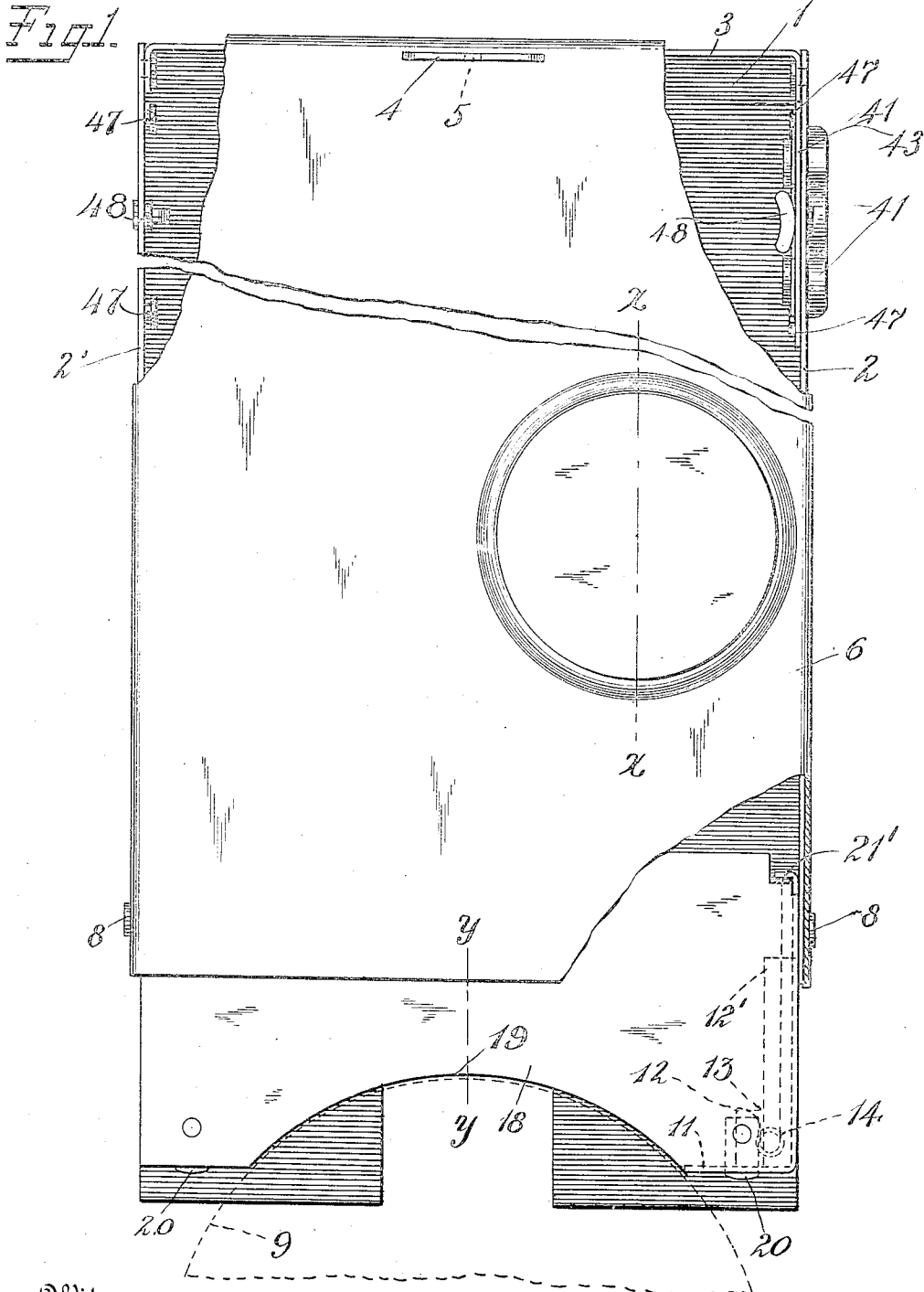


G. E. PALMER.
CASE FOR METER CONNECTION BLOCKS.
APPLICATION FILED OCT. 11, 1911.

1,028,268.

Patented June 4, 1912.

