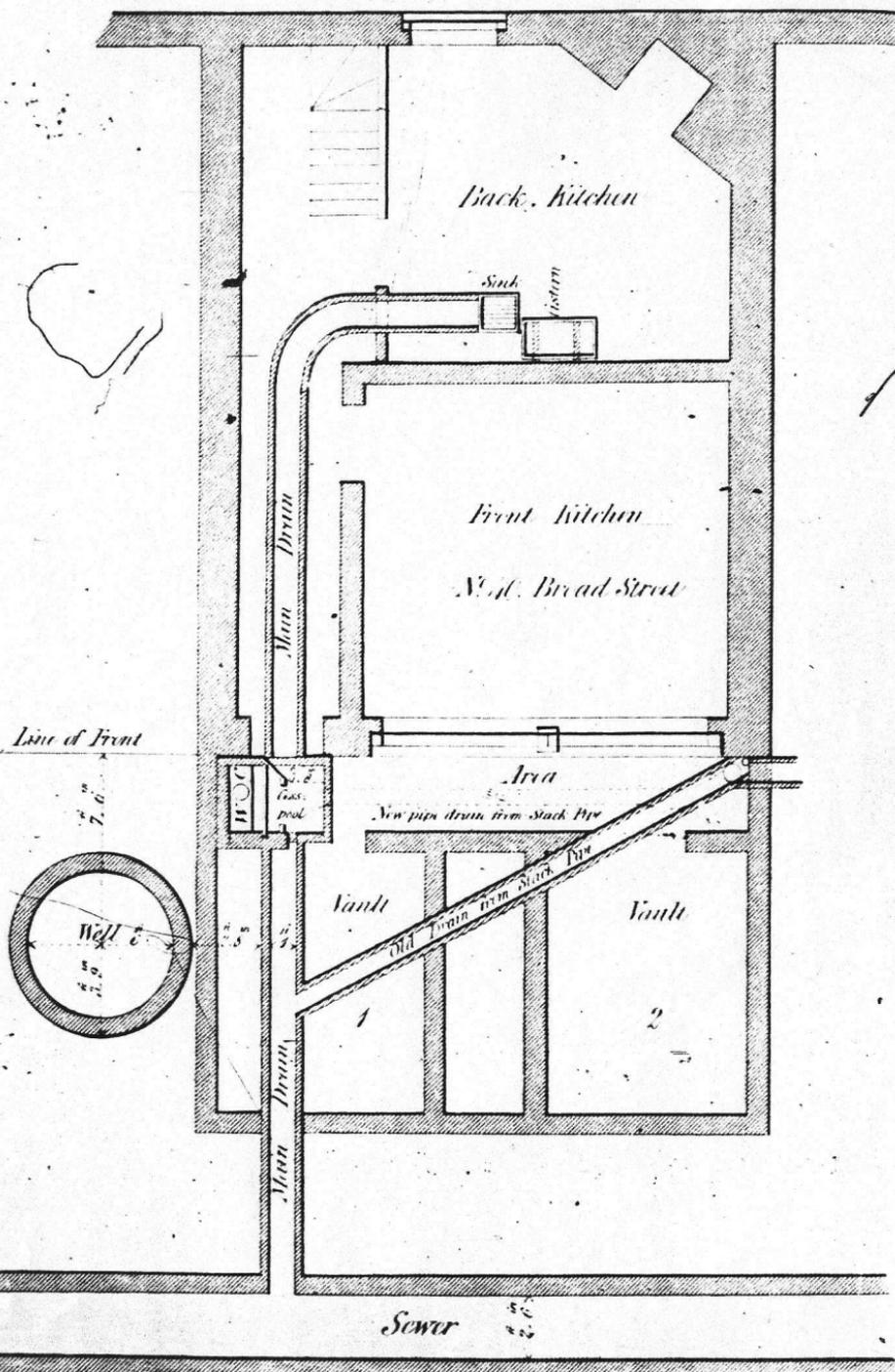


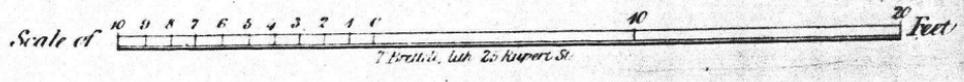
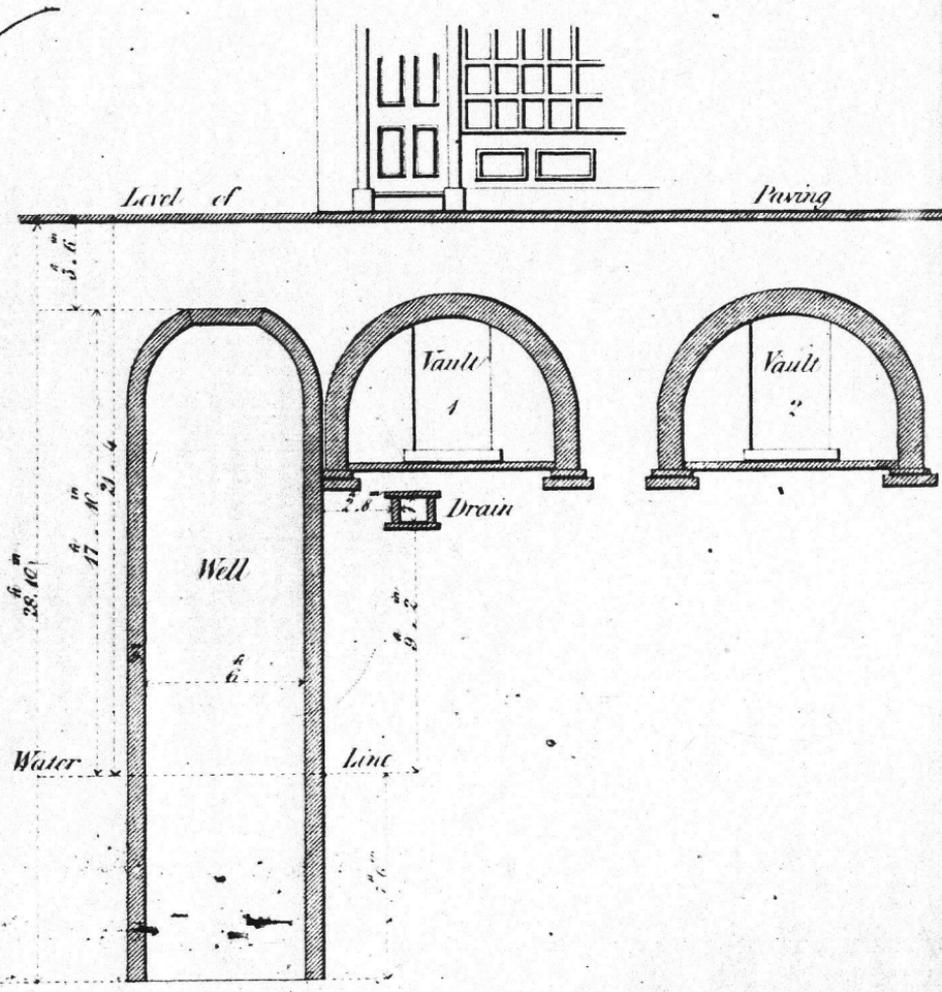
## MR YORK'S REPORT.

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THE CHOLERA INQUIRY COMMITTEE, APPOINTED BY ST. JAMES'S VESTRY, having been engaged several months in investigating any causes which might have existed in the autumn of 1854 to induce the propagation of Cholera, among which was the possibility of contamination of well water from defective house drainage, the Secretary was instructed to adopt the best measures for inquiring into, and reporting upon, the condition of the drainage at the house No. 40, Broad Street, it being immediately adjoining the parish pump in that street, which examination having been made at the close of April 1855, the following were found to be the results of his investigations:—

The main drain of the house was opened in the front vault under the street, and was found to be constructed on the old fashioned plan of a flat bottom, 12 inches wide, with brick sides, rising about twelve inches high and covered with old stone. As this drain had but a small fall, or inclination outwards to the main sewer, the bottom was covered with an accumulation of soil deposit about two inches thick, and upon clearing this soil away





the mortar joints of the old stone bottom were found to be perished, as was also all the jointing of the brick sides, which brought the brick work into the condition of a sieve, and through which the house drainage water must have percolated for a considerable period. Into this drain in the middle of the vault an intersecting smaller drain ran from the front stack pipe at the south-west angle of the front area, bringing the rain water from off the roof of the house, and also forming a communication with the drains of the adjoining house westward (No. 39.)

