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MANHOLE EXTENSION

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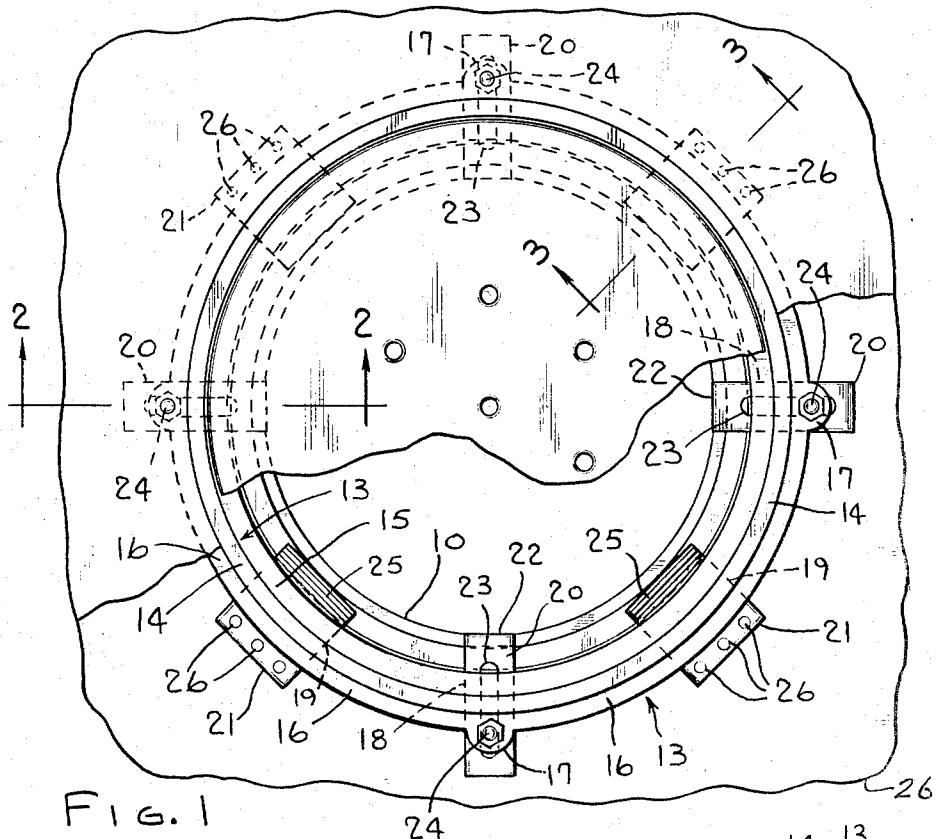