4 SHEETS—SHEET 1.



Witnesses:
Fred H. M. Eamunfelsen
Chas. A. Reed

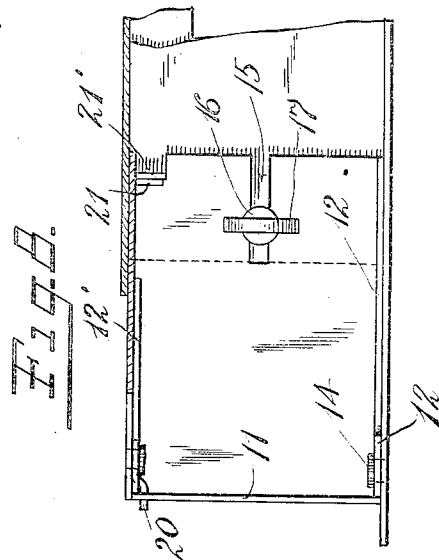
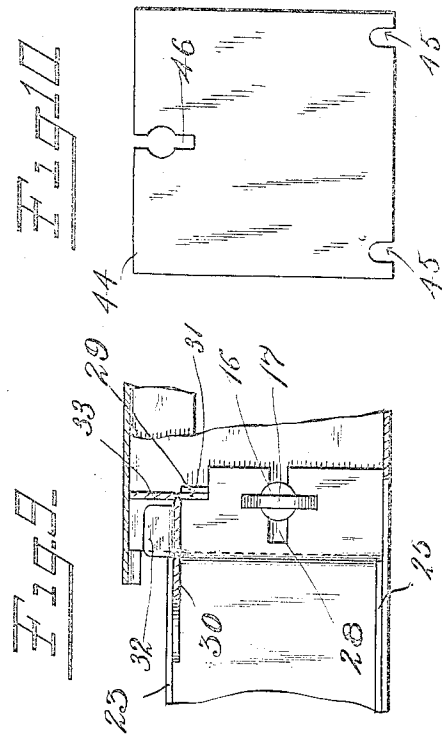
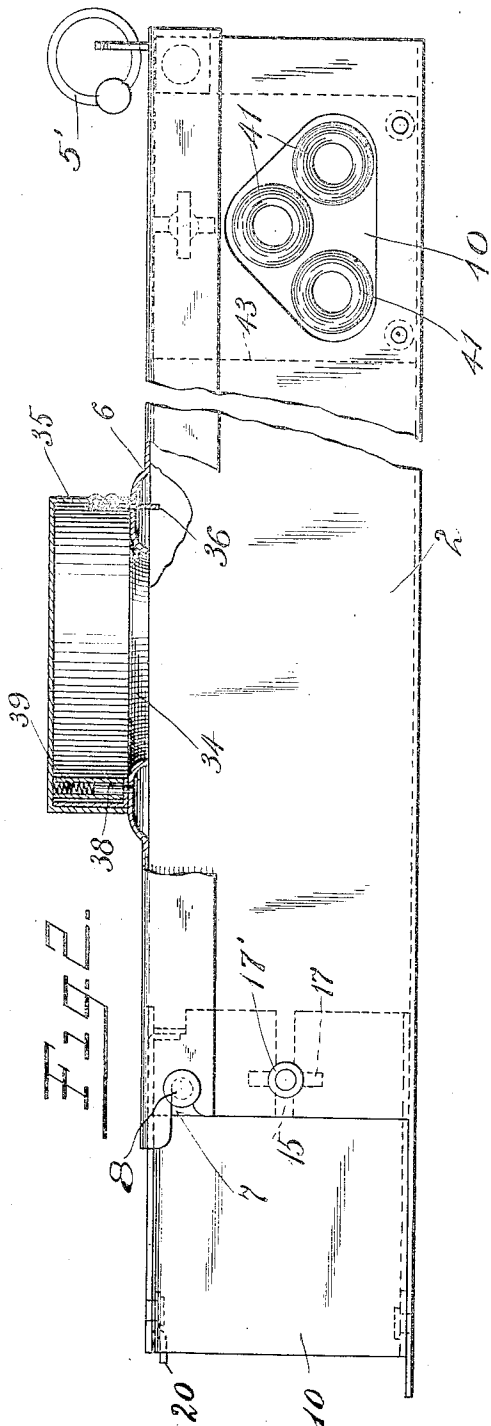
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4 SHEETS-SHEET 2.



