2,871,113
SAFETY GAS SHIELD FOR SERVICE LINES
Louis L. Hammers, Pittsburgh, Pa.
Application March 27, 1957, Serial No. 648,886
1 Claim. (Cl. 48—192)

My invention relates to safety shields for preventing the seepage of gas along service lines, such as, gas pipes, water pipes, conduits, through foundation walls and into buildings.

While the invention will more commonly be used in connection with gas lines where they enter into the foundation walls, it will be useful also in connection with conduits generally, because frequently water lines, electrical conduits, and sewers are placed in locations where there may be gas seepage from the street toward a building.

My invention has for its object the provision of a safety shield that can readily be applied to a service line, in proximity to the outer side of a building wall or foundation, in such manner that any seepage of gas along the line is diverted and will exhaust harmlessly into the atmosphere.

Some of the forms which my invention may take are shown in the accompanying drawing wherein:

Figure 1 is a vertical sectional view showing the manner in which my hood-like shield is applied to a pipe line.

Fig. 2 is a face view of the shield.

Fig. 3 shows modification of the structure of Fig. 1. Fig. 4 shows still another modification.

Referring first to Figs. 1 and 2, the numeral 6 indicates a gas pipe or other service line that extends through a foundation wall 7. A sleeve 8 surrounds the pipe 6 where it extends through the wall and serves to protect it against corrosion, such as that resulting from corrosive materials in the foundation itself, or dampness. A cap 9 has threaded engagement with the outer end of the sleeve 8 and serves to compress a gasket 10 of any suitable packing material against the end of the sleeve and the side of the pipe.

My invention resides primarily in the provision of a hood-like shield 11, through which the sleeve 8 extends, and to which it is welded at 12. The shield may suitably be made of sheet metal and of curved contour. A nipple 13 is soldered, welded or otherwise secured to the shield at its upper side and is interiorly threaded for the reception of a vent pipe 14, whose outer end is bent downwardly and will usually be covered by a screen to prevent entry of insects that might choke the vent with foreign material.

The upper and lower portions of the shield 11 are bent somewhat as shown at 15 and 16 to prevent back fill of dirt to great density within the shield, although ordinarily, any gas that flows along the pipe 6 would tend to rise within the shield even though the dirt filling were not particularly loose. At any rate, gas, instead of seeping along the pipe 6 and the sleeve 8 into the cellar of the building, will be diverted upwardly through the vent 14 to the atmosphere.

In Fig. 3, I show my invention in a somewhat different setting. In this case, while the pipe line 20 is diverted upwardly to an outside meter 21, I make provision for entrapping gases that seep along the line 20 and which might eventually find entry through crevices or pores in the foundation 22. To this end, the shield 23 is welded directly to one of the pipe fittings 24 and carries the vent pipe 25. In either form of the invention, the shield can be welded to its fitting at the shop, ready for installation at the job, or it can be soldered or welded in place at the job site.

In Fig. 4, I show a somewhat simpler arrangement, in that the shield 26 is of saucer shape, whose convex face will be adjacent to a wall such as 7 or 22. It will be welded to or otherwise snugly fitted to a pipe 27 and will be vented at its upper edge by fittings 13 and 14.

I claim as my invention:

A gas shield and vent for underground service lines, that comprises a sleeve for encircling an underground pipe where it extends through a foundation wall and into a building, the sleeve surrounding that portion of the pipe that extends through the wall and projecting along the pipe for a substantial distance outwardly from the wall, a baffle plate of convex form through which the projecting portion of the sleeve extends, the convex face of the plate being toward the wall and the plate being snugly welded around said projecting portion, a packing device sealing the outer end of the sleeve and the pipe and preventing flow of gas along the pipe and into the sleeve, a cap that has screw threaded connection with the projecting end of the sleeve and compresses the packing, a hood-like extension on the upper edge of the plate and extending outwardly from the wall, at a substantially greater distance from the wall than the cap and downwardly toward the pipe, and a vent pipe connected into the said hood-like extension, in position to direct stray gases upwardly.

References Cited in the file of this patent

UNITED STATES PATENTS

320,002 Ricketts -------------------- June 16, 1885
394,620 Shepler -------------------- Dec. 18, 1888
489,392 Reed -------------------- Jan. 3, 1893
2,584,439 Dustin ---------------- Feb. 5, 1952