 11*a* of said plunger 11 is arranged to engage within a hole or recess 14 formed in the outer edge of an enlargement 15 formed in the marginal bead 4*a* carried on the top portion of the inkwell. As the well is inserted within the container the tip 11*a* is caused to be forced back into the chamber against the spring 13 but snaps into the recess 14 through the pressure of the spring as said recess 14 comes into alignment with the plunger tip 11*a*. When so interengaged the ink pot 6 is locked into the container 2 and cannot be removed therefrom except by unlocking the same through the withdrawal of the plunger tip from the recess. This is effected by means of a special key of the type shown in Figures 5 and 6. Said key comprises a handle-part 16 to which is attached preferably at a right angle, for greater convenience in operation, a tubular portion 17 having an outside diameter small enough to permit it to pass through the aperture formed by the internal shoulder 10*a* at the outer end of the sleeve 10, and an inner diameter enabling it to be readily passed over the end 11*c* of the plunger shank 11. An internal ridge, 17*a*, is provided near the open end of said tubular portion of said key which is adapted to engage the shoulder 11*d* formed near the end 11*c* of the shank 11.

In practice the end of the tubular portion 17 of said key is slipped over the exposed end 11*a* of the plunger shank, at the same time being pressed inwardly so as to forceably slide the stud 12 back until the projection 17*a* at the end of said tubular portion engages said shoulder 11*d* on the plunger; thereby gripping the same so that an outward pull on the key retracts the plunger 11 with it sufficiently to withdraw the tip portion 11*a* from the recess 11*b* in the enlargement of the marginal bead carried on the inkwell top, thereby releasing the ink pot so that it may be removed from the container.

Having described my invention what I claim and desire to secure by Letters Patent is:

1. In an inkwell embodying a container and inkpot removably inserted therein, a device for locking said pot against removal from the container which consists of a spring-operated latch carried by the container and adapted to engage said pot in its locking position.

2. A locking device for inkwells and the like embodying a container and an inkpot removably inserted therein, said locking device being adapted for locking said pot within the container and comprising a radially movable plunger mounted on the container and having its inner end adapted in its locking position to engage said pot, and resilient means arranged to yieldingly force said plunger into its locking position.

3. A locking device for inkwells and the like embodying a container and an inkpot removably inserted therein, said locking device being adapted for locking said pot within the container and comprising a chamber mounted on the container and having a

plunger slidably carried therein, said plunger having an exposed end portion lying adjacent said pot and adapted in its locking position to engage the same, and means adapted yieldingly to force said plunger into locking position.

4. A locking device for inkwells and the like embodying a container and an inkpot removably inserted therein, said locking device being adapted for locking said pot within the container and comprising a chamber carried on said container having a radially extending internal bore and an open outer end, a plunger longitudinally slidable in said chamber and having an exposed end portion lying adjacent to said pot and in its locking position adapted to engage the same, the other end of said plunger being shaped to engage a co-operating key, a stud slidably carried on said shaped end of the plunger and normally positioned within said chamber adjacent its outer end, said stud being also longitudinally movable with respect to said chamber and being retained therein by an inwardly extending lip provided at such open end, and a spring interposed between said plunger and said stud operating simultaneously yieldingly to force said plunger into its locking position and said stud toward the open end of said chamber against said lip at the open end of said chamber.

5. For inkwells and the like embodying a container and an inkpot removably inserted therein, a locking device for interlocking said pot and container comprising a chamber mounted on said container and having an open end, a plunger slidably mounted in said chamber and having an end extending through the closed end of said chamber, said end being positioned adjacent the inkpot and being arranged to engage the same, said plunger being provided with a key-engaging shoulder near its other and outer end, a stud slidably carried on said outer end of the plunger and longitudinally movable in the open end of said chamber, and being retained therein by an inwardly extending lip located at such open end, a spring encircling said plunger and being under compression with one end bearing on said plunger and the other end on said stud whereby said spring operates simultaneously to impel said plunger into its locking position and forcibly to hold said stud in contact with said cylinder-end lip, and a key adapted to force said stud against said spring into said chamber so that said key may engage said shoulder and retract said plunger outwardly to effect its disengagement from said pot, and to permit the removal of the same.

6. For inkwells and the like embodying a container and an inkpot removably inserted therein, a locking device for inter-locking said pot and container embodying a chamber carried upon the container and having an open outer end provided with a stud-retaining lip, a slidably mounted plunger within said chamber having one end arranged in its locking position to engage said pot and having a key-engaging shoulder formed thereon near its other end, a stud located within said chamber encircling said plunger and longitudinally movable with respect thereto and to said chamber, a spring lying within said chamber and encircling said plunger, said spring being held under compression with one end bearing on the plunger and the other end upon said stud and operating simultaneously to impel said plunger into its locking position and to hold said stud against said retaining lip, the outer end of said plunger and said shoulder being located substantially within the bore of said stud in the locking position of the plunger, said stud being slidable inwardly in said chamber from pressure of operating key to permit said key to engage said shoulder for retracting the plunger, and thereby to release said inkpot for removal.

AUGUSTUS O. HOOK.