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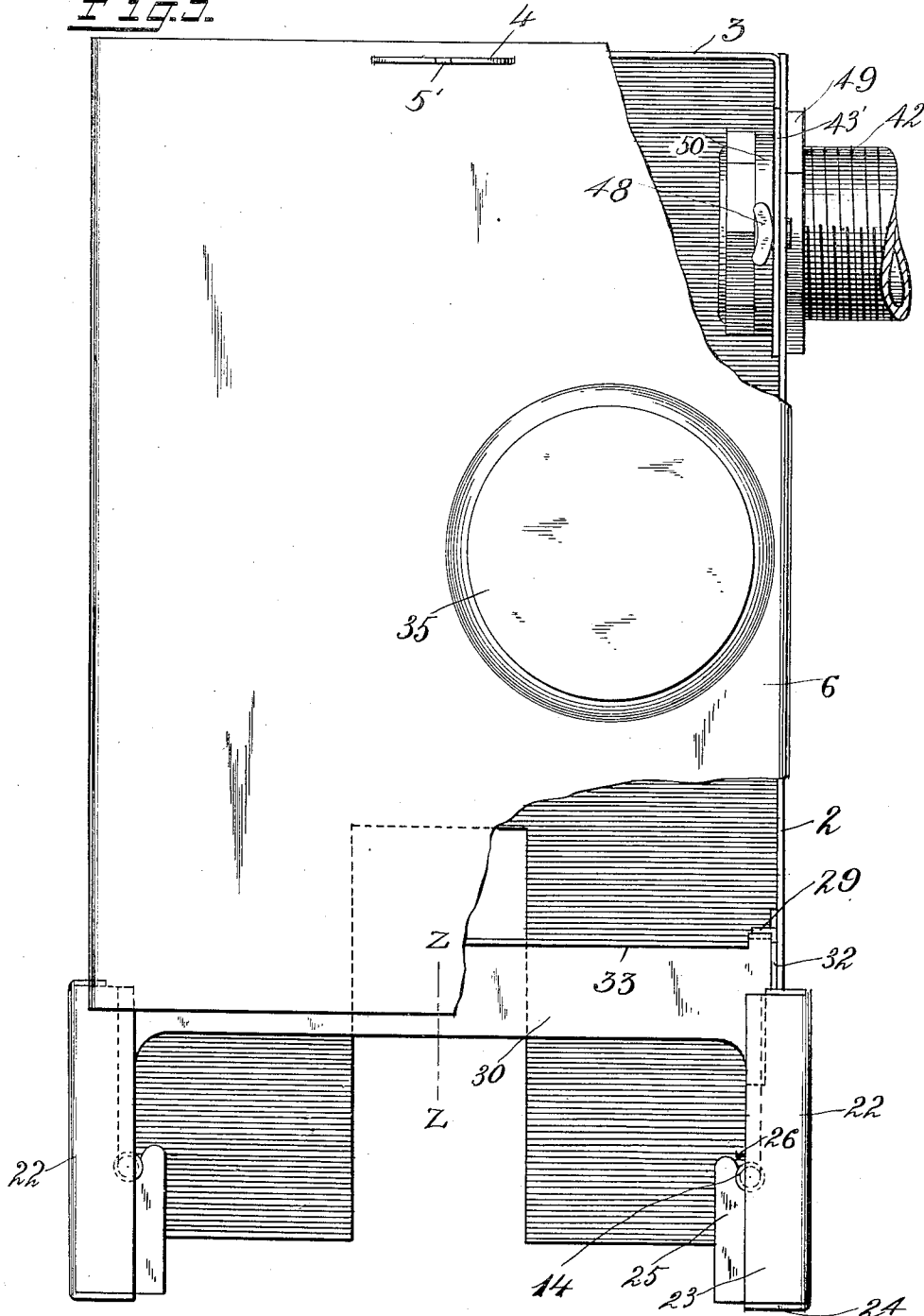
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4 SHEETS—SHEET 3.

Fig. 3.



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4 SHEETS—SHEET 4.

Fig. 4.

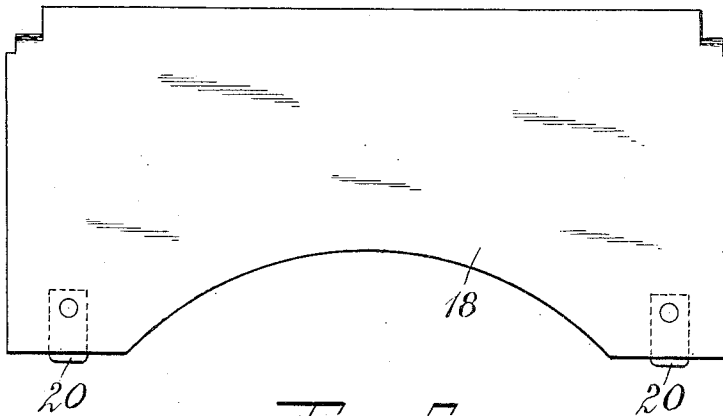


Fig. 5.

