C. E. TYLER.

ROAD BOX COVER.

APPLICATION FILED MAR. 12, 1914.

1,165,044. Patented Dec. 21, 1915.

Fig. 1.

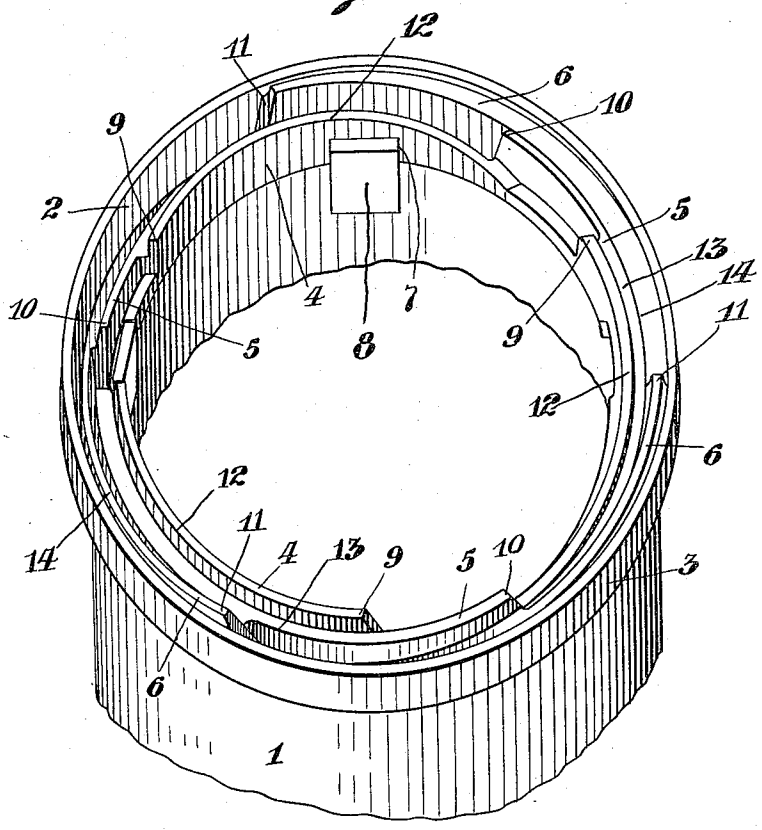
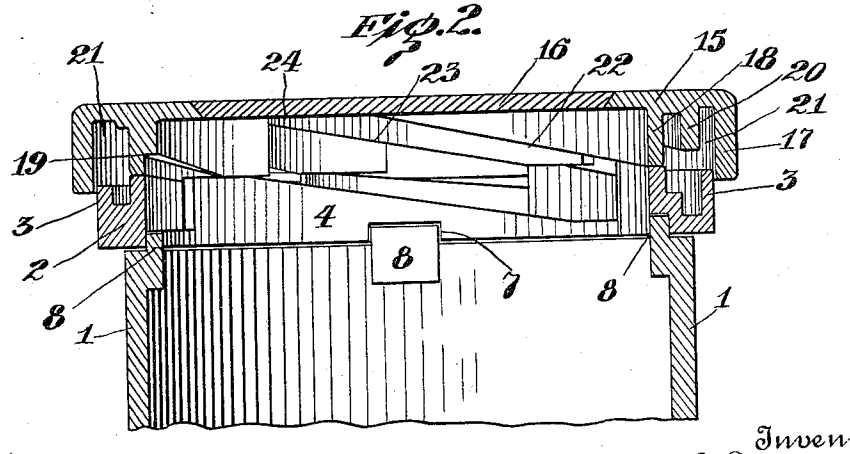


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

CLARENCE E. TYLER, OF NEWARK, NEW JERSEY, ASSIGNOR TO S. E. T. VALVE & HYDRANT COMPANY, OF NEW YORK, N. Y.

ROAD-BOX COVER.

1,165,044. Specification of Letters Patent. Patented Dec. 21, 1915.

Original application filed April 28, 1913, Serial No. 764,145. Divided and this application filed March 12, 1914. Serial No. 824,306.

To all whom it may concern:

Be it known that I, CLARENCE E. TYLER, a citizen of the United States, and resident of Newark, in the county of Essex and State of New Jersey, have invented an Improvement in Road-Box Covers, of which the following is a specification.

