Hungary, when the poultry epidemic broke out-eruption about the eyes, head, feet, &c., a cure was effected by touching the affected parts with a brush dipped in a solution, adding the acid to a tub in which ducks and geese could bathe, and mixing it with the sand or ashes wherein fowls liked to roll. Of late, in Germany, salicylic acid has been successfully and generally employed, not as a remedial, so much as a preventive agent. For horses, bulls, cows, &c., these receive one thirtieth of an ounce daily. smaller stock in proportion: about 3 ounces of the acid are dissolved in a bucket of warm water, and the solution proportionably distributed. As an antiseptic, the acid is excellent. An objection has been made that it lessens the reproductive powers of stock, but Mr. Ludloff, who has employed the acid daily for five years, finds, that 100 cows produced 89 calves, while the average was 88 for the preceding five years. The generative functions are thus unaffected. The cost of the acid, per head of cattle, per week, is only one penny.

The cultivation of the parsnip is taking extensive proportions in France as a forage plant, its natural home appears to be Brittany, where it continues to grow till the close of December. Mr. LeBian has made the culture of this root a speciality, and is in a fair way to substitute it extensively for oats for horse feeding. It goes capitally with maize, and hogs accept it as a dainty dish.

The scat and centre of the *charbon* disease, or "mountain malady," is in Auvergne, the Pasteur process of vaccination has been tried in several of the mountainous districts, and with the fullest success. Mr. Pasteur announces, that he is occupied in the grangement of a little laboratory for the commercial preparation of vaccine. He will not be ready to execute orders till next spring. no loss will be incurred in the interim, as the disease is limited during winter. He will prepare 44 gallons of the matter, sufficient to vaccinate one million of animals, it will be forwarded in special glass tubes, and the cost will be one-half penny per head of stock. Up to the present, 30,000 animals, sheep, oren, cows, horses, &c., have been vaccinated, and with success, in the sense that they have been saved, while others at their side have succumbed.

The two most successful means for destroying the phylloxera are, autumnal inundations followed in spring by rich manurings, and next, the sulphuret of carbon, in the proportion of three-quarters of an ounce per square yard, dibbled in round the roots. The sulphuret has the disadvantage of being dear, and the draw back of killing the patient occasionally. Where the latter occurs, the cause will be found to reside in an excess of humidity in the soil, and the lowness of surrounding temperature. On well-drained lands, having a silicious or calcarcous subsoil, the sulphuret may be employed with safety; treat only vines not too gravely attacked by the insect, and select winter for the work, where the soil is tenacious and the disease of long standing, multiply the holes in the square yard and reduce the doses. In spring, apply farm yard manure, with the addition of potash salt, in the Chloride form for example, but never employ oil cake.

The Dutch Poultry Show was especially remarkable for its splendid organization. the birds had little parks in which to move about, and water fowl had their bath, all, as might be expected from the country, proverbially clean. It was the unanimous opinion that the flower of the flock were the Dutch Padonaps. (1)

Mr. Barral has made some experiments on the quantity of food consumed and assimilated by poultry, and concludes, that

(1) A new breed to me. Legherns I know and Houdans, but I never heard that Padua was celebrated for any thing but for being the birth place of Titus Livius, and for bad latin! A.R. J. F.

weight for weight, they cat more than mammiferous animals, or birds at liberty.

The department of the Seine Inférieure is very pastoral, it has 133,000 milch cows, yielding on an average, 6 quarts of milk daily; from this milk, butter, valued at 26 million frs., and cheese, at 7 million frs., are manufactured. It is proposed to create a model dairy farm, totally independent of the State, where, as in Denmark, theory will march hand in hand with practice. Were the capabilities of this region developed, the butter made to day, could be sold in London next morping.

Petroleum cures cutaneous affections; Mr. Desbois finds, if it does not kill ants, it drives them away, as he knows from experience in his conservatory.

It has been decided by several of the Councils General, that for the future the highroads and by ways shall be planted with fruit trees, instead of elms, poplars, acacias, ash, &c., that merely exhaust the soil.

The vintage is excellent this year in point of quality. The beet crop will not be heavy, but the juice will be very rich.

AGRICULTURAL MACHINERY.

THE M'CORMICK GOLD MEDAL TWINE BINDER. The engraving, in our last number, represents a rear and side view of the gold medal sheaf binder of the M'Cormick Harvesting Machino Company, Chicago, Illinois, U. S. A., Messrs. Lankester & Co., of 228, Upper Thames Sreet, London, E. C., are the exhibitors and sole consignees. With the exception of the binding apparatus it is similar in construction to the M'Cormick wire binder, of which illustrations were given in the Agricultural Gazette, 1878. This is the fourth gold medal the Royal Agricultural Society have awarded this American house, viz, 1851 and 1862, both London; 1878, Bristol, and 1881, Derby. Such successes will doubtless give rise to no little comment on both sides of the Atlantic. What will most interest English makers of reaping machines is the fact that the gold and silver medals are awarded for sheaf binding only, that, thus far, the three medal machines are manufactured on the principle of Appleby's American packing and binding apparatus; that such is public property in England, and the judges highly commend Mr. King's principle of tying and separating the sheaf, which is different from Appleby's and certainly preferable. Some slight alterations have been made in the reel platform and elevator, but it is questionable if they are improvements, for the Bristol wire binder made better work in reeling, cutting, and elevating over the wheel, and also in separating the sheaf, than does the Derby twine binder; and if the reader will compare the illustration of the latter with the two engravings of the former, the only difference worth noticing is the position of the driving gear and its simplification. The latter is a decided improvement, the former is the contrary, for with the exception of the chain gear that drives the reel, all the other driving gear is inside the main driving wheel, which increases the weight on the grain wheel and also the sidedraught. The driven gear of the packing and binding apparatus, which is intermittent in its action, is outside the main driving wheel, which helps to counteract the weight on the grain wheel and side draught, but taking everything into account, including the position of the pole, side draught, and the balance on the main supporting wheel of the Derby machine (1881), it is not improved, but the contrary, as compared with the Bristol machine (1878); and it is much to be regretted that the judges did not test the draught and side draught of this mabhine, as they were evidently greater than in the silver medal machines, and also in Wood's binder, and in King's. At Bristol the binder arm was elevated above the centre of gravity, and had a to-and-fro traverse on the binder platform. At Derby there is no tra-