Feb. 5, 1929. 1,700,744

T. E. MURRAY, JR

SEALING DEVICE

Filed June 24, 1924 2 Sheets-Sheet 1

Fig. 1.

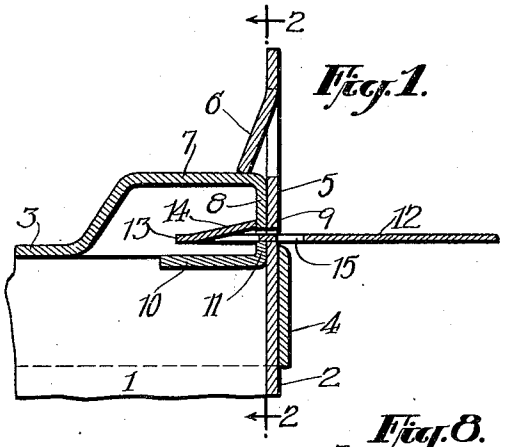


Fig. 2.

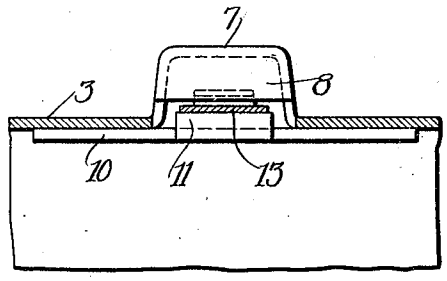


Fig. 3.

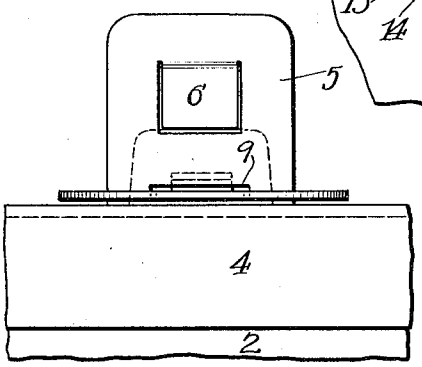


Fig. 8.

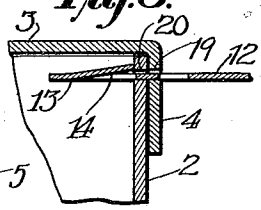


Fig. 4.

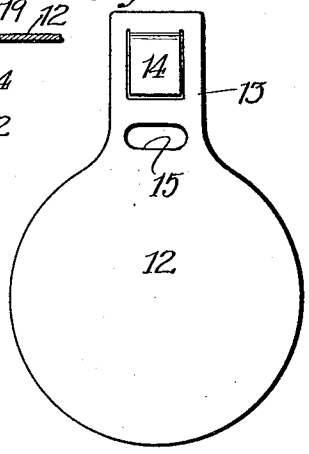


Fig. 5.

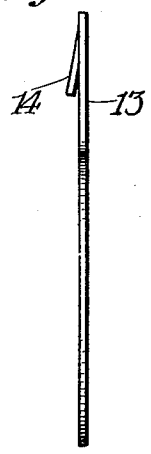


Fig. 6.

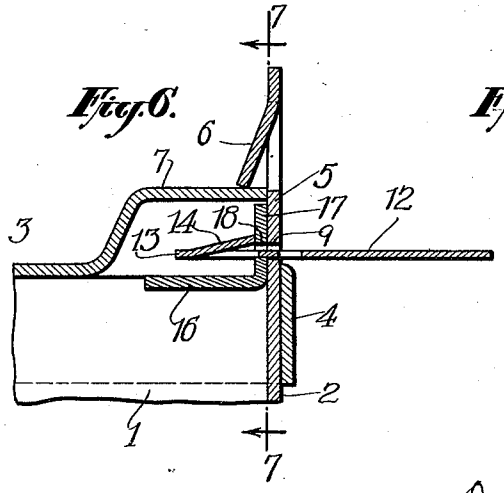
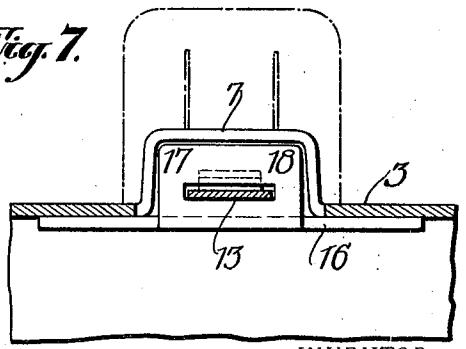


Fig. 7.