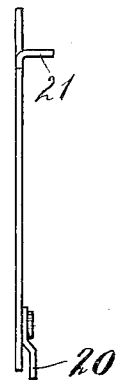


Fig. 6.

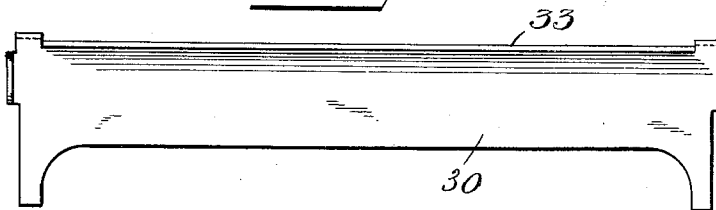


Fig. 7.

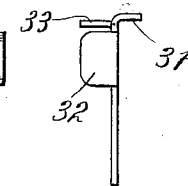


Fig. 11.

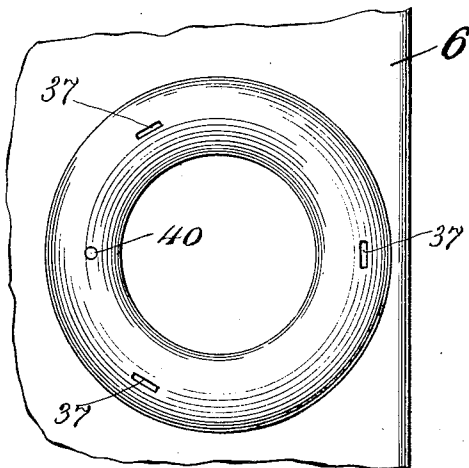


Fig. 12.

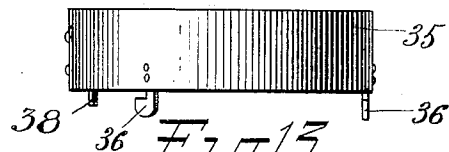
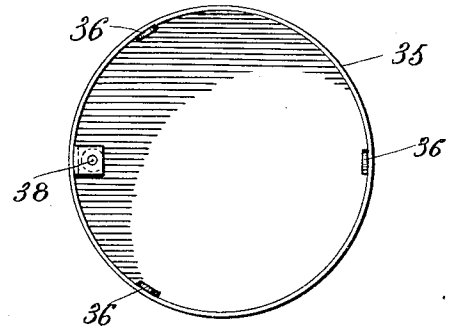


Fig. 13.



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UNITED STATES PATENT OFFICE.

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CASE FOR METER CONNECTION-BLOCKS.

1,028,268.

Specification of Letters Patent.

Patented June 4, 1912.

Application filed October 11, 1911. Serial No. 654,073.

To all whom it may concern:

Be it known that I, GRANVILLE E. PALMER, a citizen of the United States, residing at Hartford, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Cases for Meter Connection-Blocks, of which the following is a full, clear, and exact description.

My invention relates to protective boxes for meter connection blocks and has for its object to provide a box adaptable to meters of different types.

In the accompanying drawings, Figure 1 shows a front elevation of the box with certain portions of the cover broken away. Fig. 2 is a side elevation of the same with a portion of the cover and opening covering means in section on the line $x-x$, Fig. 1. Fig. 3 is a front elevation of the box with other removable adapting portions substituted so as to adapt it to another type of meter and to the conduit. Fig. 4 is a front elevation of the front adapter plate of Fig. 1. Fig. 5 is a side elevation of the same. Fig. 6 is a front elevation of the adapter plate, Fig. 3. Fig. 7 is a side elevation of the same. Fig. 8 is a section of the lower portion of the box of Fig. 1 on the line $y-y$, Fig. 1. Fig. 9 is a section of the lower portion of the box of Fig. 3 on the line $z-z$, Fig. 3. Fig. 10 is a detail showing a blank plate for closing the conduit or conductor opening of the box. Fig. 11 is a detail showing the switch opening in the cover of the box. Fig. 12 is a detail showing the side elevation and means for closing this opening. Fig. 13 is a detail showing a bottom plan view of the closing means of Fig. 12.

