

ous kinds of salt, from the coarse crystals of solar evaporation, as large as walnuts, to the snowy white table salt, almost as fine as flour, and consisting of grains or crystals less than one hundredth of an inch in diameter. The collection of Vegetables was small and of moderate merit. Domestic Hall contained a good collection of various articles of domestic fabrics, and sewing machines in large numbers. The improvement in the facilities for the manufacture of cheese, was indicated by the large collection of Cheese Vats, for holding the milk and giving to it the proper temperature, as well as for ease in the management and transfer of the materials. All of these were heated by means of a plate or stratum of hot water surrounding the milk. Among others, we observed those exhibited by D. W. Maples of Homer, Cortland County; O. O'Neil & Co. of Utica; H. & E. F. Cooper of Watertown. (Roe's vat and heater;) and Wm. Ralph, Holland Patent, Oneida Co. The cost of these vats of equal size, was about the same, varying from size to thirty to fifty dollars. A. H. Emery's anti-friction cheese press, is constructed on a principle similar to that of Dick's, but with longer rolling surfaces, and with an iron axle, worked by a winch, working between and in contact with them. We estimated its power by calculation, if strong enough made, to be that of 25 tons, for a hundred pound force applied to the winch. It cut through and broke off short pieces of strong scantling. Those who are familiar with the labor of working butter by hand, will not wonder why there is so much bad butter owing to the amount of buttermilk left in it. Machines which abridge the labor some twenty times or more, have humanity as well as economy to recommend them. Two were on exhibition; Hotchkiss's is worked by a lever working on the knee-joint principle, and pressing the unworked substance between two surfaces; and Rhoads's, which has a corrugated roller passing alternately over it.

One of the most really meritorious machines, was the Clothes Wringer, manufactured by the Metropolitan Washing Machine Co. It must save labouring women a great deal of severe labor. It is attached by screwing to the side of a wash-tub, and the clothes are passed by turning a handle, between two rollers covered with India rubber. The force required is slight, and by moderate motion a large sheet was passed through in five seconds. It was left slightly moist, but dry enough to prevent any sensible moisture being imparted to a sheet of wrapping paper placed beneath.

AGRICULTURAL DISCUSSIONS AT THE STATE FAIR.

THE ARMY WORM.

On the evening of the 17th Dr. Fitch gave a very acceptable lecture on the Army Worm, interesting for his theory of its sudden and my-

sterious appearance. He stated that this insect, when done with its depredations, entered the ground to the depth of about two inches, the miller or perfect insect emerging two weeks afterwards, to lay its eggs. It probably deposits its eggs at the root of the grass. It has not been ascertained till recently what this insect is—it was believed formerly to be the common cut worm. Specimens had been sent from the Western States and from New England, and it has been found identical with an insect described 50 years ago in England. It is not the cut-worm, but strictly a grass moth, of which there are several species in this country, secreting themselves in grass. It is one and the same species all over the country—is most remarkable for the manner of making its appearance suddenly in countless millions, and departing as suddenly without leaving any apparent descend ants. It resembles in its destructive effects the eastern locust, but unlike that it cannot fly, but can only walk, constituting the infantry or foot soldiers merely. How then does it come? Dr. F. has no doubt that it is a constant resident here in the Northern States and that it ordinarily lurks in the wild grass of swamps. The reason that it is not commonly discovered is that we are driven away from such places by clouds of mosquitoes, or prevented by them from examination. There are no marshes near his residence, and no army worm has there made its appearance. "Sportsmen," (whom Dr. F. termed "bird murderers,") have probably observed large spots in such places, where the grass was all devoured. He asked why it had not come up along the Connecticut river this year, where in 1770, ninety years ago, it was so destructive? Simply for the reason that most of the marshy margins of the river are now drained—it being now chiefly confined to the sea coast, where drainage could not be effected. He thinks he has ascertained the reason of the mysterious and sudden appearance, which is this: The season was very dry last year, as is well known by the famine in Kansas, the swamps became dry, and thus gave the insect an unusual feeding range, favoring their increase. This year was very wet, the swamps were overflowed, and the insects were driven out among the crops, and scattered their eggs over the country. Thus a dry season favors their multiplication, and a wet one spreads them. This is the present view, although circumstances may modify it, but he is fully persuaded it is substantially correct. In 1815 the army worm was very destructive; in 1816, a very dry year, the insect increased, and he infers that 1817 was wet—and also that 1769 was dry, and 1770 wet. He finds by examining an old medical work that the former year was remarkable for its heat, and from the papers of the day, that 1770 was remarkable for its storms, and he mentioned other corroborative evidence.

It seems, he remarked, that this insect is ordained by nature to keep huddled together in