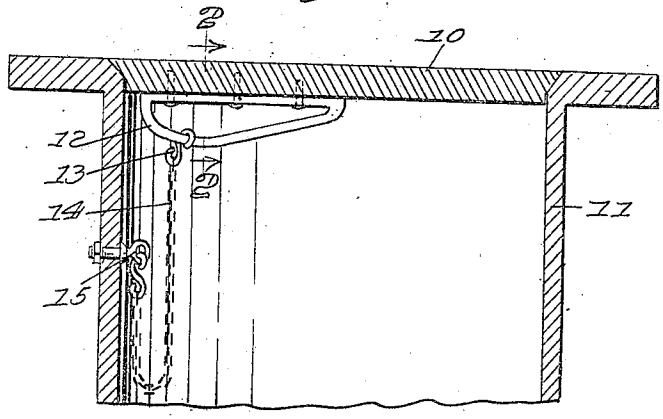
O. J. SWANSON.

SAFETY DEVICE FOR MANHOLES.

APPLICATION FILED MAY 19, 1920.

1,379,487. Patented May 24, 1921.

Fig. 1.



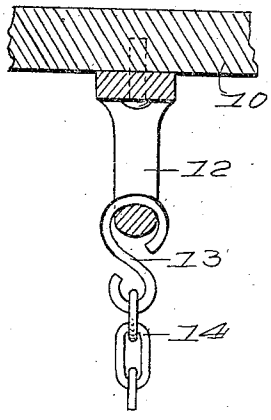


Fig. 2.

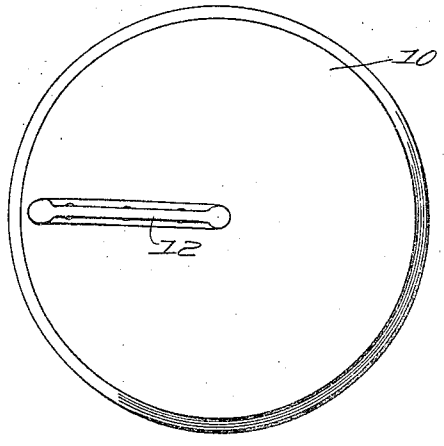


Fig. 3.

Inventor

Olaf J. Swanson,

By P. Thomas Talbert

Attorney

UNITED STATES PATENT OFFICE.

OLAF JOHAN SWANSON, OF CHAPPAQUA, NEW YORK.

SAFETY DEVICE FOR MANHOLES.

1,379,487. Specification of Letters Patent. Patented May 24, 1921.

Application filed May 19, 1920. Serial No. 382,475.

To all whom it may concern:

Be it known that I, OLAF JOHAN SWANSON, a citizen of the United States of America, residing at Chappaqua, in the county of Westchester and State of New York, have invented new and useful Improvements in Safety Devices for Manholes, of which the following is a specification.

The object of the invention is to provide a simple and relatively inexpensive means whereby the destructive throwing of manhole covers to distances from the manhole when an explosion of gas occurs in the sewer with which the manhole is connected may be prevented, by so anchoring the cover as to cause it in the event of an explosion to assume an edgewise position and to be displaced laterally so as to move out of the path of the discharge from the manhole, and to this end the invention consists in a construction and combination of parts of which a preferred embodiment is shown in the drawings, wherein:—

Figure 1 is a sectional view of a manhole and cover, to the latter of which is connected an anchoring device embodying the invention.

Fig. 2 is a detail view on the plane indicated by the line 2—2 of Fig. 1.

Fig. 3 is an inverted plan view of the manhole cover and the loop which is attached thereto or the connection of the anchoring chain.

The manhole may be of any well known or preferred construction applied in the ordinary way to the manhole casing 11 and connected with the underside of the cover which usually consists of a heavy metal plate is a guide loop or keeper 12 disposed radially with reference to the cover and extends substantially from the center thereof to its periphery, the depth of the keeper being gradually reduced toward the center and being traversed by an eye or traveler 13 attached to one end of a chain 14 of which the other is adapted to be connected with an anchor bolt 15 engaged with the side wall of the manhole casing. In the construction illustrated the anchor consists of an eye bolt but obviously it may be varied in construction to suit that of the manhole to which it it applied, and in the event of an explosion occurring in the sewer or main with which the manhole communicates, the force of the explosion due to the restraining effect of the anchor chain will cause the tilting of the cover to cause it to assume an edgewise position with relation to the axis of the casing, especially as the traveler due to the movement of the cover will tend to slide toward the periphery of the cover or toward the reverse end of the guide or keeper, so that the cover will be thrown laterally to one side of the manhole and out of the path of the progress of the escaping gases or air due to the explosion. Thus instead of the manhole being thrown to a great height or distance with the resultant danger to life or property or both it will be thrown to one side and retained in proximity to the manhole for subsequent return to its proper position and with risk of injury to the apparatus itself reduced to a minimum.

What is claimed is:—

1. A safety device for manhole covers having a looped guide or keeper arranged radially with respect to the cover, and an anchoring chain adapted for terminal attachment to the manhole casing and provided with a traveler for traversing said guide or keeper.

2. A safety device for manhole covers having a looped guide or keeper disposed radially with relation to the cover and extending from the center toward the periphery thereof, said guide or keeper being increased in depth toward the periphery of the cover, and an anchor chain adapted for terminal attachment to the manhole casing and provided with a traveler for traversing said guide or keeper.

In testimony whereof I affix my signature.

OLAF JOHAN SWANSON.