Referring more particularly to the drawings, 1 is a sheet metal box having a bottom and three sides 2-2' and 3 connected thereto. The side 3 has a tang 4 provided with an opening 5 through which a seal 5' can be passed.

6 is a cover having three rearwardly projecting edges and also an opening through which the tang 4 passes, two of the projecting edges being on the sides of the cover and one along the top thereof. The projecting edges which are on the sides of the cover have notches 7 which surround the shanks of studs 8 carried by the lateral sides 2-2' of the casing. These studs preferably have enlarged heads. The cover can be re-

moved by lifting the upper end above the tang 4, and then pulling the cover upward until the studs 8 are disengaged from the notches 7, whereupon the box is opened. It is placed in position by first causing the notches 7 to engage the studs 8 and then forcing the upper end to the rear so that the tang 4 passes through the opening in the cover, whereupon it can be secured into position by passing the seal 5' through the opening 5 in the tang.

In order to adapt the box to a meter having a circular form, indicated in dotted lines at 9, Fig. 1, I provide adapter pieces or plates 10 having inward projections 11 at their lower ends. These adapter pieces at their rear sides have inwardly projecting flanges 12 which are provided with notches 13 which engage the shanks of studs 14 carried by an extended rear wall of the box. The upper ends of the plates 10 have a notch 15, Fig. 8, which, in one portion thereof, is enlarged so as to receive the cylindrical shank 16 of the turn-button 17 secured to the lateral wall of the box at 17', the diameter of the shank 16 being greater than the thickness of the head 17. This side plate 10 can be secured to the body of the box by first causing the notch 13 to engage with the stud 14, and thereafter causing the slot 15 to pass over the head of the turn-button 17 and then turning the turn-button 17 through an angle of 90°, to the position shown in Fig. 8.

The head of the turn-button prevents any lateral movement of the plate 10, and the cylindrical shank 16 of the turn-button prevents any vertical movement of the plate 10. The plate 10 is, therefore, securely locked in position. After the plates 10 have been thus secured to each of the lower sides of the box, a front or cover extension adapter plate 18 is placed in position. This front adapter plate has at its lower end a cut-away portion 19 conforming to the shape of the meter installed. It is provided with two downwardly extending tangs 20 which pass through openings in the portions 11 of the plates 10. It is also provided at its upper end with rearwardly extending projections 21, which, after the projections 20 have been passed through the portions 11, can be forced rearwardly below projections 21' on the plates 10 which hold the plate 18 against any vertical movement. After the plates 10

and 18 have been placed in position in this way, the cover 6 is then applied and sealed, whereupon all the parts are firmly locked in position. Flanges 12' are formed on the outer edges of the parts 10 to assist in supporting the plate 18.

In wiring the meter, the parts 6, 10 and 18 may all be removed so that ready access can be had to the connection block and also to the conductors leading from the meter so that wiring is greatly facilitated. After the wiring is completed, plates 10 are first placed in position, then plate 18 and then plate 6, which latter plate is thereafter secured by a single seal.

In order to adapt the box to a meter of another type, I provide side extension adapter pieces 22, which have projecting flanges 23 and 24 for engaging the sides of the meter, and an inwardly projecting flange 25 provided with a recess 26 engaging the shank of the stud 14 carried by the rear extended wall of the box. The adapter piece 22 is provided with a slot 28 similar to the slot 15 which engages the turn-button 17 so that stud 14 and the turn-button 17 serve to hold the extension plate 22 in position in the same manner as plate 10 was held. This extension member also has an inwardly projecting portion 29 similar to the portion 21' on the plate 10.

30 is a front or cover extension adapter plate used with the adapter plates 22 for adapting the box to a meter of substantially rectangular form. This adapter plate has downward projections 31 which pass below the projections 29 to prevent the plate 30 from being moved vertically upward and has projections 32 which engage portions of the plate 22 so as to prevent the plate 30 from being moved vertically downward. It also has a projection 33 which engages the cover 6 and closes the opening which would otherwise be present. In this form of adapter also the side pieces 22 and the adapter 30, together with the cover 6, are all removed for the purposes of connecting up the meter. After the meter is connected up, the side pieces 22 are placed in position as described. The front adapter plate 30 is then placed in position, its lower ends being first tucked between the flanges 23, and its upper end being then pushed to the rear until the projections 31 are beneath the projections 29. The cover 6 is then placed in position and sealed, whereupon all the parts are sealed against removal.

