

9. The dysentery was of a very fatal character, and the ipecacuanha treatment, so successful in tropical dysentery, was not so in this epidemic.

10. The two morbid appearances most characteristic of this epidemic were, 1st, a soft membranous deposit on the mucous membrane of the intestines; and 2nd, the diseased condition of the lower part of the small as well as the large intestine in all the cases.

11. The poison which caused the dysentery seemed to occupy an intermediate position between the poison which causes the continued fevers, and that which produces ague and its concomitants."

It is a valuable and warning lesson which, Dr. Clouston here records, of the poisonous influences on the human system of sewage exhalations.

It is scarcely fair, however, to confound with *Sewage Irrigation*, properly so called, Dr. Clouston's fatal experiment.

Such irrigation must in the first place be done in a scientific manner, and next, the sewage must be amply diluted, otherwise, besides causing Dr. Clouston's form of dysentery, it will kill the grasses, whose growth it is proposed to stimulate. In the standard of all sewage experiments, the meadows at Craigintinny, near Edinburgh, which have now been so successfully irrigated for eighteen years as to raise the rental from 20s. an acre to £30, at Croydon, and at Carlisle, the sewage used for irrigation is largely diluted with the waste and surface water used in these towns. At the Cumberland Asylum, on the contrary, "the water from the baths and lavatories is not thrown into the sewage drains, it having been thought that the sewage would be too much diluted if mixed with it. The main drain conveys the sewage to a large vaulted close tank, 40 feet by 40 feet, and 6 feet 6 inches in height, situated about 150 yards from the nearest inhabited part of the asylum,—a small detached block—and 200 yards from the main building."

Thus, instead of a running stream of fresh sewage, amply diluted, Dr. Clouston in his experiment used stagnant, undiluted sewage, necessarily charged with foul gases. Further, no disinfectants appear to have been used at the Cumberland Asylum. The result was, that in little more than a year thirty-one persons were attacked by dysentery, of whom twenty died.

There are several county asylums where the whole of the sewage has for several years been applied to the land by surface irrigation, without any such ill effects as Dr. Clouston here records. In all such instances, the following precautions have been adopted:

1. The land has been thoroughly drained, so as to allow the sewage water to filter through and escape.
2. The sewage has been scientifically applied, *i. e.*, care has been taken that the channels were level, and the flow constant.
3. The sewage has been regularly deodorized by lime, carbolic acid, sulphate or chloride of iron, &c.
4. The sewage has been applied fresh, and not after being stored in a large tank, and after decomposition has taken place.

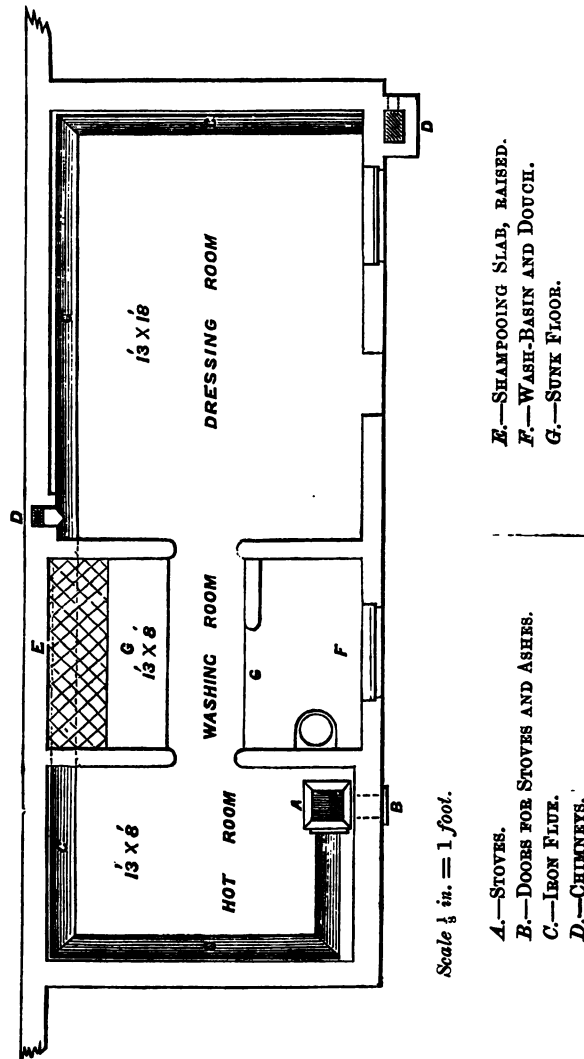
*Opening of the Roman Bath at Colney Hatch (Middlesex Asylum),
with Plans and Estimates for Radiating Chambers in Hospitals,
Private Dwellings, &c.*

THE Manager of the Hammam having been present at the opening of the bath at the Middlesex Asylum, thus describes the event:

"Last week, on Wednesday, the bath at Colney Hatch was started. I

enclose a plain sketch of it, and have asked Mr. Wood to make a more elaborate one. The heat is entirely radiating, and though they had only a blanket at the door the temperature was 190°. I went on the invitation of

PLAN OF BATH AT COLNEY HATCH LUNATIC ASYLUM.



