

(No Model.)

G. W. RADER.
GUTTER FOR SEWERS.

No. 313,620.

Patented Mar. 10, 1885.

fig. 1.

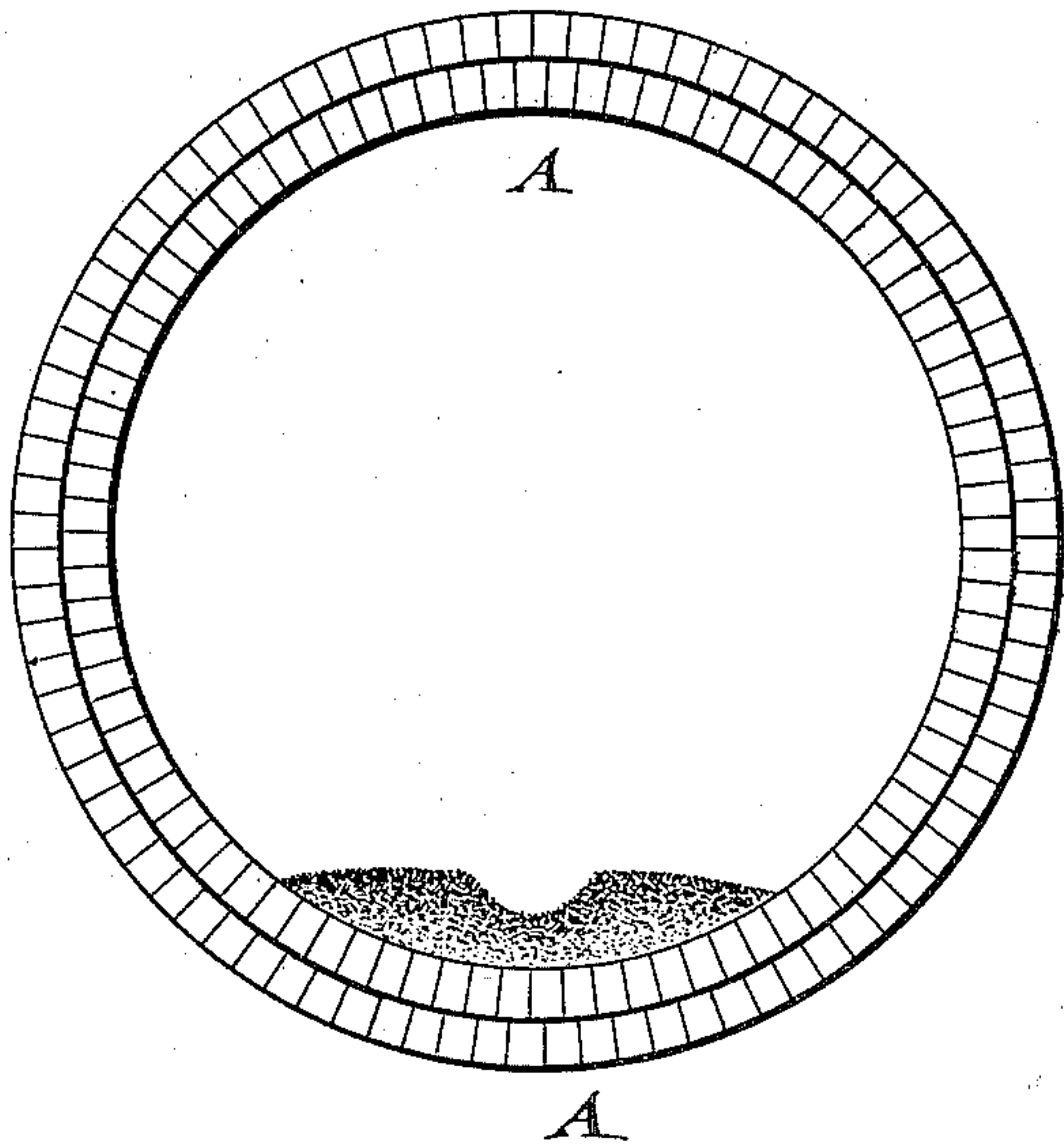
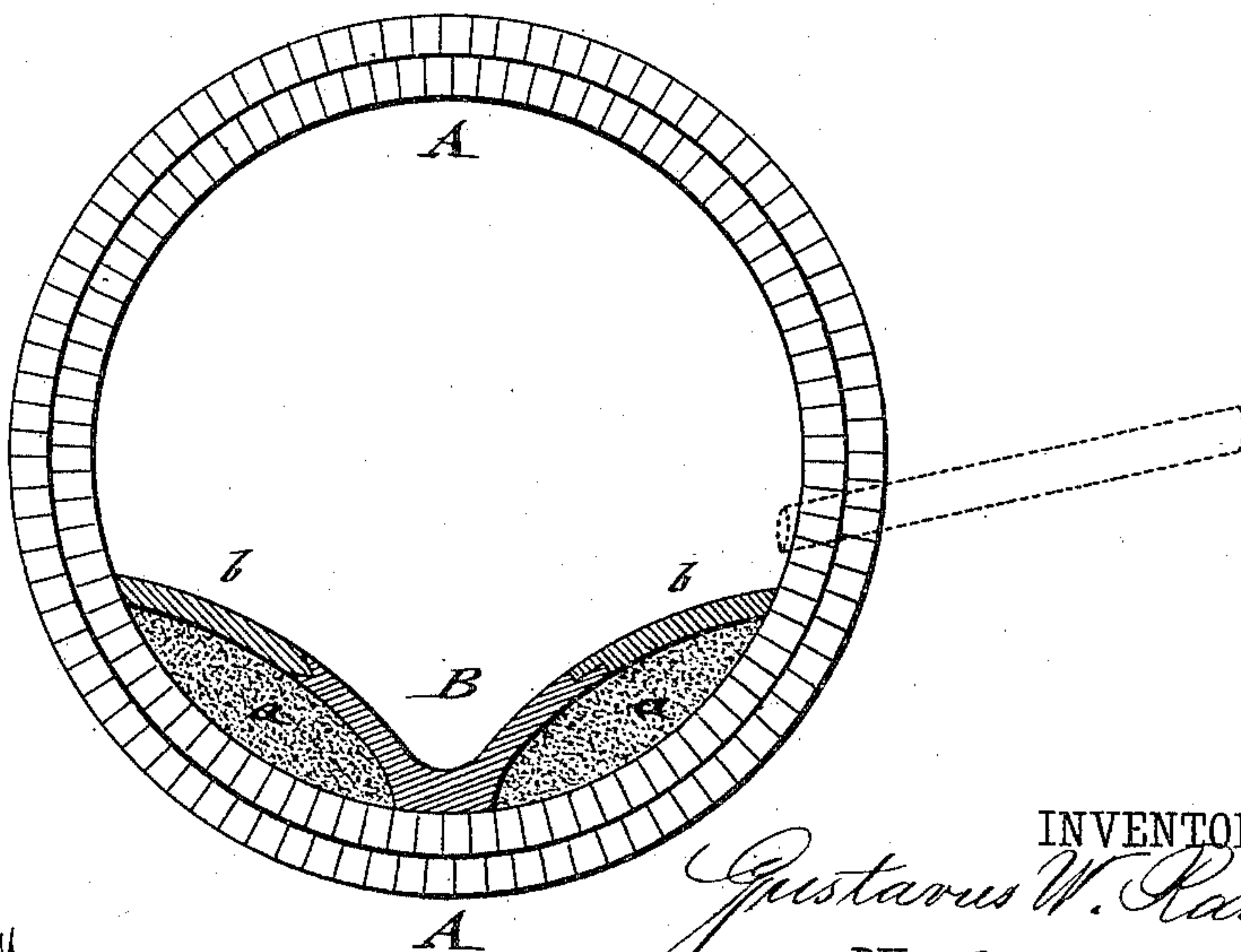


