

organs broke out in all the infected animals. After death, extensive tubercular infiltrations were found at the place where injections had been made, and in neighboring lymphatic glands, and also far advanced alterations of the internal organs, especially the lungs and spleen. The difference between human and bovine tuberculosis appeared not less strikingly in similar experiments with asses, sheep and goats, into whose vascular systems the two kinds of tubercle bacilli were injected. These experiments were not the only ones that have led to this result.

Incidentally he pointed out that cases of primary tuberculosis of the intestines were extremely rare, though it was well known that milk and butter consumed in great cities contained large quantities of the bacilli of bovine tuberculosis in living conditions. He also quoted the old experiments of Chauveau, Gunther, Harms, Ballinger and others, showing that human tuberculosis differed from bovine.

#### DAYLIGHT AT LAST!

It is fitting that the opening year of the 20th century should be signalized by the vindication of the cow from the dark and sinister imputation that, through ignorance or by design, has rested upon her. Directly or indirectly, it has been insinuated that human consumption, which in Canada alone is credited with one-fifth the deaths, or 8,000 annually, was largely due to germs conveyed through milk or meat. This view was directly disputed by Prof. Wm. Osler in his celebrated review of the medical progress of the 19th century, quoted in the FARMER'S ADVOCATE for Feb. 15th last, who singularly and significantly foreshadowed the present Koch deliverance. It is also in accordance with the eternal fitness of things that the discovery above stated and its announcement should be made by Dr. Koch, the discoverer of the tubercle bacilli in 1882. In the course of his investigations in 1890-91, he prepared, from gradually-attenuated cultures of the tubercle bacilli, a fluid called tuberculin, designed to be administered as a hypodermic injection as a cure for consumption, but which by 1894 had been discredited as a remedy. It was subsequently found that when hypodermically injected under certain conditions into animals having tubercles, however minute and innocuous, a reaction was set up, causing the animals' temperature to rise. Designing pseudo-scientists were not long in seeing rich possibilities of exploiting tuberculin as a test for cattle, though now known to be a failure. In several European countries, Canada and the United States it was officially inaugurated, in the latter reaching the climax of a crusade of slaughter in several States. Against this senseless folly cattle-owners rebelled, but once the system secured a foothold faddists were enabled to hamper with intolerably vexatious restrictions the movements of breeding cattle, doing immense damage to the industry. We put it mildly in saying that a more useless, injurious, costly and gigantic humbug than the tuberculin-test crusade was never imposed upon a deserving industry and a long-suffering community. Mr. Henry Chaplin, a former chairman of the British Government Board of Agriculture, presiding at another session of the Tuberculosis Congress, said, had the theories of officials been correct regarding tuberculous cattle it was a wonder that anybody was left alive in England. He blurted out the truth, however, that while the Government had been zealous in enforcing regulations against foreign cattle and meat, it had not been equally vigorous at home.

Many thoughtful physicians have long doubted the theory which Dr. Koch has now shattered. No one in his senses could believe that the 8,000 persons dying yearly from consumption in Canada contracted the disease from meat or milk of our cattle. And yet, upon this fiction the tuberculin-test system had its strength, leading the Dominion Minister of Agriculture to fear that its non-enforcement would lead an indignant people to sweep the Government from power. For its perpetuation there is now no excuse. The attitude of the FARMER'S ADVOCATE throughout this lengthy struggle was taken in accordance with what we conceived to be common

sense and the known facts of science and experience. It is, therefore, with no small degree of satisfaction that we record the deliberate conclusions of the world's foremost investigator, reached after years of patient enquiry, again vindicating, as time has done in other important matters where we found it necessary to take a decided stand, the soundness of our position. The announcement has created a profound sensation throughout the civilized world, putting the treatment of human consumption upon rational and specific grounds, while the stockman can uninterruptedly pursue by every intelligent means in his power, as was always in his interest to do, a policy for the perpetuation of healthy and profitable animals.

