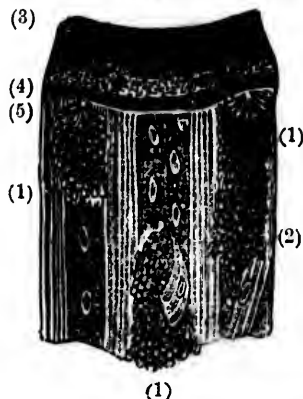


salt is one pound to a gallon of water, laid on with a plasterer's brush, the operator walking down one furrow and up another, thus sprinkling both sides of the land. Or the mixture may be applied with a watering pot; in either case, there must be a second person to replenish the supply to the operator. Two persons will thus sprinkle four acres a day. The *modus-operandi* of the salt destroying the puccinia is this: this plant being a fungus, its principal constituent is water, upon salt being applied, the watery particles are immediately absorbed, and thus the mildew plant is destroyed. The action of salt upon mushrooms, in making mushroom catsup, explains this theory.

RUST is also a disease of the wheat plant caused by a minute fungus of the coniomycetous order of plants. It is commonly ascribed by botanists to two species of the genus *Uredo*—*Uredo rubigo*, and *uredo linearis*, which probably are mere varieties of the mildew fungus or *puccinia*. It attacks wheat at all stages of its growth. The fungi have commonly an orange brown or rusty iron colour, when the spores are spherical the disease is termed *U. rubigo*, when they are oblong the fungus is called *U. linearis*. The plants when affected seem as if they were dusted with a rusty powder, especially after the sporules have burst through the epidermis or skin of the stem. It is said to prevail more among the rough chaffed wheats than others. The rust is not so injurious as the true mildew, though it causes great havoc when it appears in the later stages of growth of the wheat plant. The predisposing causes are the same as in the case of mildew; it is sometimes readily dissipated by an outburst of sunny weather, especially when attended with a healthy breeze playing over the growing crop. The remedies are the same as those mentioned for mildew. In the case of both mildew and rust it has been found that thick crops are less liable to



SECTION AND PORTION OF A STOCK OF WHEAT AFFECTED WITH RUST.

- (1) (1) (1) Masses of the Rubigo. (2) Stomata, or breathing pores. (3) Cellular tissue. (4) Cuticle. (5) Epidermis.

their attacks than thin ones, that fields which have received a liberal supply of seed have resisted the disease when thin sown ones have been destroyed. A too frequent repetition of the wheat crop also encourages these diseases. Some farmers think if they only supply plenty of manure, they can go on growing wheat crops without end. This is a great mistake, and one into which Canadian farmers at the present time are too apt to be betrayed, in consequence of the high prices offered just now for wheat; the liberal supply of manure with which they hope to renew the vigour of the soil, does but increase the rankness of the straw, thereby encouraging the attacks of these diseases, while the ears of