

FARM, FIELD AND GARDEN.

SUBJECTS THAT WILL BE FOUND OF INTEREST TO FARMERS.

Good Advice for the Farmer--Sheep Raising a Good Business--Feeding Dairy Stock--Cure of Roup--Damage to Silos.

Good Advice to the Farmer.

Every farm should be an "experiment station" to some extent. The stations under the control of the State are, when properly directed, of great benefit to the agricultural industry as a whole...

Sheep Raising a Good Business. "Whatever may be said of the prices of wool," says the Rocky Mountain Husbandman, "there is no gainsaying the fact that so long as mutton commands its present figures sheep raising will be a good business..."

Cure of Roup. For roup, give the fowls a dessert spoonful of castor oil apiece at night, and afterward feed chieflly on warm cooked food in which is mixed once a day a good allowance of cooked onions. Pulverized charcoal in the food once a day is also beneficial.

It is sometimes objected that experiments conducted on a small scale are deceptive--that they do not fairly indicate what the result will be on a larger area. There is some truth in this; but even if the same proportion of yield is not maintained on the acre or ten-acre field as on the little plot of carefully fertilized and thoroughly filled soil...

It may be learned, for example, what variety of grain yields the best returns; what potato is most suitable for the soil; what brand of commercial fertilizer will best promote the growth of the variety chosen. To be sure, the experiment might be made at once on the large scale, but it is comparative returns that are especially aimed at in conducting small experiments.

Feeding Dairy Stock. One of the leading dairymen in a state which is noted for its dairy interests, is quoted as saying that while he believes an occasional change of diet is a good thing, he feeds "what is handiest, only enough of it and at regular hours."

Farm Notes. Do not compel the hog to eat his meals in the dark. Feed at regular intervals and while it is light. Young cows kept for breeding should be fed so as to obtain a good development of bone and muscle.

Damage to Silos. That was a very sensible action on the part of the experiment station authorities of Wisconsin to make a tour of investigation of the silos of the State to discover wherein lay the weak points. There has been such complaint about the rats burrowing underneath and letting the air into the silos were found injured in a way. To avoid this nuisance it is recommended that the bottom be

SCIENCE AND INDUSTRY.

WHAT INVENTIVE MINDS ARE DOING FOR HUMANITY.

An Electrician's Novel Scheme--Fast Time in the Future--Stainless Barrels--Oxidized Water in Medicine--Science in Bread-Making.

Electricity can be purchased by the gallon and carried home like oil. So says Walter A. Crowder, a Southern inventor. Mr. Crowder believes he has discovered a means independent of the steam engine and dynamo for generating electricity of sufficient power to furnish light, run pumps and propel street cars. He produces electricity by chemical action.

The primary battery has long been in use for telephone and bell service. Mr. Crowder's battery, he claims, is a constant source of power. Mr. Crowder's room at the Palmer House is full of electrical contrivances. The dimensions of his small battery--one eight horse power--are six inches. The cover is of hard rubber. Within are four compartments, each containing a cup. To charge the generator the inventor fills the cup with a mixture of sulphuric acid and water.

The battery was then connected with a sewing machine by means of two insulated wires, a switch was turned and the machine was running. A slight movement of the switch made it possible to regulate the speed as desired.

The battery was next connected with an incandescent electric light burner. It furnished a strong, steady light. Connection was next made with a pair of carriage lamps with good results. In practice, Mr. Crowder said, a generator would be placed under the seat and would run the lights twelve hours. There was in the room an electric vase lamp, the battery furnishing the base on which the lamp rested. The inventor remarked that this was the most powerful portable lamp ever constructed, in fact the only portable electric lamp possible.

Stainless Barrels. It is doubtless a matter of general knowledge that the bodies of casks and barrels are composed of a number of tapered staves, which are assembled together, held in position and hooped up. By a novel and ingenious method of manufacture, casks are now being manufactured from one piece of wood, and therefore without any staves, or it may be said, with only one, the body constituting in itself a long, single stave. The method of preparing the body of the cask may be likened to the sharpening of a lead pencil by a pocket-sharpener.