Upon opening back the main drain, a cesspool intended for a trap, but misconstructed, was found in the area 3ft. 8in. long, by 2ft. 6in. wide, and 3ft. deep, and upon, and over a part of this cesspool a common open privy (without water supply) for the use of the house was erected, the cesspool being fully charged with soil. This privy is formed across the east end of the area, and upon removing the soil the brickwork of the cesspool was found to be in the same decayed condition as the drain, and which may be better comprehended by stating that the bricks were easily lifted from their beds without any, the least force; so that any fluid could readily pass through the work, or as was the case when first opened, over the top course of bricks of the trap into the earth or made ground immediately under and adjoining the end wall eastward, this surface drainage being caused by the accumulation of soil

in, and the misconception of the cesspool, which was intended to prevent effluvia and vermin coming into the house from the main sewer in the street, but which in fact it facilitated rather than prevented. This point is worthy of notice, and a reference to the accompanying plan prepared by me will more fully shew its misapplication as well as demonstrate the fatal effect it would have in driving or forcing any deleterious fluid matter into the ground and parish well adjoining, by preventing its running direct into the current of the house drain.

The stone placed in and across this cesspool dipped about three inches into the fluid therein contained, and as the more solid matter became deposited in it, the fluid became reduced in proportion, and when opened on the 23rd of April, 1855, it had reached that state of solidity that hardly any passage for its egress from it was left; it had in consequence commenced to overflow between the back of it and the end wall of the area, and through any other crevice at the sides of the covering which was composed of saturated rotten boards—the condition of this cesspool covering, together with the solid matter at the bottom, led me to believe that it must have been in this state for many months, but it could not possibly have gone on much longer without total stoppage. All this old drainage has been removed; the cesspool destroyed, and new tubular pipe drains with

cemented joints, and a syphon trapped closet have been substituted. The drain inside of the house which leads from the front area to the back kitchen has not been disturbed, it appears to be used only for the carrying off of waste water from a sink near the cistern, but should the street pump continue to be used hereafter, it will be necessary to have this drain reconstructed.

In connection with the question of how far any communication can exist, and has existed between this defective drainage, and the adjoining parish well which supplies the Broad Street pump, a reference to the accompanying plan and section of the well and drainage of the house will I conceive set the matter at rest.

From the bottom of the house drain down to the water line in the well, a vertical depth of 9 feet 2 inches exists, and from the side of the drain horizontally to the outer side of the brickwork of the well, there is only a space of 2 feet 8 inches, whilst the side wall of the vault adjoining the cesspool actually abuts upon it; thus, therefore, from the charged condition of the cesspool, the defective state of its brickwork, and also that of the drain, no doubt remains upon my mind that constant percolation, and for a considerable period, had been conveying fluid matter from the drains into the well; but lest any doubt should arise upon this subject hereafter, I had two spaces of the brick steining, two feet square each,

taken out of the inside of the well,—the first, thirteen feet deep, from the level of the street paving, the second eighteen feet deep, and a third was afterwards opened still lower, when the washed appearances of the ground and gravel fully corroborated the assumption. In addition thereto the ground was dug out between the cesspool and the well to three feet below the bottom of the former, and its black, saturated, swampy, condition, clearly demonstrated the fact, as did also the small furrowed appearance of the underlying gravel, observed from the inside of the well, from which the fine sand had been washed away during the process of filtration.

In conclusion, I have to state that nearly the same condition was observed in the ground between the street sewer, and the end wall of the vault through which the main drain passes outwards; I presume, therefore, it is manifest to all that, the owner and the occupier of this house had both neglected to improve its drainage by not availing themselves of the facilities afforded them for doing so by the construction and use of the new sewer carried through the western half of Broad Street in the years 1851-2.

JEHT YORK,

*Secretary.*

14, MARSHALL STREET,  
May 1st, 1855.