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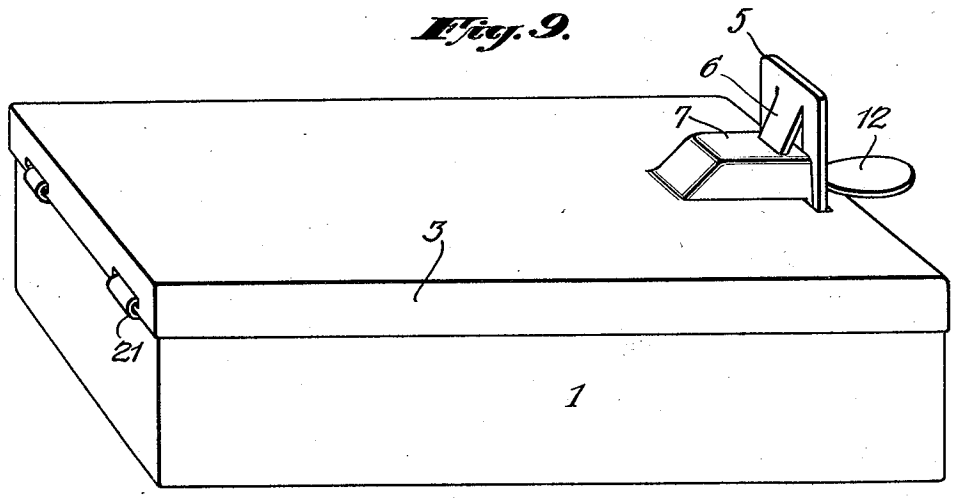
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Fig. 9.



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Patented Feb. 5, 1929. 1,700,744

UNITED STATES PATENT OFFICE.

THOMAS E. MURRAY, JR., OF BROOKLYN, NEW YORK.

SEALING DEVICE.

Application filed June 24, 1924. Serial No. 722,074.

My invention aims to provide an improved seal particularly useful for boxes which carry switches and fuse mechanisms controlling the admission of current to users of electricity.

The invention is applicable, however, to the sealing of boxes or covers for a great variety of apparatus.

The accompanying drawings illustrate embodiments of the invention.

Fig. 1 is a longitudinal section;

Fig. 2 is a vertical transverse section on the line 2—2 of Fig. 1;

Fig. 3 is an end elevation of the seal applied to the cover of a sheet metal box;

Fig. 4 is a plan and Fig. 5 a side view of the seal proper;

Figs. 6 and 7 are respectively a longitudinal section and a cross-section on the line 7—7 of Fig. 6 illustrating a modification.

Fig. 8 is a longitudinal section of another form.

Fig. 9 is a perspective view of the complete box, closed.

Referring to the embodiments of the invention illustrated the box has side walls 1 and end walls 2 and a cover 3 with a flange 4 fitting around the top of the sides and ends. It may be hinged or otherwise fastened at the end opposite that which is to be sealed. Only the sealed end is illustrated. The end wall 2 has a portion 5 projecting up through a slot in the cover. This projection has a pawl 6 cut out on three sides and bent back to form a spring catch to hold the cover down so that the seal may be easily inserted and will not be strained or broken except when the pawl 6 is pressed back and an effort is made to lift the cover. The cover of sheet metal is stamped to form a raised portion 7 with which the pawl 6 co-operates and which serves also to form a chamber to receive the end of the seal. The metal is bent down also to form an end portion 8 bearing against the projection 5 of the end wall of the box. This portion 8 terminates a slight distance above the top of the box cover 3. There is also a slot 9 through the portion 5 of the end wall and located just above the cover. Fastened on the inside of the cover is a plate 10 having a flange 11 extending up to about the top of the cover and in line with the part 8 so as to leave between the two a slot similar to the slot 9 in the end wall.

The seal comprises a wide outer end 12 with an inner end 13 narrow enough and thin enough to be pushed easily through the slot 9 and having a spring finger 14 bent up from it. The two parts of the seal are connected by a neck which is preferably of reduced cross-sections so that it may be easily broken; the reduction in cross-section being effected by punching the metal out to form an opening 15.

