I venture to add, that I have scarcely ever had a case of typhus in a malignant form, without discovering some stagnant drain, or over-charged cesspool, or some other manifest cause of malaria, in the immediate residence of the patient." Another writer observes in reference to the situation of a neighbourhood where fevers had prevailed—"Most of the houses surround an undrained common, full of pools of stagnaut water, that in the winter season overflow. In the summer months, and greater part of the spring and autumn, they are stagnant, and undoubtedly, a fruitful source of malaria."

The benefits of drainage on the health of the inhabitants of wet and marshy districts, have been striking. An English report on this subject, says in reference to one district, where the inhabitants were formerly exposed to the malaria of marshy lands,—"for the last few years, *owing to the excellent plan of draining*, very few diseases have occurred that can be said to be produced by malaria. There is very little ague, scarcely any continued fever, and a case of typhus fever has not been known along the borders for the last three or four years. Some years back, a great portion of the parishes adjoining these marshes, was under water from the end of autumn to the early part of the following spring; then fevers and agues of all characters prevailed to a very great extent." Much testimony of a character like this, has been obtained in Britain, and leaves no doubt of the great benefits of drainage in regard to health.

Several diseases of domestic animals, such as "liver-complaint" in cattle, and "rot" in sheep, are known to be connected with the same causes which produce the diseases in man above mentioned. The effects of malaria, and watery succulent herbage, in producing the rot, have long been known. As might have been expected, the health of sheep and cattle has been benefited by drainage to an equal or greater degree than that of the human race. C. W. Johnson states that the rural population of drained districts in England, have often remarked the favorable effects of drainage on the health and improvement of animals, by which losses of stock have been prevented to a great extent.

There is no insuperable obstacle to the drainage of those sections of this country which have heretofore been so subject to particular diseases. A gentleman of great experience in draining, states that drains will draw effectively, if properly made, where there is a descent of only four inches to the mile. There are a few cases where a much greater fall cannot be had. How immense would be the benefits which would follow from the adoption of a thorough system of draining, in those sections!

MODES OF FORMING DRAINS.—Drains have been made in various ways. In clayey soils they have been formed by digging a trench to the required depth, and then placing a block of wood four inches square in the bottom, around which the soil is rammed hard—the timber being then drawn along, and the same operation repeated. The subsequent contraction of the clay, allows the water to enter the cavity thus formed. Such drains operate well for a time, but are not, probably, very lasting.

Stones have long been used for the construction of drains. They are made both with and without an eye, or open space, and if rightly constructed, are considered as efficient as any. It has been found that small stones are best for this purpose, and in England and Scotland they are broken to about the size ordinarly used for macadamized roads, or so small that they will pass through a ring two and a-half inches in diameter. Prof. Norton says—"The bottom of the stone drain should be about six inches across, and from six to eight inches in depth of these small stones, should be thrown in. Turfs cut thin and very carefully so as exactly to fit, should be laid on the top, over-lapping each other, and the *earth rammed down* hard, as the object is to prevent entirely the access of water from above; it should all filter in at the sides, for if it finds an enterance at the top, sand and small stones will wash down, and eventually choke the drain."

But the principal operations of draining in Britain, for the last few years, have been with tiles made of clay, and burnt after the manner of burning bricks. These could be used with more economy, especially in districts where stones were scarce, the expense of transporting the former, being much less. They have been made of various forms. The curved or "horse-shoe" shape was first adopted. The tiles were made in lengths of fourteen to sixteen inches, and three to four inches wide, with "soles" for the tiles to rest on when laid in the drain. The manner of making drains with these, has so frequently been described in our pages, that nothing further seems necessary in regard to them. Of late, another form, called 'pipe' tile, has been introduced. We have never