fig. 2.



WITNESSES:

F. H. Rosenbaum.
Ernst Wolff

INVENTOR

Gustavus W. Rader

BY

Georg & Reger

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GUSTAVUS W. RADER, OF NEW YORK, N. Y.

GUTTER FOR SEWERS.

SPECIFICATION forming part of Letters Patent No. 313,620, dated March 10, 1885.

Application filed December 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVUS W. RADER, of the city, county, and State of New York, have invented certain new and useful Improvements in Gutters for Sewers, of which the following is a specification.

In cleaning the old style of sewers of round cross-section it is necessary to remove from time to time the sediments that are deposited at the bottom of the sewer. These sediments accumulate gradually and harden, sufficiently so that they have to be chopped off for removing the same. In the center of the sewer is formed, by the flow of the liquid, a natural channel or gutter. In the summer season the sediments emit obnoxious gases and microscopic germs which are deleterious to health.

The object of this invention is to form an auxiliary gutter for sewers of the class described, whereby the disagreeable and expensive cleaning of the sewers by removing the sediments collected therein is dispensed with; and the invention consists of a round or oval sewer, an auxiliary interior gutter that is set into concrete at the bottom of the sewer, the sides of the gutter being extended laterally so as to abut against the wall of the sewer.

In the accompanying drawings, Figure 1 represents a vertical transverse section of the old style of sewers of round shape with the natural sediment collected at the bottom of the same, and Fig. 2 is a vertical transverse section of a sewer made with my improved gutter.

Similar letters of reference indicate corresponding parts.

A in the drawings represents a sewer of round cross-section, which is provided at its bottom with a gutter, B, of glazed earthenware or other suitable material, which is set into a bed of concrete, *a a*. The gutter B is made V-shaped, the legs of the same extending toward the side walls of the sewer, and are slightly curved, so as not to interfere with the outlets of the house sewers and pipes. When the gutter B is made of earthenware, it is preferably made of three parts—a V-shaped main part, and side plates, *b b*, that are connected by overlapping joints to the ends of the main part, and extended to the side walls

of the sewer, as shown in Fig. 2. By a gutter of this construction the liquid in the sewer has a natural wash, so that the heavy sediments are prevented from settling in the same, while the gutter may be readily washed and cleaned from time to time by running water through the same. By providing the sewers of round cross-section with auxiliary gutters, as described, the expensive chopping up and removing of the sediments contained in the same are dispensed with and a more effective flow of liquid in the sewers obtained. The gutter may also be used in connection with sewers of elliptical cross-section; but it is mainly adapted for sewers of round cross-section, so as to prevent the bottom sediments in the same.

I am aware that sewers having an auxiliary gutter or channel supported at the bottom of the same, so as to concentrate the water and flush the gutter for keeping it clean, have been used heretofore, and I do not claim this feature broadly. My auxiliary V-shaped gutter is mainly intended for round or oval sewers, in which the gutter is embedded in cement at the bottom of the sewer, while its sides abut against the side walls of the gutter, so as to form no separate channels at both sides of the gutter, as in the sewers heretofore in use.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a sewer of round or oval cross-section, a V-shaped auxiliary gutter located at the bottom of the same, and fillings of concrete between the sides of the gutter and the bottom of the sewer, substantially as set forth.

2. The combination, with a sewer of round or oval cross-section, of a V-shaped auxiliary gutter the sides of which are set into concrete at the bottom of the sewer and extended to abut against the wall of the same, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

GUSTAVUS W. RADER.

Witnesses:

PAUL GOEPEL,
SIDNEY MANN.