

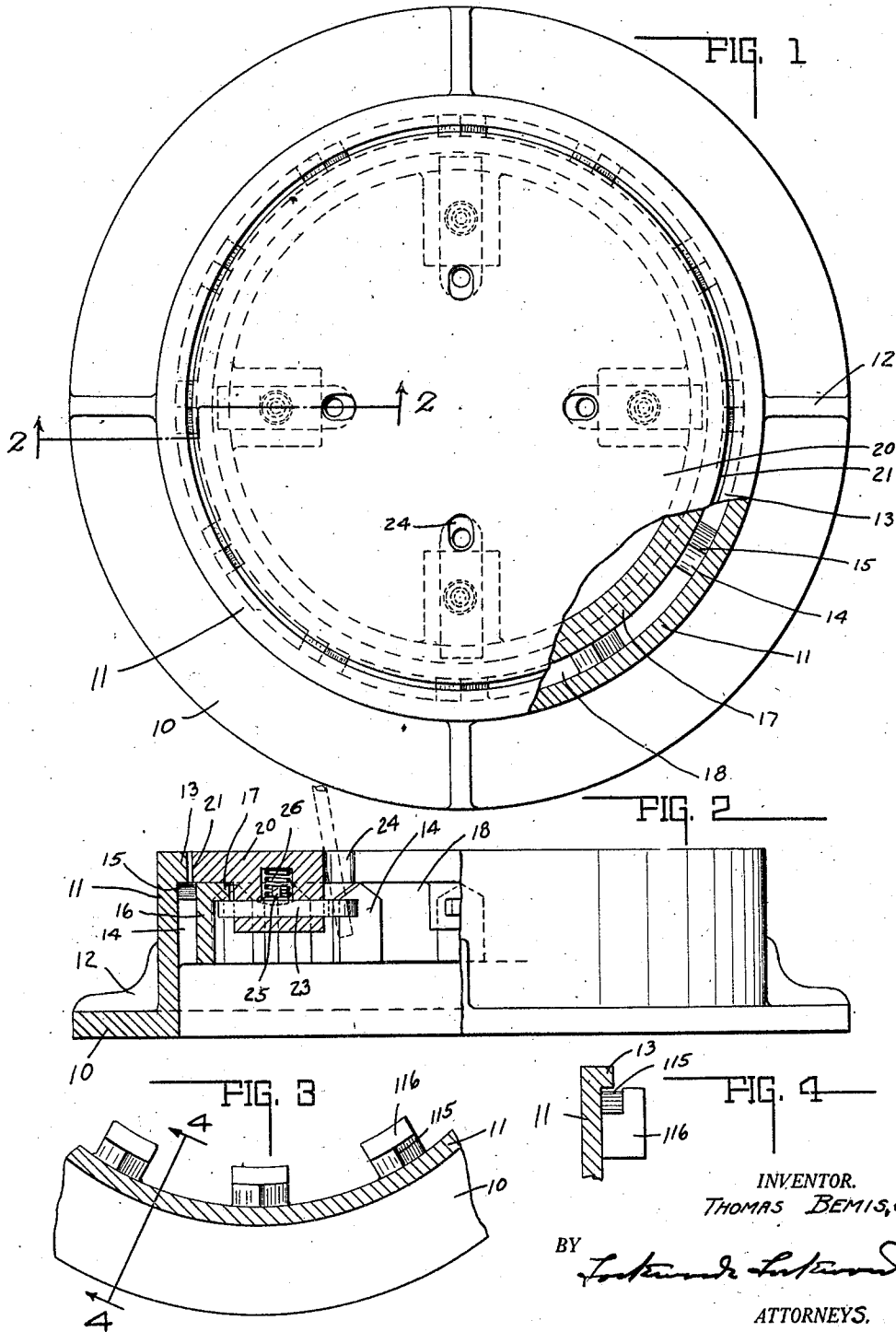
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MANHOLE COVER

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MANHOLE COVER.

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This invention relates to a manhole cover, of the character employed in streets, sidewalks and the like and subject to support traffic which may pass thereover.

5 The main object of the invention is to provide a cover of this type which will at all times lie firmly and securely upon its base and be locked thereto. The principal difficulty heretofore had with manhole covers 10 has been in the casting of the base support wherein irregularities, particularly in the seating of the cover on the base has caused it to wobble and vibrate upon the passage of traffic thereover, resulting not only in noise, 15 but the wearing and breaking thereof. Furthermore, the structures heretofore employed have been such as to accumulate dirt and stones in the crevices or corners of the supporting base in such fashion as to prevent 20 the proper seating of the cover thereon. This likewise served to cause rattle and vibration with the result of wear and breakage upon the passage of traffic thereover.

The main feature of the invention resides 25 in the means of support for the cover wherein it is spaced inwardly from the outer periphery thereof, leaving openings adjacent the periphery through which dirt, water and the like may readily pass, and also eliminate 30 the irregular contacts of the peripheral edge of the cover due to irregularities of casting in the cover and support. By means of this arrangement a proper seat is provided for the cover and there will be no corners or 35 pockets in which water and dirt will accumulate.