When a rotary switch for controlling circuit to the meter is also inclosed in the box, it is desirable to provide means for operating the same by the usual rotary handle. To this end I provide an opening 34 in the cover and a cap 35 for said opening. Said cap is provided with three hooks 36 all pointing in the same direction, which enter

slots 37 in the cover 6, as shown in Fig. 2. When the hooks 36 are passed through said slots 37, and the cap is turned clockwise, said cap is retained in position. In order to prevent its removal, I provide a bolt 38 which is pressed out by a spring 39. This bolt 38 enters a hole 40 when the cap 35 is rotated clockwise so that the hooks 36 engage the sides of the openings 37. The cap therefore is securely locked in position and can only be removed by removing the cover 6, that is, after breaking the seal securing the cover. After the cover is removed the bolt 38 can be easily retracted by any pointed instrument so that the cap 35 can be removed from the cover. The cover 6 can then be replaced with the cap 35 removed, leaving the switch opening 34 uncovered so as to be easily accessible.

For the introduction of the conductors I provide openings 40 in the box at suitable points. These openings are triangular in their general configuration so as to permit the protruding of three insulating bushings 41, in the angles thereof, or of a large conduit 42 as desired. The insulating bushings 41 are carried by a plate 43 preferably of rectangular form, as indicated in dotted lines in Fig. 2. This plate may be removed and replaced by a blank plate 44 shown in detail, Fig. 10. Both plates are provided with recesses 45 at their lower ends and with a slot 46 similar to the slot 15, heretofore described. The recesses 45 pass beneath the heads of studs 47 secured to the wall of the box, and the slot 46 passes over the head of the turn-button 48, similar to 17, which, when turned, acts in the same manner as the turn-button 17, preventing the plate from being forced inwardly and its cylindrical shank preventing any forward movement of the plates secured. When the plate 44, shown in Fig. 10, is inserted, the opening is securely closed. The turn-button 48 is of such dimensions that the cover 6, which in position, prevents it from being turned completely around so that even if its stud extends outside the box, the plates 43 or 44 cannot be removed, because the turn-button 48 cannot be turned sufficiently to release the upper portion of the plate.

The conduit 42 is carried by a plate 43' similar to the plate 43, being secured thereto by nuts 49 and 50. The plates 43-43' and 44 are therefore interchangeable for adapting the box for flexible conductors, conduits, or for sealing the ports.

What I claim is:

1. A protective device for meter connection blocks, comprising a box having lateral projections and a tang with a removable cover therefor, side extension adapter pieces, means for securing said side adapter pieces removably to said box, a cover extension adapter piece having means for securing

it removably in position, and a cover having recesses engaging said projections on said box at points adjacent to said side extension pieces and a seal for said cover engaging said tang on said box at the other end of said box said cover extending partially over said cover extension adapter piece.

2. A protective device for meter connection blocks, comprising a box, a removable cover therefor, an opening in said cover, a cap for said opening, hooked projections carried by said cap adapted to engage the inner side of said cover, and means for locking said cover against circumferential movement when said hooks engage said inner side.

3. A protective device for meter connection blocks, comprising a box, a removable cover therefor, an opening in said cover, a cap for said opening, hooked projections carried by said cap adapted to engage the inner side of said cover, a spring-pressed bolt carried by said cover adapted to enter a hole in said cover when said hooks engage the inner surface of said cover.

4. In combination with a meter casing, a

box having an open end wherein said meter casing enters partly to close the same, and in said end a detachable frame secured to said box and cooperating with said meter casing to complete the closure of said end.

5. In combination with a meter casing, a box having an open end wherein said meter casing enters partly to close the same, and in said end a detachable frame comprising side plates and an adapter plate thereon and secured thereto, the said adapter plate having its outer edge recessed to fit against the periphery of said meter casing.

6. In combination with a meter casing, a box having an open end wherein said meter casing enters partly to close the same, and in said end a detachable frame comprising side plates and an adapter plate thereon and secured thereto, the said adapter plate having its outer edge recessed to fit against the periphery of said meter casing, a cover for said box engaging said adapter plate, and means for locking said cover in place.

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Witnesses:

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FLORENCE L. CLAUSSEN.