This invention relates to latch mechanism for holding the covers of boxes closed and has for its object a particularly simple and efficient latch mechanism particularly adapted for use in connection with iron or metal conduit outlet boxes or boxes containing electrical appliances as fuses and the like.

This invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a plan view of a box embodying my invention, the cover being shown as swung open.

Figure 2 is an end view, partly broken away, of the parts seen in Figure 1.

1 designates the box which may be of any suitable form, size and construction. 2 is the cover hinged at 3 to the box. The box is here illustrated as particularly adapted to house fuses or other appliances mounted upon a base of insulation, which, in turn, is mounted upon a base plate 4 in the bottom of the box.

The latch mechanism comprises a latch member located on the inner face of the cover 2 and having a handle on the outside of the cover and a latch member on the inner side of the cover, the latch member being movable about an axis and a spring in the form of a loop fixed at one end to the inner face of the box and pressing at its other end against the latch member, the point of attachment of the spring and the cover being arranged in the path of the portion of the latch member to which the spring is attached.

5 is the latch member here shown as including a radial portion and an angular portion 6, the radial portion lying adjacent to the cover and the angular portion 6 being arranged to extend into the box in order to interlock with a lug 7 provided on one side of the box. The latch member 5 is preferably mounted upon a rock shaft 8 extending through and suitably supported by the cover, it having a handle or knob 9 at its outer end, which thrusts against the upper face of the cover and said shaft at its inner end extending through an opening in the latch member 5. The latch member lies adjacent a raised surface 9 on the inner face 55 of the cover.

10 is a spring in the form of a loop fixed at one end to the stud 11 on the inner face of the cover and having its other end formed with a slot or opening for receiving a tongue 60 or arm 12 on the latch member 5, this tongue extending in a circumferential direction about the axis of the latch and rearwardly with respect to the closing movement of the latch. The stud 11 is arranged in the arc 65 movement of the arm 12, so as to limit the opening movement of the latch 5 and prevent straining of the spring. Overthrow of the latch is prevented by the latch coming in contact at 13 with the inner face of the 70 downturned margin 14 of the cover.

A suitable key operated lock mechanism 15 may be provided on the inner face of the cover and operated by a key 16 insertable on the outer face of the cover, this lock mechanism 15 comprising a bolt movable into the path of the latch when it is in locking position. When the cover is closed, the latch member or the angular end thereof latches into a locking engagement with the 80 lug 7 on the box.

This latch mechanism consists of a minimum member of simple parts and, owing to the arrangement of the spring and the latch member, the breakage of the spring is prevented in the normal use of the latch.

What I claim is:

1. A combination with a box having a movable cover, of a latch mechanism comprising a rock shaft extending through the cover and having a handle at its outer end, the latch member including a radial portion mounted on the inner end of the rock shaft and an angular portion arranged to extend into the box and a spring acting on the radial portion of said member, the angular portion being in the form of a latch head and the box having a shoulder for coating with said latch head.

2. A combination with a box having a movable cover, of a latch comprising a rock shaft extending through the cover and having a handle at its outer end, the latch member including a radial portion mounted on the inner end of the rock shaft and an angular portion arranged to extend into the box, the radial portion being formed with an arm extending in a circumferential direction.
around the axis of the rock shaft and a spring in the form of a loop fixed at one end to a cover and having an opening at the other end for receiving the arm.

3. A combination with a box having a movable cover of a latch comprising a rock shaft extending through the cover having a handle at its outer end, the latch member including a radial portion mounted on the inner end of the rock shaft and an angular portion arranged to extend into the box, the radial portion being formed with an arm extending in a circumferential direction around the axis of the shaft and a spring in the form of a loop fixed at one end to a cover and having an opening at the other end for receiving the arm, the point of attachment of the spring and the cover being arranged in the path of the arm.

In testimony whereof, I have hereunto signed my name, at Syracuse, in the county of Onondaga, and State of New York this 9th day of October, 1928.

CARL H. BISSELL.