#### Our Scottish Letter.

The Canadian representatives who are with us are not allowing the grass to grow under their feet, and Mr. Fisher and his colleagues, to us staid, old-fashioned people, seem to be making records in travelling. Fortunately, trains hereabout do travel at a speed which even a go-ahead American cannot despise, and a man who means to get over the ground can do so if he only is determined enough. Many interests are engaging the attention of your representatives, and it would take an encyclopedic pen to chronicle all their doings. At the Cardiff meeting of the Royal a week ago, Mr. Fisher could be seen in earnest conference with mayors, alder-

men, Ayrshire breeders, like all others, have gone to an extreme, and making this tight vessel, with its almost unfailing concomitant—the corky, short teat—the be-all and end-all of their favorites, have often overlooked frame and substance, and the animal which occasionally leads in the show-yard sometimes appears a veritable “weed” to the non-fancier. Judges are usually fanciers; they have the show kind themselves, and have therefore neither interest nor desire to overlook the points most in favor in the ring. This is perfectly intelligible on their part, and yet it is an abuse against which the press and public opinion must maintain a consistent protest. The fact that, apart from show animals, so large a number of high-class dairy cows can be found in the Ayrshire breed, is proof that the protest of the public and the press is not unavailing.

The Royal Show at Cardiff was an interesting event, and proved highly successful. The Society paid its previous visit to Cardiff in 1872, and possibly there is no town in England and Wales which has undergone so great a transformation in the intervening period. The South Wales coal fields have been developed, and the Bute docks built by the superior, the Marquis of Bute, who has handed them over to the Dock Trust. This has led to the doubling, or it may be the tripling, of the population during the past twenty years; and at present Cardiff has the greatest registered tonnage of any port in the United Kingdom. It is not an industrial, but a seaport town, and consequently not manufacturing but commerce predominates. The country around is romantic enough, and the various places of resort on the Bristol channel are thronged day by day by visitors from Cardiff. The miners have certain fixed holidays every week, and this ensured an enormous gate. The show was favored with superb weather, and the ladies turned out in their thousands, and in the gayest attire. It is long since the Royal had as animated a show-yard, and, from the spectacular standpoint, as successful an exhibition.

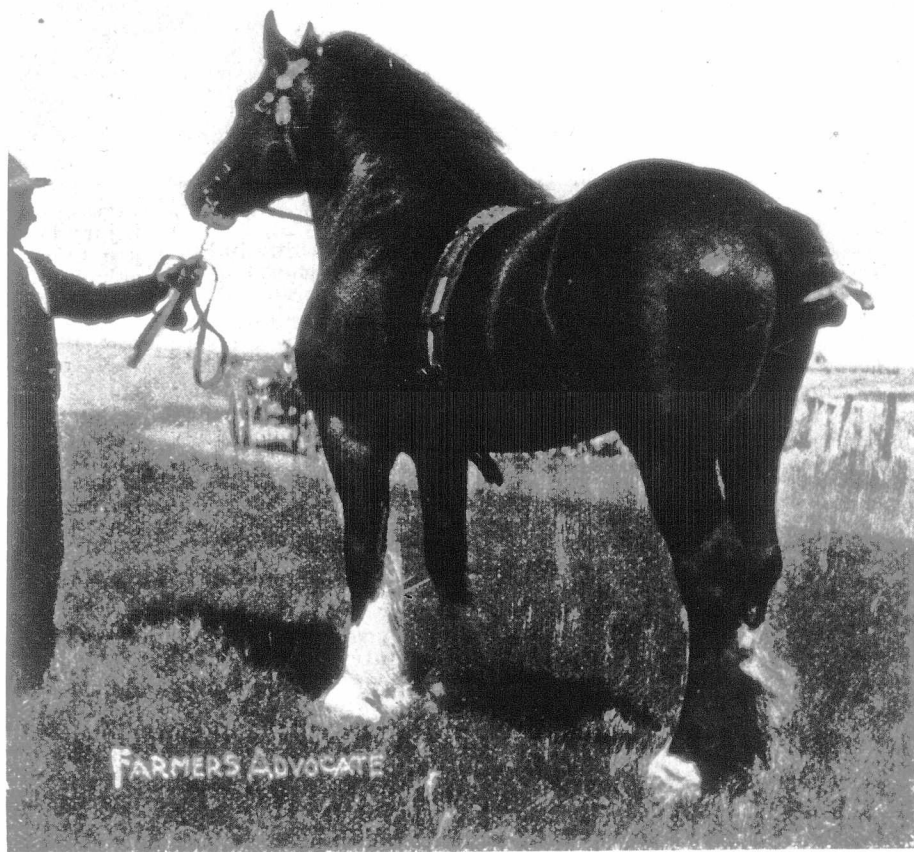
So far as the display of stock was concerned, Cardiff would take second place. The breeds of cattle which made a creditable entry in respect of numbers and merit were the Shorthorn, the Aberdeen-Angus and the Galloway. Herefords, although near their native heath, were not above an average, and Devons were pretty but not too numerous. Jerseys were in evidence in large numbers, and no doubt they have their uses, but commercially a limited number of them would suffice. The great show was undoubtedly in the Shorthorn department. Numbers and quality were alike high, and the victory of His Majesty the King was very popular. His Majesty has two great bulls in Royal Duke and Pride of Collynie. The former was bred at Windsor by the late Queen, and has never known defeat. He is a great, wealthily-fleshed animal of the Scottish type, with the flesh built on him to perfection. He is a bit narrow in front, and indeed rather disappointing in the brisket; but his championship was not challenged. Pride of Collynie was bred by Mr. Duthie, and was brought out by an Aberdeen-shire tenant-farmer, Mr. James Durno, Jackstown, Rothie-Norman, who bought him at one of Mr. Duthie's autumn sales. He is a great bull, with a lot more style than many of the Aberdeen Shorthorns possess. He