The box being closed and held down by the pawl 6, the narrow end of the seal is pushed in through the slot 9 until the finger 14 springs up into engagement against the inner side of the wall 8. The cover cannot now be lifted clear of the sides of the box, even though the outside spring finger 6 be pressed back, without breaking the seal. The end wall of the cover has to be moved up past the end wall of the box and this cannot be done as long as the seal passes through the two walls referred to; or indeed as long as a part of the cover or a part attached to the cover engages the underside of the seal. When the box is to be opened by an authorized person he can easily bend up the outer part of the seal and break the latter across the reduced neck and push the narrow end into the box. The recess formed by the raised portion 7 of the cover has to be made long enough to permit the broken end of the seal to be pushed in.

These boxes are usually stamped out of sheet metal. The modification in shape of the parts illustrated is adapted also for economical stamping from sheet metal. And the seal likewise is a simple sheet metal stamping which can be easily broken by bending it back and forth.

A modified construction of the end of the cover is illustrated in Fig. 6. Here the plate 16 which is united to the inside of the cover (by welding, riveting or otherwise) has a flange 17 extending up past the slot 9 in the projection 5 of the end wall of the box, the flange 17 having a slot 18 therein corresponding to and registering with the slot 9. The part of the flange 17 above the slot might be omitted, the spring finger 14 bearing directly against the part 5, but it is preferable to have (17) or an equivalent part of the cover in order to make it more difficult to tamper with the seal.

In boxes of this character it has heretofore been the practice to provide apertured projections on the outside through which a wire was passed, the ends of the wire being

brought together under a lead seal. To open such a box both the wire and the seal were destroyed.

The seal of my present invention is a matter of very trifling cost, much less than that of the previous combinations of wire and seal. There are also certain advantages, in the prevention of thievery of current, in having special seals which are fitted only for certain boxes. This is, in a considerable measure, true of the present invention because the seal is made of a width and thickness, as well as length, to especially adapt it to boxes made with a certain size of slots and of recesses within the cover, so as to substantially fill the slots and prevent the introduction of a wire through the slots after sealing.

The raised portion 7 of the cover is advantageous in leaving, when the seal is in place, more unobstructed room in the box proper for wires and other parts. This scheme also lessens the chance of the sealing hasps getting tangled with or into contact with the electric wires, and the plate 10 serves a similar purpose.

However, the invention is useful also in sealing boxes without the special provisions referred to. Fig. 8 illustrates a simple box and cover with a flange 4 of the cover coming down over the end wall 2 of the box and with registering slots 19 and 20 in the overlapping parts, through which the shank 13 of the sealing hasp can be passed until the spring finger 14 thereof locks against the inner face of the wall of the box.

Fig. 9 shows the complete box. The cover 3 has its flange overlying the body 1 and is fastened at the rear end by ordinary hinges 21. The pawl 6 presses on the raised portion 7 of the cover which forms the chamber into which the end of the seal projects when it is inserted in the position shown in this figure.

Though I have described with great particularity of detail certain embodiments of my invention, yet it is not to be understood therefrom that the invention is restricted to the particular embodiments disclosed. Various modifications thereof may be made by those skilled in the art without departure from the invention as defined in the following claims.

What I claim is:

1. The combination with the overlapping slotted portions of a box and cover of a seal adapted to be inserted through said slot and to be automatically caught and held in sealing position, said seal comprising a flat piece of easily breakable sheet metal, the outer portion of which can be broken off and the inner portion of which can then be pushed inward beyond sealing position, and means for preventing its being pushed inward beyond sealing position when the outer portion is not broken off.

2. A sealing hasp made of a single integral flat piece of easily breakable sheet metal having an inner portion with a locking member thereon and an outer portion which prevents the moving of the remainder beyond the sealing position and which can be broken off to permit such movement.

3. The sealing hasp of claim 2 having a weakened intermediate portion.

4. The combination with the overlapping slotted portions of a box and cover of a seal adapted to be inserted through said slot and to be automatically caught and held in sealing position, said seal comprising a piece of easily breakable material, the outer portion of which can be broken off and the inner portion of which can then be pushed inward beyond sealing position and means for preventing its being pushed inward beyond sealing position when the outer portion is not broken off.

5. A sealing hasp made of a single integral piece of easily breakable material having an inner portion with a locking member thereon and an outer portion which prevents the moving of the remainder beyond the sealing position and which can be broken off to permit such moving.

In witness whereof, I have hereunto signed my name.

THOMAS E. MURRAY, JR.