

SCIENCE.

FRIDAY, OCTOBER 1, 1886.

COMMENT AND CRITICISM.

CONTAGIOUS PLEURO-PNEUMONIA has broken out to such an extent in Illinois as to call for most prompt and vigorous measures on the part of the state authorities. This disease has prevailed in this country to a greater or less extent among the bovine species since 1845, when it was introduced in Brooklyn from Holland. Kings county and the city of Brooklyn have been hot-beds of this form of cattle-plague from that time to the present. The state authorities attempted some years ago to eradicate it, but failed. The local health authorities have also endeavored spasmodically to root it out, but it still exists to a greater or less extent on the western end of Long Island. We notice in the daily press, that the owners of the distilleries in the west who profit by the sale of swill to the owners of the cows in the affected districts claim that there is no danger from the milk of the diseased cows, as they do not yield any. This claim is utterly without foundation. The milk becomes reduced in quantity, but often continues to be secreted throughout the attack. This effort is made to delude the authorities and the public, in the fear, that, if compelled to destroy such milk, their revenue will be much reduced. The producers of swill-milk need the closest watching. Any one who will feed his stock upon such food will not hesitate to palm off upon the public the milk from the most diseased animals as being 'pure Orange county milk.' The people of the whole United States are affected by unwholesome meat, which finds its way into the Chicago stock-yards, and have a right to demand of the authorities, municipal, state, and national, that every precaution shall be taken to keep from the shambles animals sick or suspected to be affected with any disease which tends to produce sickness in the consumers. Fortunately, there is little danger from the milk for those at a distance, but the refrigerator-cars may bring to the door of every one the meat of animals killed in the slaughter-houses of Chicago.

THE SUPERVISORS OF KINGS COUNTY, N.Y., are bearing the onus of the charge of interfering with

the proper care and recovery of the insane poor of that county. Although a large sum of money has been expended to purchase a farm at St. Johnland, Long Island, with the object in view of removing at the earliest possible moment the insane who are now crowded in the Flatbush asylum, and although every financial provision has been made to erect cottages for their proper protection, still this board neglects, week after week, and month after month, to take such action as will make possible the attainment of this end so much to be desired, and for which philanthropists have been working for so many years. The general impression prevails that the supervisors are actuated by motives which are, to say the least, very questionable, and the press is calling the attention of the grand jury to the matter.

THE NOTICE THAT HACHETTE of Paris is issuing a series of historical and archeological monographs of French towns is important as showing the increasing desire to make history something more than a dreary record of rulers and wars, and to make it tell the story of the people. In this series the volumes on Blois, Tours, Rheims, Nimes, Chartres, le Mans, Angers, Nantes, St. Malo, and Dinard, are already published. In the records of these towns and in their development are to be learned valuable lessons, and much of by no means antiquated social and political interest. In centres like these the people's life was truly lived, and it remains for the conscientious and industrious historian to reveal it to us. In England, similarly, the cathedral towns and the various shires are receiving attention; and American scholars are describing our early town and village societies, as well as tracing the development and administration of our large cities. Thus history is made; and it is owing to the broader and clearer idea of what history really means, which now prevails, that students are turning in increasing numbers to these important sources of information.

GLANDERS IS REPORTED to exist among the horses of Brooklyn and in a large stable at Coney Island. It is believed to have been spread by means of the watering-troughs, the affected animals soiling the troughs with the discharge of the nos-

trils, which thus communicates the disease. Infecting the horses is not the only danger to be feared: numerous cases are on record where grooms, and others whose duties brought them in contact with the diseased animals, have become themselves diseased, and have in most cases succumbed after suffering the most excruciating torture. The health and other officials should make every effort to discover infected horses, and to isolate them until they can be destroyed. The probabilities of recovery are so slight, and the danger both to animals and man so great, that the retention of the glandered beasts in public stables, or their passage through the streets, should not be permitted. Like the Indian, the only good glandered horse is a dead one.

THE BAD EFFECTS of the use of circular curves on city railways is shown in a striking way in Philadelphia, where the cable-road on Market Street has to make eight right-angle turns (four for each track) in passing around the public buildings on Broad Street. The harm is not only in the sudden development of centrifugal force in passing from the straight tangent to the circular arc, but also in the sudden starting and stopping of a moment of rotation — a turntable movement — as the car runs on and off the curve. In passing around the curve, every car is rotated through ninety degrees at a uniform rate; much as if an engine on a turntable were suddenly set turning, then moved steadily, until it as suddenly stopped. It is manifest that great strains are caused by such violent changes of motion, not only on the cars, but on the cables as well; and it would be worth while to go to much trouble and expense in the construction of parabolic curves in the beginning, to save wear and tear in the long-run. Horse-cars feel the bad effects of circular curves less than the cable-cars, because the velocity of the former can be adjusted to the occasion by good driving; while the latter move steadily and rapidly, without any allowance for the strain on the cars and the stretch of the cable that the curves produce. It is curious that so antiquated a device as the circular curve should survive in a construction involving so much special and ingenious arrangement as a cable-road.

THE CONSUMPTION OF TEA has become so enormous as to have suggested a study of its effects upon the health of the people. There are

those who look upon it as an evil only second to that connected with the excessive use of alcohol. Tea is spoken of as an agreeable cerebral stimulant, quickening intellectual operations, removing headache and fatigue, and promoting cheerfulness and a sense of well-being. When it is used to excess, the digestive and nervous systems are especially affected. There is no doubt that there are cases of dyspepsia caused by the inordinate use of strong tea; and it is also a matter of common observation that sleeplessness, palpitation of the heart, and nervous irritability often follow the prolonged use of this beverage. Tea-drinkers, by which we mean those who use tea to excess, are to be found in all classes of society. The fact should be impressed upon such persons, that tea is not a food, and cannot therefore, without risk to health, be substituted for articles of diet which form both flesh and bone.