was second at the Highland last year, and was then bought for the Sandringham herd by Mr. Beck. Had he been put in front of Royal Duke no one would have been displeased and no wrong would have been done. Mr. Deane-Willis had the female championship with a three-year-old white heifer in milk, a beauty of the first rank, and one of the best Shorthorns seen for many a long day. Mr. Robert Wilson, Kilquhanity, Dalbeattie, showed a number of first-class Galloways, mainly of Tarbreoch breeding, and Mr. Robert Graham, Kirkconnel, Ringford, Castle Douglas, also showed good stock of the same kind. Mr. Thomas Smith, Powrie, Dundee, had the champion Aberdeen-Angus, a magnificent cow with a white udder. Her like is hard to find. Mr. J. J. Cridlau, Maisieinore, Gloucester, had the best bull, a magnificent, level two-year-old, named Elate. Ayrshires were shown by Mr. Andrew Mitchell, Barcheskie, Kirkcudbright. He swept the decks.

“SCOTLAND YET.”

#### A Branding Mixture for Sheep.

Tar by itself is of very little use for branding sheep, because the marks made by it soon disappear if continually exposed to the sun. When prepared with a certain proportion of pitch, however, it can be made much more lasting. The proportions in which the pitch and the tar should be mixed for this purpose are about a pound of the former to a gallon of the latter. The best method of preparing this branding mixture is to heat the tar to boiling point and then add the pitch, allowing the vessel to remain on the fire until the pitch has melted and become thoroughly incorporated with the tar.



WALDO [8067].

Noted Clydesdale stallion. Owned by John Clark, Jr., Crowfoot, Alta.

men, presidents and secretaries of sundry boards, and other eminent persons. Mr. Hodson was endeavoring to convince the writer that it would be for his advantage to visit Canada (which doubtless is true), and Mr. Green was intent on arguing the new rules of the American Shorthorn Society with leading lights of the British Shorthorn Society. All this shows energy and enterprise. The other members of the staff were examining stock and making an uncommonly good use of their time.

Amongst other discoveries made by your men, it is gratifying to know that they have discovered heaps of Ayrshires which give milk, have capacious vessels, workable teats, large frames and sound constitutions. This is well, and corroborates the opinion held by many in this country, that they who form their judgment about Ayrshires on what is seen in a show-yard may make a mistake. In the show-yard type good points are exaggerated so that the balance of parts is disturbed, and instead of an all-round animal, we have one that excels in a particular point, but not in all. The whole question of the effect of this on the breed as a whole will stand some thinking—and the argument is not wholly against the show-yard.

In all domestic animals there are certain points which more than others are needful for the practical use of man. In the Ayrshire cow, a tight vessel well gripped up behind and well carried forward in front is needful, because the vessel is apt, in time, to become shapeless and trail very near the dirt—a condition not at all conducive to clean milking or the purity and wholesomeness of the product. But in the anxiety to get a point which is difficult of