

fifth cubic feet in one hundred feet length, on increasing the width to three inches at the bottom. Quantity removed by increasing the width to four inches is four and four-fifths cubic feet ; to five inches, ten and four-fifths ; to six inches, twenty and two-fifths feet ; to eight inches, forty-five feet ; and to ten inches seventy-nine and one fifth feet.

The increased cost being for the three inch width one-half cent ; for four inch, two cents , for five inch, four cents : for six inch, eight cents ; for eight inch, seventeen cents ; and for ten inch, twenty-nine cents.

The amount of earth removed by widening the trench for a larger pipe is the same in every case, without regard to the depth. Take an example ; a trench is to be dug four feet deep for a one inch pipe, the cost of which will be \$1.07, for one hundred feet, and a trench of the same depth for an eight inch pipe will cost \$1.86. If the trench is to be six feet deep for a small pipe, the cost will be \$2.22, and for the large pipe \$2.51 ; the increased cost in each case being 29 cents. A pipe with an eight inch bore requires a trench ten inches wide at bottom.

Judge French, of Exeter, whose work is done in a systematic and very skillful manner, had a trench two hundred and thirty feet long, four feet deep, with a width at top of twenty inches and at the bottom of four inches, cut in one day, by two men, at a cost of two dollars ; by the basis used in our estimates, it would cost three dollars and forty-one cents, but the digging was quite easy on his land, the soil coming under the third case cited above, and would by that basis cost two dollars and thirteen cents, the estimate being thirteen cents more than the actual cost on the entire length, or less than one cent a rod.

These estimates call for no more work than any man with ordinary skill in handling the spade should do, though few trenches, probably, are so economically cut, except under the direction of a competent superintendent, who is familiar with the work.

J. HERBERT SHEDD.

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## Poultry Yard.

### THE GREAT FRENCH HENNERY.

With care and good management, no branch of domestic industry is more profitable than rearing poultry. Many persons have supposed that what is profitable on a small scale might be made still more so when carried on to a larger extent, but repeated experiments in this and other countries have proved this to be a mistake. The secret of the matter is, that hens cannot thrive and lay, without a considerable quantity of animal food. Where but a limited number of fowls are kept about the farm-yard, the natural supply of insects is sufficient to meet this demand, and hence, when attempts have been made to extend the business beyond this source of supply, they have not prospered. It will be seen from the following account that Mons. de Sora, of France, has adopted a method that has proved completely successful by affording an artificial supply of this essential portion of food.

The French practical philosophers certainly knew how to make the most of things. A Mons. de Sora has recently discovered the secret of making hens lay every day in the year, by feeding them on horse flesh. The fact that hens do not lay eggs in winter as well as in summer, is well known, and the simple rea-