Scale $\frac{1}{8}$ in. = 1 foot.

- A.—STOVES.
- B.—DOORS FOR STOVES AND ASHES.
- C.—IRON FLUE.
- D.—CHIMNEYS.
- E.—SHAMPOOING SLAB, RAISED.
- F.—WASH-BASIN AND DOUCH.
- G.—SUNK FLOOR.

Dr. Sheppard. He was very sanguine, and at once brought in a patient to try the effect. It was a case of melancholia—a young intelligent man he seemed, had lost a child, and could not be brought to believe in its death,

but fancied it had been stolen. Dr. Sheppard said it was a very bad case, as he could not get any sleep. Had not had more than three hours' sleep in four days and nights. Was in the bath nearly an hour, sweated very well, epidermis peeled off in a most extraordinary manner. He was very comfortable all through the bath, and afterwards while cooling, and, despite the conversation going on between four or five persons present as to the bath itself, fell off into a sound sleep. Dr. Sheppard woke him, and he said he felt very comfortable. He went to bed at eight and slept soundly until six next morning, when he took exercise—a new man. Dr. Sheppard says it was a bad case, but now he will be right in about ten days. Mr. Pearson, the other medical gentleman present, will make notes of the case. Nothing could be better than this successful trial there.”

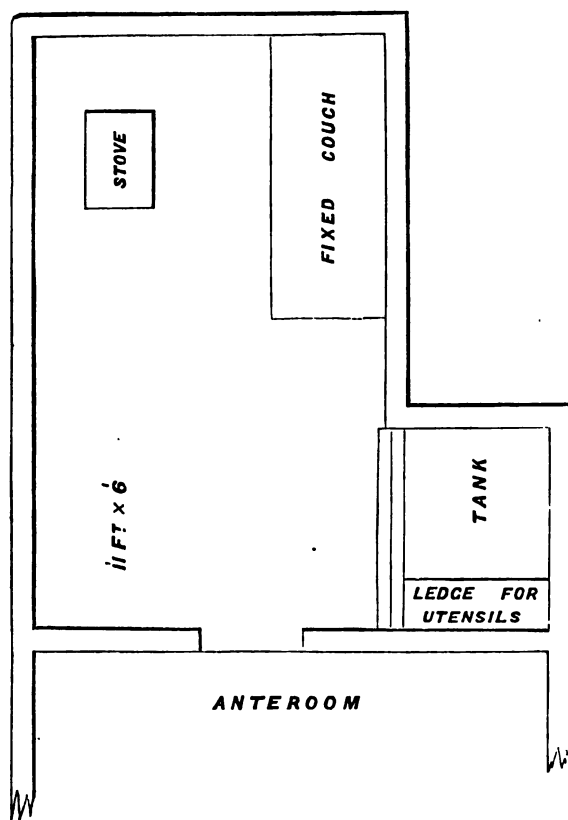
The bath at Colney Hatch has cost £180. It is to be hoped that the immediate success that has attended it may induce the governors of the asylum before long to sanction the original plan submitted to them by Mr. Urquhart, the heads of which were as follows:—

“I have been engaged in planning an adaptation of the bath to the purposes of your Institution. The bath, and that by radiating heat, must of course be there; but, in addition, you require a large available space for the daily washing of your patients, with abundant supply of hot and cold water, in a hall with an Indian temperature. The plan first submitted to you was based on an expenditure of £300. The present is for £500. For this you will have a structure which will become the model for the asylums, hospitals, unions, and barracks of the three kingdoms.

“The Hammam has cost for the building part £10,000; the area is 7000 square feet. I propose to give you a building, with an area of 1500 square feet, at a cost of £500, and will undertake to pay the difference in case of excess of expenditure. As you dispose of the patients' time, and can arrange relays from six in the morning till eight at night (and herein lies your facility), you can pass 700 patients through the operation of the bath daily. For mere washing you can pass them through it at the rate of 250 an hour.”

