

MUNICIPAL DEPARTMENT

SEWER GAS.

For dealing with foul gas in sewers the following directions have been prepared by Mr. Joseph Corbett, the borough engineer, for use in the county borough of Salford, Eng. Whenever men have to go down into an old and foul sewer or cesspool the following precautions must be taken:

1. Open the lids of two adjacent manholes so as to provide a down-cast and an up-cast shaft; or if only one manhole is available and there is no other outlet by an open sewer or ventilation pipe, place a wooden tube about a foot square down the one manhole for use as a down-cast shaft.

2. Use one manhole, or the wooden pipe above described, as a down-cast shaft, by means of a heavy shower of water from a large watering can with a rose jet or else from a rose jet on a hose pipe from the town's water mains.

3. Where there are two manholes near together, use one for the down-cast shaft by means of the shower of water above described, and use the other for the hoisting and working shaft.

4. Test the air in any shaft before men go down it by lowering a lighted candle down it. If the light burns dull, even without going out, the shaft must not be entered. Ventilate the shaft as before described and test it again; and do not enter it until a light will burn brightly in it.

5. Beware of any mixture of combustible or explosive gas in the sewers, their manholes, and if any signs of such gases are found, obtain skilled men and safety lamps from some colliery, and let those men direct the work, giving them the help of ventilation, &c., as before described.

6. When a man has to descend a risky manhole or shaft he must have a strong

rope properly tied about his shoulders, so that he could be lifted by it, and the rope must be kept in hand ready to lift him up if he becomes overpowered by the gas.

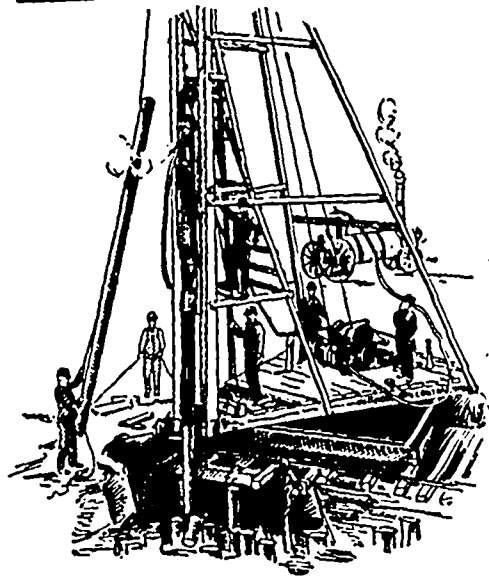
When a man has to crawl along a risky sewer he must have a short rope securely tied to his ankles, and a rope from it to hand so as to draw him back if he becomes overpowered by the gas.

7. In any case of special difficulty or danger, report the case immediately to the borough engineer, so that he may take the responsibility of the work.

ADVANTAGES OF STREET PAVING IN SMALL CITIES.

The industrial and social effects of paving a city are of great importance. Paving the streets to some extent reduces the price of the material hauled over them. On a well-paved street the traction may be perhaps but one-sixteenth of that on a dirt road, and in case of bulky material, such as coal, where the cost of local delivery is a considerable item, the saving due to the larger loads which may be hauled is reflected in the retail price. It is, however, from a sanitary point of view that paved streets are most desirable. Smooth clean streets are almost necessary to the health of the community. The prevention of the accumulation of filth and the corresponding decrease in disease is one of the chief benefits of paving. When a city is paved with brick and its sewers are laid with the same material, the streets may be cleaned with a stream of water from a fire hose without fear of the sand cutting either pavement or sewers. A small gang of men may thus clean a large area in a short time. Attractive streets serve to draw trade, and of two similarly situated towns, one paved and the other unpaved, the former will have the advantage. Well-paved streets stimulate municipal interests and civic pride. When the people have paid for having their streets put in good condition they feel an interest in keeping them so. Franchises for street railroads or for any enterprise requiring the tearing up of the streets are scrutinized with greater care and almost invariably a provision is inserted prescrib-

ing that the corporation using the street shall help pay for the paving. In Iowa, for example, street railroads pay for a strip of seven feet wide. This is an important aid in fixing the principle of compensation for public franchises.



PILE DRIVING

on land or water by Steam Pile Drivers or Drop Hammers.

**Portable Boilers
Hoisting Engines
Pumping Machinery
TO LET**

Bridge Building, Trestle Work, Wharves, Dams, Diving Submarine Work and General Contracting.

WM. HOOD & SON
10 Richmond Sq. - MONTREAL

ARTIFICIAL STONE PAVEMENTS

SIDEWALKS A SPECIALTY

CORPORATIONS Will do well to consider our work and prices before letting contracts

The Silica Barytic Stone Company of Ontario, Limited.

WALTER MILLS, General Manager. Head office: INGERSOLL, ONT.

Flush Your Sewers with

THE MILLER AUTOMATIC SYPHON

(PATENTED) Received HIGHEST AWARD at the World's Columbian Exposition for

- (1) SIMPLICITY OF CONSTRUCTION.
- (2) EFFECTIVENESS. (3) RELIABILITY.

Write for Prices and Particulars.

VICTOR HILL, General Agent, Hewson Bldg. Box 245. NIAGARA FALLS, ONT

ORE AND STONE
CRUSHERS
HOISTING MACHINERY
RAILWAY SUPPLIES
BOILERS AND ENGINES
Prices furnished on application

MARSH & HENTHORN,
BELLEVILLE, ONT.

BELLHOUSE, DILLON & CO., 30 St. Francois Xavier St., Montreal

Sole Agents for the Compagnie Generale des Asphaltes de France (Rock Asphalt).

PORTLAND CEMENT NORTH'S CONDOR

Paving and Fire Brick a Specialty

"DYCKERHOFF" and "WHITE CROSS" Brand

NORTH'S "CONDOR" BRAND AWARDED FIRST PRIZE AND GOLD MEDAL AT THE ANTWERP EXHIBITION

Portland Cements...

HIGH GRADE GERMAN BRANDS FOR GRANOLITHIC AND ARTIFICIAL STONE SIDEWALKS.

**Sewer Pipes, Best English Cements. Best Belgian Cements.
Culvert Pipes, &c. W. McNALLY & CO., Montreal.**



"GERMANIA" BRAND
HIGHEST CLASS PORTLAND CEMENT

McGILL UNIVERSITY TESTS, 1898:
Fineness:—residue on 100 sieve, 4.45%.
Tensile strength: neat: 7 days, 629 lb.
" " 28 " 773 lb.

—OF ALL FIRST CLASS DEALERS.—



"BURHAM" BRAND
THE BEST LONDON PORTLAND CEMENT

As used for the following work: Keewatin Power Co.'s dam at Lake of the Woods; Canada Paper Co.'s dam at Windsor Mills; Government Breakwater, Buffalo; Dry Docks, Brooklyn and League Island; Hudson River Tunnel; and a vast amount of railway work, and mileage of Street Paving throughout Canada and the States.

OF ALL FIRST CLASS DEALERS