

his noble friend, for he assured them it was a most difficult one. Lord Walsingham had asked him how he could account for the intermixture of clay, sand, and flints, that was found here and there in the different pits that were sunk. Geologists merged all these materials in the common name of drift. They were drifted materials that had been carried from different rocks over the surface of the land. The sub-soil was chalk, but some of the soil which covered it was, he was happy to say, sufficiently thick to bear the magnificent oaks he had seen on the estate of his noble friend; while, from what he had seen during the little partridge shooting he had enjoyed with his friend the Duke of Wellington he found it thin enough for the chalk to be seen at the surface. How to account for every heap of sand or gravel would defy the best geologist that ever lived; and his lordship had, therefore, propounded to him a question which no geologist at this moment was in a position to answer.

American Cavalry Horses—their Inferiority of Quality and its Causes.

Some of the remarks in the subjoined article, which we copy from *Wilke's Spirit of the Times*, are deserving of the special attention of breeders of horses.

A long continuance of profound peace and tranquillity has invariably been found to lead naturally to a feeling of national security, and a relaxation of that vigilance which is asserted to be the price of liberty. This cause, combined with that eager and engrossing pursuit of the "almighty dollar," which is generally regarded as characteristic of the American people, has caused us to neglect the judicious maxim, "In time of peace, prepare for war." This is especially true of one of the most important arms of our military organization—our cavalry—and the seemingly studied neglect with which we have treated it, would lead to the conclusion that we ignored its value. The breed of horses best adapted for cavalry may be said to hardly exist in this country, or, at all events, only in a very limited degree. This is especially evident in viewing a regiment of cavalry at the present time, and observing the heterogeneous lot of horses on which they are mounted. Horses of every breed, except the one best suited for the cavalry charger, are there in abundance. The trotter, with his unnatural gait and unsuitable action, is alongside the badly-broken and hard-mouthed hack, and the lumbering Conestoga; all equally unfitted for active service in the field. But the true charger, nearly thoroughbred, full of fire and courage, that can clear a hedge or a ditch like a deer, carry his heavily armed rider with ease, and possess both speed and endurance in the highest degree, is hardly ever to be seen.

And to what is this deterioration of our breeding stock to be attributed? It is to the fact that in the Northern States, racing, as a national pastime, has been allowed to die out, and, as the natural consequence, we are fast losing in the breed of our horses, the speed, courage and endurance which are characteristics of the thoroughbred racer. Trotting has usurped the place of racing in the affections of the people, and the country has become flooded with a breed of horses that are utterly valueless for cavalry purposes in time of war, however useful they may be for the pursuits of peace. Such a class of horses can never be got to face the cannon's roar, or to charge the serried ranks of glistening bayonets. "Blood will tell," and they would recoil and run away in such circumstances, where the stock of the "high mettled racer" would stand firm, and, like its rider, defy the whistling storm of death.

In the Southern States, where racing, as an institution, flourishes and prospers, they possess a breed of cavalry horses which can hardly be excelled in the world. In the commencement of the present war, they far surpassed us in the number and excellence of their cavalry, and even now they are far better mounted. In the Mexican war it is well known that the cavalry furnished by the Southern States was much superior to the Northern, owing to the better breed of their horses, which could withstand any amount of fatigue and travel. In actual warfare, the great advantage of cavalry is by charging, to prevent the reforming of the enemy's ranks, after they have been broken by the fire of artillery, or by the bayonet charge of infantry; and by completing the temporary disorder, produce a disastrous effect throughout the ranks. To effect this, the horse and the rider must be so trained that every evolution can be executed with precision and rapidity; and it is essential that the former must possess courage, endurance and speed. The latter quality is as important a requisite as the other two, so that no time may be lost in making the decisive charge upon the already broken ranks. It is easy to conceive the effect upon raw recruits of a charge of well organized and well mounted cavalry, when their lines are once broken: the trampling down of the horses and the fearful execution of the riders on sabres; the temporary disorder may often precede a total rout.

In England, where racing is a national institution, patronized and supported by annual grants of money, by government itself, are to be found the best cavalry horses in the world. For the purpose the English hunter stands unequalled. He is nearly thoroughbred, and possesses all the virtues of the latter, with an increase of speed and endurance. Russia, whose Emperor, Nicholas I., has devoted such care and attention to raising a breed of cavalry horses, imports all her thoroughbred stallions from England. No price is too great for a first-class thoroughbred sire, as the best