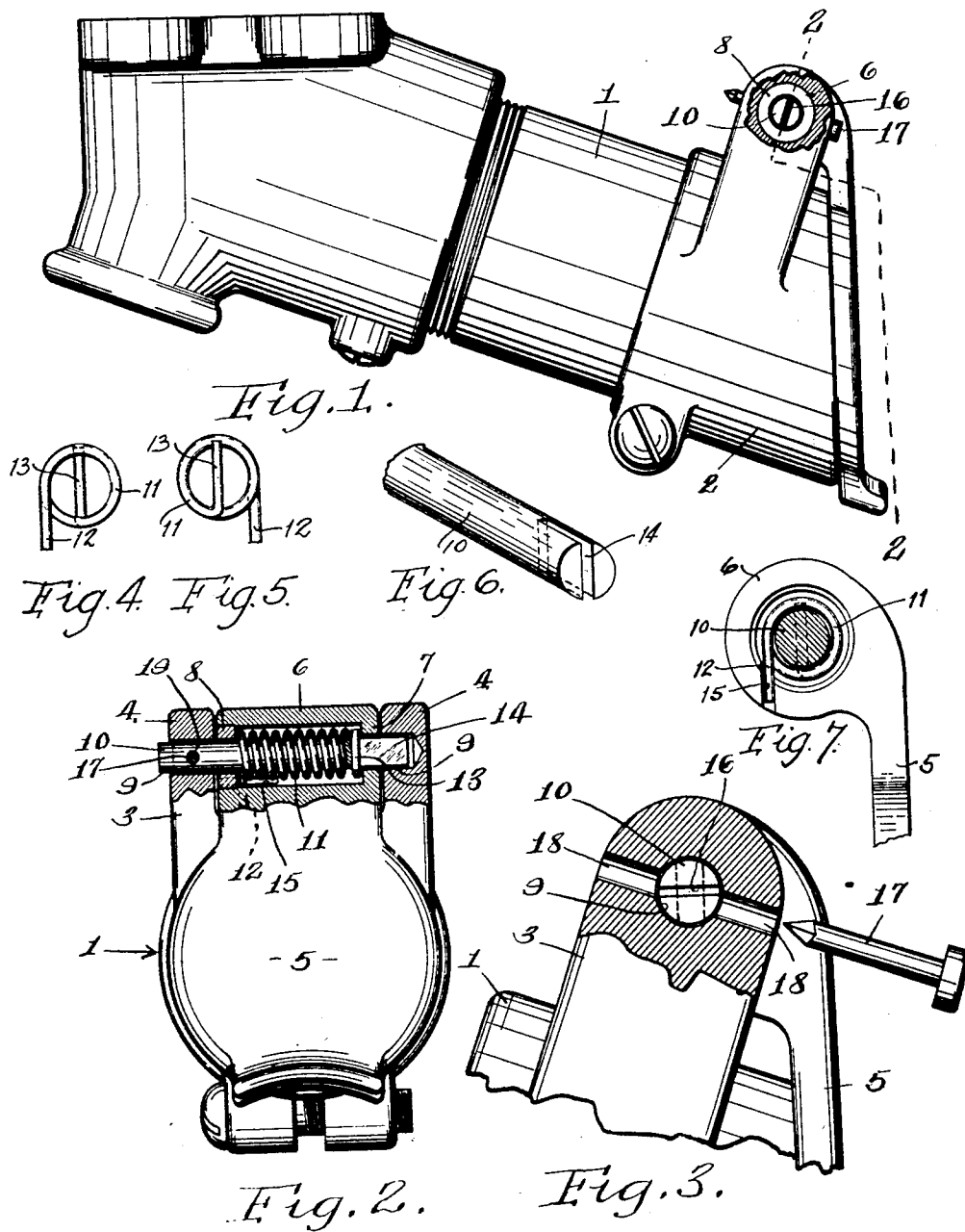


F. J. MANTEL.
 SPRING BARREL CONSTRUCTION.
 APPLICATION FILED SEPT. 7, 1918.

1,387,794.

Patented Aug. 16, 1921.



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UNITED STATES PATENT OFFICE.

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SPRING-BARREL CONSTRUCTION.

1,387,794.

Specification of Letters Patent. Patented Aug. 16, 1921.

Application filed September 7, 1918. Serial No. 252,993.

To all whom it may concern:

Be it known that I, FLORIAN J. MANTEL, a citizen of the United States, and a resident of Syracuse, in the county of Onondaga and State of New York, have invented a certain new and useful Spring-Barrel Construction, of which the following is a specification.

This invention has for its object a particularly simple and efficient weather tight spring barrel construction, particularly applicable for covers of conduit outlet boxes and other appliances which are exposed to the elements, and the 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 side elevation, partly in section of a plug socket provided with my invention.

Fig. 2 is a sectional view partly in elevation taken on the plane of line 2—2, Fig. 1.

Fig. 3 is an enlarged fragmentary view, partly in section, illustrating the means for locking the spindle or hinge pin of the cover from rotation.

Figs. 4 and 5 are opposite end elevations of the spring.

Fig. 6 is a perspective view of the hinge pin.

Fig. 7 is a fragmentary view showing in end elevation the left end of the barrel looking to the right in Fig. 2, the washer or closure at this end of the barrel being omitted.