Science in Short Doses. A new mineral has been discovered, to which the name sanguinite has been given. It is bright red in color by reflected light, and upon analysis is found to contain silver, arsenic and sulphur.

Science in Short Doses. The strength of spider silk is incredible. Size for size it is considerably tougher than a bar of steel. An ordinary spider thread is capable of bearing a weight of three grains, while a steel thread of the same thickness would support less than two.

Peerless Feed Grinders. In the last two years New London (Ct.) lobstermen have bagged in their deep-water traps in Fisher's Island Sound not less than five or six indigo lobsters, which are so rare that it is not known that more than two of the kind had ever been taken in the world before. In the same time two blue lobsters were caught by Maine fishermen. Blue lobsters are as blue as the summer sky, and extremely beautiful.

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day the little steam yacht the Vamoose developed a speed of thirty miles an hour, and her rival, the Norwood, will try to do still better. On a recent Sunday in July the Royal Blue Limited, changing engines at Philadelphia, made the 226 miles from Washington to New York, with the usual allowances for stops, in 290 minutes, at the rate of 51.9 miles an hour. One mile was made on this trip in 44 seconds, and two successive miles in 45 seconds each. As the fastest train in England, the Flying Scotchman, runs from London to Edinburgh, 400 miles, with a similar time allowance for stops, in eight hours and a half, or at the rate of 51.6 miles an hour, this fast trip of the limited was deemed a record breaker. But as the time draws near for the World's Fair at Chicago the rivalry between the great railroad companies grows more intense, and the New York Central Railroad Company made a great effort, which was a supreme success. A special train was run from New York to East Buffalo, and made the 436 miles in 439 minutes, including stops. So great a speed for such a distance is believed to be unequalled.

Science in Bread-Making. At the recent annual meeting of the Chemical Society, held in Washington, D. C., the question of the value of carbonate of ammonia as a leavening agent in bread or as used in baking powders came up for discussion, in which Prof. Barker, of the University of Pennsylvania, and President of the Society; Dr. Richardson, late of the United States Department of Agriculture in Washington; Dr. William McMurtrie, late Professor of Chemistry in the University of Illinois; Dr. E. H. Bartley, late Chemist of the Brooklyn, N. Y., Board of Health and Professor of Chemistry of the Long Island College, and others took part.

The consensus of opinion was overwhelmingly in favor of the employment of ammonia. It was stated as a fact that ammonia rendered the gluten of the flour more soluble than the original gluten, and that the bread in which this action was produced by carbonate of ammonia was more digestible, and hence more healthful, and because of the extreme volatility of carbonate of ammonia and its complete expulsion from the bread in the process of baking it is one of the most useful, most healthful and most valuable leavening agents known.

These conclusions are borne out by the very elaborate and exhaustive experiments made by Prof. J. M. Mallet, of the University of Virginia, which show conclusively that bread made with a baking powder in which 1 per cent. of carbonate of ammonia is used, in connection with cream of tartar and soda, is not only uniformly better color and texture, but a product more wholesome, because the ammonia serves to neutralize any organic or lactic acids present in the flour.

Oxidized Water in Medicine. It appears from the statements made in medical quarters that peroxide of hydrogen, or oxidized water, is rapidly taking an important place in medicine, being declared not only good or useful, but really necessary. As ordinarily known, the peroxide of hydrogen is 3.2 per cent solution, yielding fifteen times its volume of oxygen; and in its application this solution is said to be nearly as bland as water, causing smarting only on such surfaces as the interior of the eye or nose, yet it acts so powerfully as a germicide, as to kill anthrax spores in a few minutes. The chief value, however, of the peroxide is asserted to be in stopping suppuration and sterilizing wounds, which it does more effectively than any other substance.

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