FIG. 1

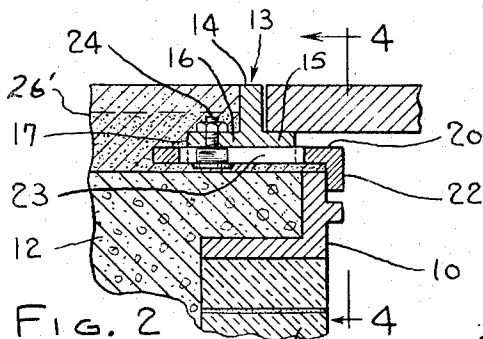


FIG. 2

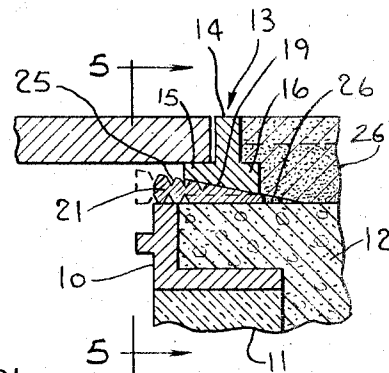


FIG. 3

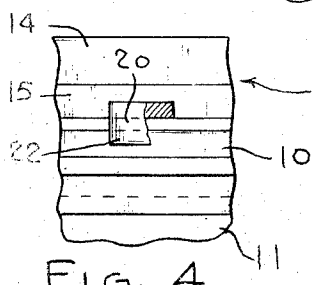


FIG. 4

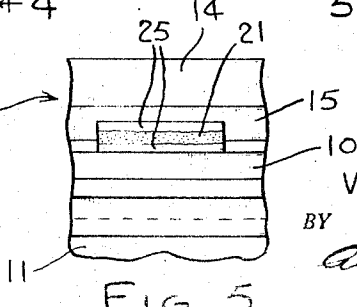


FIG. 5

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1

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MANHOLE EXTENSION

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4 Claims. (Cl. 94—34)

This invention relates to extension rings for street manholes.

It frequently becomes necessary to raise the level of a street and when this is done considerable delay and expense is occasioned by extending the manhole upwardly so as to adjust to the new street level. It is usually the practice to break out the top ring of the old manhole and brick up the manhole to a suitable height and position a new top ring. Thereafter, a considerable length of time is allowed to pass in order that the new bricked-up portion can set to a proper degree of security and thereafter the top layer of the street is added. This top layer is usually what is known as bituminous concrete though any other material may be used. This top layer has to be level with the new top level of the manhole. It is further apparent that in order to secure the proper leveling of the new top ring of the manhole with the new surface of the street that a considerable amount of additional work is required during the bricking-up of the old manhole.

This invention is designed to overcome the above noted defects and objects of this invention are to provide a novel manhole construction with particular reference to a novel extension ring construction for a manhole so as to eliminate the loss of time occasioned by the previous practice, on the one hand and so as to materially reduce the expense on the other hand.

In greater detail, objects of this invention are to provide an extension ring for a street manhole which is so constructed that it is not necessary to break out the top of the old manhole and build it up and thereafter position a new ring but in which the old top ring of the manhole is utilized and the extension ring is so made that it coacts with the old top ring of the manhole so that it might be locked in place in a permanent manner without requiring the breaking away of any portion of the old manhole and which is so made that it may be easily adjusted to the desired new street level whether the surface of the street is horizontal or slightly slanted as sometimes happens.

Further objects are to provide a construction which can be very readily made and which is cheap to manufacture.

An embodiment of the invention is shown in the accompanying drawings in which:

Figure 1 is a plan view of a manhole construction with the extension ring in place and with parts broken away.

Figure 2 is a sectional view on the line 2—2 of Figure 1.

Figure 3 is a sectional view on the line 3—3 of Figure 1.

Figure 4 is a fragmentary side view looking in the direction indicated by the line 4—4 of Figure 2.

Figure 5 is a fragmentary side view looking in the direction indicated by the line 5—5 of Figure 3.

Referring to the drawings it will be seen that the top ring of the old manhole is indicated by the reference character 10. This top ring is supported by brick work or concrete work indicated by the reference character 11

2

and the concrete of the old road surface is indicated by the reference character 12. The extension ring is indicated generally by the reference character 13 and comprises an up-standing annular flange 14 and an inwardly projecting annular flange 15 and an outwardly projecting annular flange 16 which is equipped with apertured tongues 17.

This extension ring is provided with a plurality of radial slots such as indicated by the reference characters 18 and 19. The slots 18 slidably receive locking clips or clamping members 20 and the slots 19 receive adjusting wedges 21. The side walls of the slots 18 and 19 prevent lateral shifting of the locking clips or clamping members 20 and the wedges 21, respectively. The clips or clamping members 20 are provided with downwardly extending lips or fingers 22, see Figure 2, which are positioned inside of the top ring 10 of the old manhole and thus clamp or hold the new top ring 13 in place against horizontal shifting. The amount of vertical lift or adjustment of the new ring or extension ring is determined by the vertical length of the lips 22 of the clamping members for it is apparent that the amount of lift or vertical adjustment of the new or extension ring cannot be greater than the vertical length of the lips 22 of the clamping members so that they always will be within the inner surface of the old ring 10 and will extend downwardly below the upper surface thereof. These clamping members 20 are provided with elongated slots 23 which receive the square portion of inverted carriage bolts 24 and thus prevent the bolts from turning. The carriage bolts 24 extend through apertures in the lips 17 of the extension ring 13 as shown in Figures 1 and 2.