ANOTHER FATAL RESULT from the administration of chloroform is reported from Dallas, Tex. The patient was a vigorous Swede forty-one years of age. He was suffering from diseased bone, due to a gunshot wound received during the late war. There were two of the most careful and skilful physicians present, who exhausted all available means for his restoration to life, but their efforts were fruitless. This case illustrates in a most striking manner the great and unavoidable danger connected with the use of chloroform as an anaesthetic in surgical operations. This patient was examined prior to its administration, and pronounced free from any heart or other disease which would contra-indicate the use of chloroform; and yet while the anaesthetic was being given, with the surgeon's finger on the pulse to detect the first evidence of danger, the heart stopped beating instantly, nor was there any pulsation after that moment. As we have already said, and as we propose to continue to say whenever opportunity offers, the administration of chloroform in surgical operations is ordinarily unjustifiable, and, unless the surgeon can give some good reason for using it instead of ether, he should be held civilly and criminally responsible in case of the death of his patient.

MUCH HAS BEEN WRITTEN on the subject of mysterious noises, which in most cases, if intelligently inquired into, would be found to have no mystery at all about them. A professor at Philadelphia recently recorded that at a certain hour

each day one of the windows in his house rattled in the most violent manner. On consulting the local railway time-table, he could find no train running at the hour specified; but on examining another table, which included a separate line, he found that a heavy train passed at the time at a distance of several miles from his house. He then referred to the geological formation of the ground between the two points, and at once saw that there was an outcropping ledge of rock which formed a link of connection between the distant railway line and his home. It was the vibration carried by this rock from the passing train that rattled the window.

A REMARKABLE LAND-SLIDE.

THE U. S. geological survey has learned from Mr. C. W. Cross, engaged in field-work at Denver, Col., the particulars of a remarkable land-slide near Cimarron, Gunnison county, which was described in the local papers as an earthquake. Professor Farnham, of the Nebraska state normal school, who chanced to be in the neighborhood, had personally visited the scene of the supposed earthquake; and when he called upon Mr. Cross, and described the appearance of the region, the fissures formed, etc., the latter inferred that a serious disturbance must have occurred along the line of faulting on the west side of the Trident mesa, indicated on the Hayden maps. As soon as practicable, Mr. Cross went to Cimarron. He found the locality about nine miles south of that town, on the east side of the west fork of the Cimarron River. Between the two forks of the Cimarron is a mesa capped by eruptive rock, the valleys on either side being eroded out of cretaceous rocks, apparently the clays of the Colorado group. The area involved extends from the base of the cliffs of eruptive rock forming the top of the mesa, down the slopes toward the valley bottom, nearly to the edge of the belt of timber. Such a crumpling of the surface had taken place, — throwing down forests in inextricable confusion, pushing the ground up into ridges, and leaving fissure-like depressions, — that the assumption by untechnical persons of an earthquake as the cause was not surprising; but, after a two-days' examination, Mr. Cross satisfied himself that there had been no earthquake, but a remarkable land-slide, involving an area of nearly two square miles. It was evident that the surface of the ground had become loosened from the underlying clay beds, probably in consequence of the seepage of water, and that a movement of the area, starting at its upper end, had been thereby instituted in the

direction of the mesa. The lower portion having moved less, or not at all, the ground there had been most thoroughly ridged, fissured, compressed, and overlapped, in such a manner that trees had been overthrown, little ponds drained and new ones formed, and the courses of small streams changed. Ranchmen living near by had perceived no tremor or other evidence of earthquake disturbance, nor could they tell when the movement took place; but they agreed in saying that the rainfall had been unusually heavy. Evidences were found of similar land-slides of earlier date, at various places along the valley, and it seems clear that such slides must have played an important part in shaping out the valley depression.

THE 1886 PRINCETON SCIENTIFIC EXPEDITION.

AFTER a most successful working season of over ten weeks, the Princeton scientific expedition has returned from its explorations in the Bridger beds, south-western Wyoming, and the White River country, north-eastern Utah. It will be remembered by those familiar with the history of bad land explorations that this is the sixth expedition that Princeton has sent out to the west. Since 1877, Prof. W. B. Scott and his coadjutors have worked in the Bridger beds and Bitter Creek country of Wyoming, in the White River of Dakota country, in the Yellowstone region, and now in the White River basin in Utah. The result is that the Princeton museum has now a splendid collection of American fossils, less complete, it is true, than Professor Marsh's collection at New Haven, but in some important respects quite equal to it.

The expedition this year started in June last, under Professor Scott's personal direction; but, after the first two weeks, he was obliged to return east, and his place as leader and director of the work was taken by Mr. Francis Speir, jun., of Princeton (1877), who has had wide experience in the western bad lands. Mr. Speir had under his command seven men (mostly Princeton students), a guide, and a cook.

Fort Bridger was the original base of supplies, and the first working camp was on Henry's Fork, an important tributary of Green River, about thirty-five miles south of the fort. Work was begun near the spot where a fine skull of *Uintatherium* was found last year, and careful search resulted in exhuming the remainder of the skeleton nearly complete, and in excellent preservation. Twin Buttes, a spot some thirty miles to the east, was the second working camp, and in that vicinity was found an extraordinarily perfect skeleton of *Mesonyx*; and it is believed that Princeton will