Furthermore, water will pass there- 40 through rather than accumulate upon the seat and cause the lid to be frozen thereto in the winter.

Another feature resides in the latching 45 means for locking the cover to the base support, which latching means will be held in locking position against vibration, but which will be readily accessible for unlatching 50 thereof and the removal of the cover plate.

The full nature of the invention will be understood from the following description and claims and the accompanying drawings:

50 In the drawings, Figure 1 is a plan view looking down on the manhole cover with a portion thereof broken away. Fig. 2 is a side elevation of the manhole cover showing

a portion thereof in central vertical cross section. Fig. 3 is a modified form of a portion 55 of the supporting rim of the cover support showing a plan view thereof. Fig. 4 is a section taken on the line 4-4 of Fig. 3.

In the drawings there is shown a manhole cover comprising an annular base support 10 60 provided with an upwardly extending annular flanged portion 11 braced by the angle braces 12, all of which are cast integral. The flanged portion 11 is provided with an inwardly extending lip portion 13 about the 65 upper annular edge thereof, and immediately below which and slightly spaced from the underside are positioned a plurality of lugs 14. Said lugs are arranged at intervals 70 about the periphery of the flanged portion 11 and are cast integral therewith. The upper portion of each of said lugs is tapered and brought to a pointed edge 15, which edge is slightly spaced from the underside 75 of the lip portion 13, as shown in Fig. 2. The thickness of each of said lugs is such that it extends inwardly beyond the lip 13, said pointed lugs extending about the inner 80 periphery of the flange 11 carry an inner supporting ring 16 having formed on the upper edge thereof an inwardly extending lip 17. The supporting ring 16 is cast integral with the lugs 14, so that the effect there- 85 of is such that the entire pointed structure provides a supporting seat for the cover, the seat having formed therein a plurality of open spaces or passageways 18.

The cover lid 20 is of annular formation and of substantially the same thickness as 90 the lip 13, the diameter thereof being slightly less than the inside diameter of the lip 13 so that when it is seated on the support, the adjacent edges of the lip and cover are slightly spaced from each other, as 95 shown at 21. By means of this arrangement, it will be observed, as shown in Fig. 2, that the annular space between the cover and support lies immediately above the pointed or beveled lugs 14 and the inter- 100 mediate spaces or passageways 18, so that any dirt, stones or the like passing between the lip and cover through the space 21 will readily drop through the passageways 18, so that there will be no accumulation thereof 105 to cause any irregularity in the seating of the cover. It will further be observed that

the cover is entirely supported within and spaced from the inner periphery of the base support by the supporting ring 17.

5 The underside of the cover is provided with a plurality of radially extending latching means comprising the sliding bolts 23, slidably supported therein in position to engage under the lip 17 of the supporting ring so as to prevent the removal of the cover 10 when said bolt is moved to latching position. For normally maintaining the bolt in latching position, it is provided with a recess on the upper surface thereof into which a plunger 25 is forced under tension 15 of a spring 26 seated in a suitable recess in the underside of said cover. The outer ends of each of said bolts are provided with openings adapted to coincide with elongated openings 24 in the cover through which a 20 crowbar may be extended for forcibly moving the bolt in and out of latching position.

In the modified forms shown in Figs. 3 and 4, the structure is as above described with the exception that instead of employ- 25 ing an annular ring 16 cast integral with the inner surface of the lugs 14, the support for the cover is provided by a projection or lug 116, which in effect takes the place of the combined lugs 14 and ring 16, said projection having a beveled portion 115 spacing 30 the supporting surface thereof from the inner periphery of the annular portion of the supporting base.

The invention claimed is:

35 1. A manhole cover comprising a supporting base, a cover, and means formed on said supporting base for supporting said

cover so as to permit the free passage of dirt or the like between the entire periphery of said cover and supporting base. 40

2. A manhole cover comprising a supporting base, a cover adapted to be supported thereon, and means formed on said base for supporting said cover, whereby the lower 45 outer edge thereof will be spaced from and free from engagement with any portion of said supporting base.

3. A manhole cover comprising a supporting base, a cover therefor, a plurality of inwardly projecting lugs formed on said projecting base having tapered upper surfaces immediately below and spaced from the outer edge of said cover when placed in supported position, and means formed on 50 said lugs for engaging and supporting said cover inwardly and spaced from the outer edge thereof.

4. A manhole cover comprising a supporting base, a cover adapted to be mounted thereon with its outer edge in slightly spaced relation thereto, a plurality of lugs extending inwardly from the inner surface of said supporting base, and a supporting 55 ring forming a part of the supporting base carried by said lugs and spaced from the inner surface of said supporting base for providing passageways between said lugs, whereby the outer edge of said cover will be supported by said ring and extend over 60 said lugs and passageways.

In witness whereof, I have hereunto 65 affixed my signature. 70

THOMAS BEMIS, Sr.