

Live Stock.

A New Sheep Wash.

The English papers have accounts of the public trial of a new sheep wash and new dipping apparatus discovered and invented by a Mr. Little, a gentleman not unknown in scientific agriculture. One thousand lambs were dipped during the day in the presence of a large number of flock masters, graziers, and farmers, to show the rapidity and convenience with which sheep may be cleaned with cheap and simple means. The character of the chemical fluid employed is in many respects very remarkable; for although it is so powerful in effect with respect to the destruction of insect life, it is perfectly harmless in its action on the sheep. In appearance it is a thin transparent black fluid, but directly it comes into contact with water, in the proportion of one part to a hundred, it is as by magic turned into milk. Nothing can possibly be more simple than the process of mixing, as it requires no warming or special manipulation to make it ready for use. It has no ill effect on the hands or arms of the men using it, and the entire absence of all danger is proved without the least doubt, from the fact of Mr. Little having administered internally to a number of small lambs as much as a quarter of a pint of purified fluid, of the same strength as used for dipping, without producing the least ill effect in the lambs whatever. Highly interesting and important experiments are now being carried on for the purpose of destroying internal parasites, especially that terrible scourge known as "the worm in the throat," which he hopes to destroy, and, what is still better, to show that in this matter "prevention is better than cure." To wish success to this valuable agent is to wish well to all persons interested in wool and mutton. Other simple and ingenious forms of apparatus for washing or pouring over sheep were exhibited by casting or fixing a number together on their backs. As a question of economy and portability in carriage for foreign countries it is important, because one gallon will bear diluting with a hundred gallons of water for ordinary dipping, making double the quantity of most other materials, and at the same cost. Its action on wool has been tested at Bradford by washing; it leaves the wool soft and silky in character, and without any evidence of discolouration or stain.

A Sheep-Shearing Machine.

Of great interest to all who grow sheep on a large scale are any inventions which tend to reduce the expense of harvesting the wool-crop. About a year and a half ago, we published a cut of some improved sheep shears which seemed, judging from the multitude of enquiries which poured in upon us, to be just the thing. Since then, however, we learn that those shears have been still further improved by making them cut with the back action as well as the forward. We have no doubt that when the implement is perfect, its sale will be pushed on this continent.

As of interest in this connection we reproduce from the *American Agriculturist* an engraving of a wool-cutter which is driven by compressed air. Of course it will be of more use among the great flocks of Colorado and New Mexico, than among the less numerous flocks of Canada. It is claimed for the machine that a sheep can be sheared in five minutes much better than could be done by hand. The fleece is cut off very evenly and closely with this machine; the sheep cannot possibly be cut by it; and there can be no cutting through and injuring the staple. The cutters, made precisely upon the principle of the mowing-machine knives, are of chilled steel, and are self-sharpening. The motion is communicated by means of compressed air which reaches it through a pipe attached to the tube on the left side of the machine, and 3,000 revolutions per minute can be easily given to it, although 1,500 revolutions are sufficient for a working speed. The air pump is worked by a crank, and one man can produce sufficient power to work 25 machines. The air is forced from the pump through a flexible rubber tube, which allows ample freedom of movement. The working pressure of the pump is 5 lbs. per square inch, but it may be worked up to 15 lbs. by using an engine or windmill. One pump

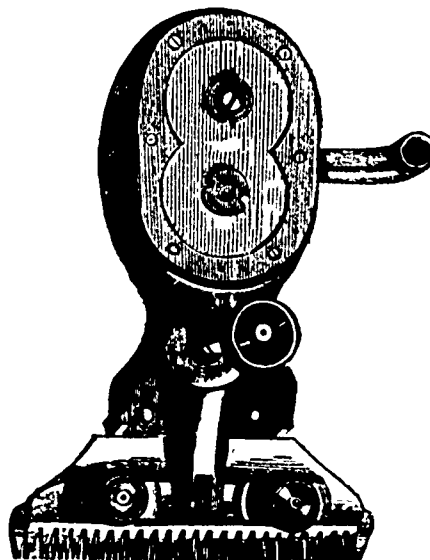
is sufficient to work 25 of the shearing machines, and these may all be attached to a supply pipe, from which the compressed air may be let off or on to the machine as needed, by taps. Thus one pump will supply power for 25 shears, and these having merely to hold and direct the machine, which barely fills the hand, and requires no muscular force to work it, are not exhausted, or required to stoop over the sheep—if benches are used—and may therefore work more quickly and certainly than with the ordinary hand-shears.

The machine is also adapted for clipping horses, for which purpose the motive power used, and the method of attachment, are well adapted. It is also perfectly adapted for shearing pelts, instead of "pulling" the wool from them, by which the quality of the fleece is injured.

Shearing Years.

Concerning the causes which go to produce what is called a "shearing year," R. M. Bell, who is a noted Illinois sheep-man, writes from the Sacramento valley to the *National Live Stock Journal* as follows:—

Shearing years are not to be accounted for on the old trapper's theory of "mild winters make light fur." On this theory, Vermont would shear heavier fleeces than Texas or California, the winter being severe in the one, and being none in the other two regions. This pet theory of trappers and guessers has no foundation in the facts as we find them. In the Sacramento valley we handled a flock of Vermont ewes that clipped, at the two shearings they give sheep there, 17 pounds of wool, unwashed. The condition as we noticed, promised to be as free from dirt



SHEEP-SHEARING MACHINE.

and trash as Illinois wool. These ewes in Vermont probably would average 12 pounds, not more. The climate in Sacramento valley is very mild—ice as thick as a trade dollar is a severe freeze. Quite the same condition and results are found in Texas.