The plan given of the actual Colney Hatch bath, though falling far short of what it ought to be for such an establishment, is still very well adapted for a private house; but as there may be many who would wish to build a bath in their own houses, but who would be unwilling to go to the expense of £180, a plan is given on the opposite page of a small bath erected at Worthing by Mr. Urquhart, the cost of which was only £37. Here is his description of it:—“There is a furnace, two couches, one raised, and receiving the close and full radiation of the red-hot metal, the other moveable on the floor; also a tank, to which you descend two steps, there being a slab to prevent splashing. You may have it in hot, tepid, or cold water, from pipes arranged so that the stream gushes out as from a rock. The water is heated simply by being in tanks close to the ceiling. The floor is in cement. There are no flues. From a common laundry stove, an iron pipe conveys the smoke across the room. There is no plate glass, but only a double sheet of crown glass let into the wall for a window. I use coke instead of coal, so as to keep the pipes clean, that the heat may be given off: no coal is used, even for lighting the fire. At a heat varying from 180° to 230°, night and morning, the fuel consumed will not amount to more than one-half of what is required for an ordinary fire. This closet has been constructed in the rudest fashion and at the lowest possible cost. I found that my bath at Riverside deterred rather than invited imitations, as people thought less of the advantage than the cost, and fancied that it required a thousand pounds to get a wash. This closet, with all the fittings for the supply of the water, hot and cold, and the building of three of the walls, has cost £37.”

Supposing even £37 to be more than it is convenient to lay out, the writer may mention what he did himself when living in chambers in London. The only possibility of having a stove was to put it up in a room which was probably as little fitted for the purpose as any room in England: there was a thoroughfare through it, which it would have been most inconvenient to block up, and therefore anything like a reasonable length of flue was out of the question, and the stove had to be kept within thirty inches of the wall.



THE SWEATING CLOSET AT MONTAGU COTTAGE, WORTHING.

However, in spite of this, and in spite of the room having three doors and a window, which fitted so badly that sand-bags had to be put across them, the heat rose to 160°. This is how it was managed:—A laundress's stove was put opposite the fire-place: this was filled up with a sheet of iron, through which the stove-pipe passed. The draughts, from the reasons above mentioned, were so excessive, that it was found necessary to have a sort of wooden gridiron fixed over the stove about eight feet from the floor. On

this a piece of green baize was laid, and curtains of the same material ran along two sides of it and fell to the ground, thus enclosing the top and two sides of the stove. In this semi-enclosure the heat used to vary from 150° to 160°, and was about 100° in the rest of the room. Now as to cost. The stove, including fixing it and filling up the front of the fire-place was 30s.; the wooden framework, 5s.; the green baize, 23s.; and the sand-bags, 3s.; total, £3 1s. This is to be looked upon solely as a makeshift, and not for one instant to be called, or considered, a "Turkish Bath." It is probable that in five rooms out of six the same outlay would produce far greater results; but, even under all the disadvantages mentioned, it was found to answer perfectly so far as this:—If one came home wet through and felt a cold coming on, an hour and a half was quite sufficient to raise enough heat to drive away one's enemy—no small advantage where colds are so common!

If any one who reads these lines should feel disposed to lay out even the smallest of the sums mentioned in putting up a stove for his own convenience, the writer would suggest to him, as the result of his own experience, which was bought by several failures and mistakes:

1st.—That for any *small* bath, there is *nothing* better than a common laundress's stove.

2nd.—That the heat from iron pipes is not injurious, in spite of what all the wise men say about it, if only there is provision made for an ample, but controllable supply of fresh air.

P. S.

Family Treatment in the North.

A FEARFUL crime was committed yesterday forenoon at the Grange—a young man murdering his mother and sister, in broad daylight, in the public street, and almost under the eyes of the neighbours. The murderer is a man of thirty years of age, called John Hunter, who has been from boyhood weakly in body and erratic in mind, and whom for several years it had been thought prudent or found necessary closely to confine within his father's house, in Dalrymple Crescent. It is supposed that yesterday the young man attempted to leave the house, and was intercepted while so doing by his mother and sister; and that it was in anger at this interruption, and with the view of freeing himself from the confinement which he had, on the whole, borne very patiently, that he struck the fatal blows. He had armed himself, seemingly in his determination to liberate himself, with a piece of iron bar about eighteen inches long, and one inch in diameter; and with this, when his mother and sister had followed him through the garden before the house, to the pavement beyond, endeavouring to persuade him to return—he felled his hapless mother dead to the ground, and by repeated blows destroyed his sister, who had fallen prostrate over her mother's corpse. The appearance and demeanour of the prisoner (for Hudson was speedily and without difficulty taken into custody), as well as the statements of his family—which moves in a respectable circle—plainly indicate that when he committed the crime he was insane; and the sad tragedy gives a warning that should be taken good heed to, of the dangerous nature of the kindness by which persons in the unfortunate condition of the murderer, are permitted to live without proper surveillance and care.—*The Scotsman*, October 6th, 1865.