1 designates a plug receptacle which may be of any suitable form, size and construction, it including a substantially circular box 2 having one end open for the entrance of a plug and also having supports 3 on the outside thereof and at one side of the entrance opening, these supports being here shown as lugs 4 rising from the upper portion of the box 2.

5 is a closure for the entrance opening, the closure being formed with a barrel 6 located between the supports 3 and having its ends contiguous to said supports. The barrel is formed at one end with an internal annular wall 7 and the other end is closed by a disk 8, the wall 7 and disk 8 being

formed with openings alined with bearings 55 for the spindle or hinge pin 10.

11 is a spring located in the barrel 6 and coiled about the pin or spindle 10 and having one end anchored or secured to the spindle and its other end anchored or secured to the barrel and pressing thereon in such direction as to close the cover 5.

As here shown, the spring 11 is detachably secured at its opposite ends to the spindle or hinge pin 10 and to the barrel 6 by means arranged to come into interlocking engagement during axial movement of the spindle 10 into the barrel through the spring and by the movement of the spring into the barrel.

The spring 11 is provided with radially extending arms 12, 13 at its opposite ends and the spindle is formed with a slot 14 opening through its advance end for receiving the arm 13. The barrel 6 is formed with a slot 15 opening through the end thereof at which the disk or plug 8 is located for receiving the arm 12.

The outer end of the spindle 10 is shaped to receive a tool for turning the same and as here shown it is formed with a diametrically extending slot 16 for receiving a screw driver.

The spindle or pin 10 is held from turning movement by a locking pin 17 extending through alined passages 18 and 19 extending radially through one of the bearings 4 and the portion of the spindle or pin 11 in said bearing.

In operation, the cover 5 is placed so that the barrel 6 with spring 11 and disk 8 therein is between the bearings 4. During the movement of the spring into the barrel, the arm 12 thereof slides in the slot 15 in the barrel and anchors the spring to the barrel.

The spindle or hinge pin 10 is then passed through the lugs 4, disk 8, the spring 11 and the barrel 6. The arm 13 of the spring enters the slot 14 of the spindle 10 during such movement of the spindle and hence anchors the spring 11 to the spindle.

The pin or spindle is then turned to tension the spring and when the desired tension is obtained the locking pin 17 is placed through the alined passages 18, 19.

What I claim is:

1. The combination of a pair of bearings spaced apart, a spring barrel located be-

tween the bearings and formed with a slot opening through one end thereof, a spring located in the barrel and having an arm at one end for entering the slot as the spring moves in the barrel and thereby anchoring one end of the spring to the barrel, the spring also having an arm at its other end, and a spindle extending through the bearings, the barrel and the spring therein, and having a slot opening through its ends for receiving the last mentioned arm of the spring during axial movement of the spindle through the spring and thereby anchoring the spring to the spindle, substantially as and for the purpose specified.

2. The combination of a pair of bearings spaced apart, a spring barrel mounted between the bearings, a disk closing one open end of the barrel and having an opening for a spindle, the barrel being also formed with a lengthwise slot in the wall thereof, the slot opening through the edge at the same end of the barrel at which the disk is located, a spring located in the barrel and having arms at its opposite ends, one arm extending into said slot, and a spindle having its ends mounted in the bearings and extending axially through the spring and the barrel, the advance end portion of the spindle being formed with a slot opening through the periphery of the spindle and through the end thereof, for receiving the other arm of the spring as the spindle moves axially into the barrel, substantially as and for the purposes set forth.

3. The combination of a pair of supports spaced apart, a spring barrel arranged between the supports, a cylindrical coiled spring located in the barrel, a hinge pin mounted in the supports, the barrel and the spring, the spring and barrel having means for interlocking during axial movement of the spring into the barrel, and the spindle and spring having means for interlocking during axial movement of the spindle through the spring, the portion of the spindle in one of the supports and said support being formed with transverse open-

ings arranged to be brought into alinement during rotation of the spindle, and a locking pin extending through the aligned passages, substantially as and for the purpose specified.

4. The combination of a pair of bearings spaced apart, a spring barrel located between the bearings and formed with a slot opening through one end thereof, a spring located in the barrel and having an arm at one end for entering the slot as the spring moves in the barrel and thereby anchoring one end of the spring to the barrel, the spring also having an arm at its other end, a spindle extending through the bearings, the barrel and the spring therein, and having a slot opening through its advance end for receiving the last mentioned arm of the spring during axial movement of the spindle through the spring, and means extending through one end of the spindle and the adjacent bearing for holding the spindle from turning, substantially as and for the purpose set forth.

5. The combination of a box having an opening, a pair of bearings on the outside of the box at one side of said opening, a cover for the opening having a barrel located between the bearings and being closed at one end, a disk closing the other end of the barrel, the closed end and the disk being formed with openings alined with the bearings for receiving a spindle, a spring located in the barrel and being movable thereinto through the end provided with a disk, a spindle movable through the bearings, the barrel and the spring, the barrel and the spring having means for interlocking during axial movement of the spring into the barrel, and the spindle and the spring having means for interlocking during movement of the spindle into the barrel, substantially as and for the purpose described.

In testimony whereof I have hereunto signed my name, at Syracuse, in the county of Onondaga, and State of New York, this 28th day of August, 1918.

FLORIAN J. MANTEL.