The adjusting tapered wedges 21 fit within the slots 19 as previously described and it is preferable to have the upper surface of the slots 19 slightly slanting to conform to the slant of the wedges as shown in Figure 3. These wedges are cast iron or other readily breakable metal and are provided with a plurality of transverse grooves 25, as shown in Figure 3, so that the end of the wedge may be broken off, as shown in Figure 3, after the wedge has been driven into place. These wedges are preferably provided with holes 26 through which the bituminous concrete indicated by the reference character 26' may pass thus forming locking tongues to resist longitudinal shifting of the wedges, though wedges will stay in place very well indeed even without these holes. The holes actually add to the security of the positioning of the wedge.

It will be seen from the drawing, particularly, Figures 2 and 3, that after the extension ring has been positioned and after the top surface of the extension ring has been made to coincide with the top surface of the new street surfacing that the bituminous cement may be readily positioned and rolled into place in the customary manner without any loss of time whatsoever. It is the usual practice to form the bituminous cement in two layers, the top one of which is the finer grained or outer surface layer though this feature forms no portion of the present invention.

It will be seen that a very cheap and easily produced construction has been provided which may be employed wherever a street surface is raised above the surface of the old manhole without loss of time and with a minimum of effort.

Although this invention has been described in considerable detail, it is to be understood that such description is intended as illustrative rather than limiting, as the invention may be variously embodied and is to be interpreted as claimed.

I claim:

1. A manhole extension for positioning above the top ring of a street manhole comprising an extension ring

3

having an inner flange and having a plurality of circumferentially spaced radial slots, clamping members slidably positioned within said slots and each having a downwardly projecting lip for gripping the inner surface of the top ring of the manhole to thereby position the extension ring, means for locking the clamping members to the extension ring, and wedges positioned beneath the extension ring to adjust the height of the extension ring, said extension ring having means cooperating with said wedges to hold said wedges against lateral shifting.

2. A manhole extension for positioning above the top ring of a street manhole comprising an extension ring having an inner flange and a plurality of radial slots formed in the under portion thereof, clamping members slidably positioned within said slots and each having an elongated slot therein, a bolt extending through the elongated slot of each clamping member and through an outer portion of the extension ring, a nut screwed on said bolt for locking the clamping member in place, the clamping members each having a downwardly projecting lip at its inner end for gripping the inner surfaces of the top ring of the manhole to thereby position and lock the extension ring in place, and a cover for the manhole arranged to rest upon the inner flange of the extension ring.

3. A manhole extension for positioning above the top ring of a street manhole comprising an extension ring having an inner flange and having a plurality of radial slots on its underside, clamping members slidably positioned within certain of said slots and each having a downwardly projecting lip for gripping the inner surfaces of the top ring of the manhole, means for locking the

4

clamping members to the extension ring, a plurality of wedges positioned in the remaining slots of said extension ring, and a manhole cover fitting within the extension ring and resting upon the inner flange of said extension ring.

4. A manhole construction utilizing an old manhole having a top ring, said manhole construction comprising an extension ring positioned above the old ring of the manhole, said extension ring having an inner flange and having a plurality of radial slots on its underside, clamping members slidably positioned within certain of said slots and each having a downwardly projecting lip gripping the inner surfaces of the top ring of the manhole, means for securing the clamping members to the extension ring in adjusted position, wedges slidably positioned within the remaining slots of said extension ring and slidable on the upper edge of the top ring and having breakage end portions on their inner ends and holes through their outer end portions, the outer end portions of said wedges projecting beyond the outer periphery of said manhole extension ring, an upper layer of street surfacing material arranged flush with the upper surface of the extension ring and projecting through the holes of said wedges, and a manhole cover supported by the inner flange of said extension ring.

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