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ten in the right hand corner, to which

he bowed his head and pays his respects."

ON DRAINING.

HOW ARE LANDS BENEFITED BY DRAINING?

It will be found impossible in the space allowable here, more than briefly to give a synopsis of the answer to this most important question.

The first growth of the embryo-plant in the soil, requires certain con-

tions, such as the requisite degree of heat, the presence of atmospheric air, moisture, and the exclusion of light. Wherever a seed is placed in these circumstances, germination will take place. Soil does not of itself act chemically in the process of germination. It is the vehicle by means of which air, moisture and heat can be continually kept up.

It absorbs water from the atmosphere to supply the demands of plants.

It absorbs heat from the sun's rays to assist in the process of growth.

It admits air to circulate among roots and supply them with a part of their food.

The secret we want to learn is how to obtain and keep up this supply in a manner most favorable to the chemical change which in process o

The heat will be proportioned to the completeness by which the water is removed, and by reason of the increased facility by which air and water circulate, heat will be distributed more evenly among all those parts of the soil occupied by roots.

The conditions of soil necessary for the germination of seed, apply to the whole period of the growth of the plant, that is, it needs an uninterrupted circulation of heat, moisture, and air.

Under-training effects the mechanical changes in the soil, by reason of which moisture, heat and air can circulate freely through it. This is true of the hardest, most obstinate and retentive of clayey soils. It decomposes the mineral matters contained in them, disintegrates the particles and renders them porous. A familiar example will illustrate this.

If we fill a vessel or box having holes at the bottom with any of the most tenacious soils, to the depth of three or four feet, and pour on water, it will soon soak down through the box and escape at the bottom. But

a renewal of this process a short time, it will be found that the water will pass freely through the soil, that it will be rendered porous and mellow, and as long as the outlet for the water is kept open there will be no danger of over-trenching the soil in the box. It will receive all the rain water that falls upon it with all its treasures of fertility and be benefited by it.

The "Country Gentleman," of November 18, 1858, contains an interesting statement by John S. Pease

tribe, Esq. of Manchester, Vt., it is reply to an opinion expressed by Mr. Johnston, the celebrated land draughtsman, that some soils, such as stiff blue clay, could not be drained. Below is the substance of the statement:

Mr. P. took "a specimen of what he thought was stiff blue clay, which as would hold water about as well as iron." The specimen was taken about three feet below the surface on a level with a brook that runs through a clay soil. He filled a hundred pound nail box with this clay

and pressed the bottom of the box with holes. He poured water in. At first it disappeared slowly; he put in water frequently, and the oftener he filled it the more readily it passed off. He left more than a week, when a shower came; after the shower not a drop of water was to be seen.

The soil in the box represents the condition of a well drained field, having free outlet for the water down three or four feet below the surface of