Now, we all know we have shearing years. The winters preceding these extreme clips fier. The summers have as much to do in making this a reference as the winters. The rains of 1875, that came in May and June, produced grass so abundant and washy, as to seriously interfere with the health and condition of sheep in Illinois and Missouri. The wool failed to grow during this time, and the vigor of the sheep was so impaired as to prevent the growth for a time after we began to feed. Those who began to feed early, or, better yet, who continued to counteract with corn the effects of the poor grass all summer and fall, found no such serious falling off in weights of fleece. Three years ago with us was a light shearing year. A drouth set in in June, and for three months we had no grass, and the sheep did poorly for three months, and the fleece for four or five months. If the sheep are well summered, the wintering is easily done, if feed is abundant, and the finest success produced in heavy, good fleeces. Flocks unhoused shear lighter, of course, when the spring rains are abundant and warm—the yolk is the more readily dissolved and washed out. I notice a fine report from certain flockmasters every year, confirming the opinions I have given above. If the conditions of health and thrift are such as to secure a growth of wool every day of the 365, we have a shearing year. A mild winter to a well fed sheep is agreeable, and favors carcass, and so fleece. Good shelter counteracts, or helps to resist, inclement weather. Grain, though stoutly opposed by the average stockman—except short-horn and hog men—should be fed any time in the year when the quantity or quality of grass in the pastures make it necessary, to enable stock to preserve condition and growth. Breeders with small flocks

of fancy sheep often force a growth of fleece; and in so producing an enormous weight, weaken the physical force of the sheep, so that there will be a falling off next year, and the previous enormous growth may never be repeated by the same sheep. Good, creditable shearing is that which reports the same sheep, year after year, by number in ear, and is careful to give exact date of growth of each fleece; then you know there is no stubble shearing, nor reporting every other year.

The Neat Habits of Swine.

It is a prevalent belief with the majority of people, says the *New York Herald*, that swine are filthy animals. But no impression is more erroneous. The truth is, there is no other domestic animal that is naturally so neat and clean in its habits as swine. The reason why swine have had the odious reputation fixed upon the race as being "as filthy as swine" consists in the fact that these animals are usually confined in small pens or filthy yards, where it is impossible for any animal to keep clean. Let swine have the advantage of a spacious yard and every animal will deposit its fecal matter near some corner. A sow having a large brood of pigs will soon teach every one to keep their feeding and sleeping apartments free from all droppings by going to some distant corner to cast out all fecal matter. Horses, mules, neat cattle and sheep will not do this. They will all drop their ordure and urine where they feed and where they are accustomed to lie down, until the floor is literally covered with filth. Professor Law, when alluding to the filthy manner in which swine are kept, says it is here that the pork raisers are most frequently at fault. Fifty or a hundred pigs are allowed to crowd together in a filthy manure heap, a rotten straw stack, or under a barn subjected to the droppings of other animals, as well as their own products. Their feeding troughs and drinking water are so supplied that they can get into them with their filthy feet, and they must devour the most obnoxious matter or starve. If, under this abuse, disease is developed, the healthy are left with the sick, as "they will all have it, any way," and the result is usually a clean sweep. Hence, to avoid all diseases, and especially hog cholera, swine must be kept clean. Protect them from the hot, reeking bed of manure and close sleeping place, where the emanations from decomposing dung, urine, straw and other organic matter are added to those of their own skins and lungs when huddled together in great numbers. See that both food and water are clean, in the sense of being free from disease germs and from the microscopic particles of decomposing organic matter, which, within the system as well as outside of it, furnish appropriate food for the disease, poison and favor its increase, while they depress the vital powers and lessen the chances of the virus being thrown off. No less important is the purity of the air, since the delicate membrane of the lungs, perhaps more than any other, furnishes an easy mode of entrance for any injurious external matter. Finally, purity of the blood can only be maintained by a healthy functional activity of all the vital organs, which insures the perfect elaboration of every plastic constituent of the blood and the excretion of all waste matters that have already served their purpose in the system. By perfect cleanliness the poison, even if generated or introduced, will be virtually starved out as surely as an army in a closely besieged fortress. But it will be observed that this implies the separation of sound from diseased animals, and the free use of disinfectants (solutions of sulphate of iron, and chloride of lime, fumes of burning sulphur, &c.) to purify the air and other surrounding objects, as well as the simple clearing away of filth.

How to Have Healthy Pigs.

Prof. Law, of Cornell University, in a communication to the *Husbandman*, writes as follows in regard to the proper treatment of swine for the prevention of disease: "Keep your hogs clean. Protect them from the hot, reeking bed of manure and close sleeping place, where the emanations from decomposing dung, urine, straw, and other organic matter are added to those of their own skins and lungs when huddled together in great numbers. See that both food and water are clean, in the sense of being free from disease germs and from the microscopic particles of decomposing organic matter which, within the system as well as outside of it, furnish appropriate food for the disease poison and favor its increase, while they depress the vital powers and lessen the chances of the virus being thrown off. No less important is the purity of the air, since the delicate membrane of the lungs, perhaps more than any other, furnishes an easy mode of entrance for any injurious external matter. Finally, purity of the blood can only be maintained by a healthy functional activity of all the vital organs, which insures the perfect elaboration of every plastic constituent of the blood, and the excretion of all waste matters that have already served their purpose in the system. By perfect cleanliness the poison, even if generated or introduced, will be virtually starved out, as