The present application for Letters Patent is a division of an original application, Serial Number 764,145, filed April 28th, 1913, and it refers generally to curb or roadway boxes, giving access to the valves of water distributing pipes or to underground electric circuits. These boxes are necessarily provided with covers and, while the roadway boxes themselves may be adjusted to the varying depths, at which the mains are located and so take care of the more extensive variations between the top of the boxes and the surrounding road surface, slight variations are usually taken care of by the box covers themselves, as shown in U. S. Letters Patent No. 638,692.

It is the purpose of the present invention to provide a roadway box cover simple of construction and most efficient in operation, by means of which slight variations in height can accurately be adjusted within the smallest fraction of an inch.

An additional feature of the invention consists in the provision of means for preventing access of surface water to the interior of the box.

The invention is illustrated in the accompanying drawing in which—

Figure 1, represents a perspective view of the cover frame of the box cover, as secured to the top of a roadway box and Fig. 2, a central vertical cross section of the assembled box cover.

The cylindrical side walls of the roadway box 1, support the cover frame 2, the latter comprising an outer continuous circular flange 3, an inner flange 4, and a set of intermediate flanges 5 and 6, located between the outer and inner flange and concentric thereto. The lower edge of the inner flange is provided with recesses 7, for receiving corresponding lugs 8, of the upper edge of the side walls of the roadway box and adapted to prevent rotation of the cover frame relatively to the box. Each of the flanges 4, 5 and 6, consists of a number of saw tooth shaped members, the flange of the teeth 9, the flange 5 of similar teeth 10, and the flange 6, of the teeth 11. Each tooth is formed of a relatively long incline 12, 13 and 14, respectively, and the tooth points of each flange are staggered relatively to those of the adjoining flanges, *i. e.* they are located in different radii.

The cover top 15, is provided with a suitable opening, giving access to the roadway box and is normally closed by the cover plate 16. The cover top is provided with an outer continuous circular flange 17, an inner flange 18, and intermediate flanges 19 and 20. The flanges 18, 19 and 20, are separated from the outer flange 17, by an annular groove 21. Each of these flanges, except the outer one, is formed with saw teeth, similar to those of the flanges 4, 5 and 6, of the cover frame, each saw tooth comprising an incline 22, 23 and 24, respectively.

The cover top is placed on the cover frame so that its outer flange overhangs the outer flange of the frame, acting as an efficient apron to lead off the rain or other surface water which might be capable of entering the box. The inclines of the saw teeth of the box cover rest upon and engage with the corresponding inclines of the saw teeth of the stationary cover frame, and in rotating the former, an axial and vertical displacement of the same takes place which is utilized in adjusting the small variations in level between the top of the cover and the surrounding road surface, should such variation there be.

It is old in the art to provide the upper and lower sections of a curb box with single flanges divided into teeth for the purpose of adjustably supporting the one upon the other, but it is thought to be broadly new to employ a plurality of concentric flanges, and having the teeth formed by the inclines of one flange, staggered relatively to those of an adjoining flange.

Claims:

1. The combination in a roadway box cover with a cover frame, of a cover top, a series of sets of concentric inclines on said cover frame, a series of sets of corresponding inclines on said cover top, the inclines of one set being staggered in relation to those of an adjacent set, and being adapted to cause axial displacement of said cover top on the rotation thereof.

2. The combination in a roadway box cover with a cover frame, of a cover top, a series of sets of concentric circular inclines on said cover frame, and a series of sets of corresponding inclines on said cover top engaging the inclines of said cover frame whereby an axial displacement of said cover top is caused when the same is rotated.

3. The combination in a roadway box cover with a cover frame, of a cover top, a series of sets of concentric circular inclines on said cover frame, and a series of sets of corresponding inclines on said cover top engaging the inclines of said cover frame, the inclines of one set being staggered relatively to those of an adjacent set, whereby an axial displacement of said cover top is caused when the same is rotated.

4. The combination in a roadway box cover with a cover frame, of a cover top, a series of sets of concentric circular inclines on said cover top, a series of sets of corresponding inclines on said cover top engaging the inclines of said cover frame, a continuous outer flange on said cover top, a continuous outer flange on said cover frame, and an annular groove on said cover top adjacent to said continuous outer flange thereon and adapted to engage the continuous flange of said cover frame.

Signed at New York, in the county and State of New York, this 18th day of February, 1914.

CLARENCE E. TYLER.

In presence of—
J. K. MACDONALD,
E. S. MACDONALD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."