inches; width 9 inches.—1. Ransome's A plough—one wheel 31 stones; as a swing plough 40 stones. 2. Garrett's A plough—one wheel 35 stones. 3. Wood's patent plough, with a wheel astern and one wheel in front 39 stones; without either wheel 49 stones. 4. Howard's patent plough—two wheels 30 stones; without the wheels 40 stones. 5. Ordinary Dorset plough—one wheel 36 stones. By this as by all the other experiments made by Mr. Pusey and others, it clearly appears that the wheels are lightest in draught. It was observed that the heavy work was done in good style by two Suffolk punches, though with the ordinary horse of the country most farmers would have used three and some four horses.

Religious Scruples of Farm Servants.—On Monday week one of the farm servants of Mr. George Ritchie, at the Rynd, was brought up before Mr. Barclay, sheriff-substitute of Perthshire, at the instance of his master, for disobedience and neglect of duty, in so far as on the preceding day, being Sunday, he refused to clean out the stables in the morning, alleging it was an improper service on that day; and, in consequence, the rest of his fellow-servants also declined lending a hand to that necessary work of cleanliness. It appeared that the man belonged to Mr. Cumming's (Free Church) congregation at the Bridge of Earn, and either from misunderstanding some doctrine he had heard, or anxious to get early away to the church he attended, which is fully three miles from the Rhynd, he had come to the resolution of evading his stable duties on that morning, although the cleaning out the litter, which was all that was objected to, did not require more than from ten to fifteen minutes to perform. The man, when questioned as to the ground of his objection, contented himself with saying "it was not legal"—meaning, probably, it was not scriptural. Mr. Barclay allowed a proof to both parties. That for the pursuer was heard on Friday last, when Mr. Ritchie clearly established that the duty required was necessary for the health of the animals, and that it was consistent with the practice of the district to be performed on Sundays. The defender endeavoured to overturn this evidence on the following day, by the testimony of farm servants, but failed, and the sheriff sentenced him to eight days' imprisonment in Perth gaol.

Cabbage and Bean Crop.—Mr. Pusey reported to the Council, that Lord Lovelace's plan of growing the thousand-headed Cabbage as a crop, intermixed with the Bean-crop, had been tried by one of his tenants in Berkshire, Mr. Brooks, of Lyford, and found to answer so well, that Mr. Brooks intends to grow five acres in this way in the present year. The Beans are set in close double rows, with wide intervals between each pair of rows, in which the cabbages are planted in May, and afford a most luxuriant crop of green food upon heavy land during the present month. Mr. Pusey considered this method of Lord Lovelace's one of the best plans which had been devised for enabling the farmer to grow green food on very heavy land.—Mr. Hayter fully concurred in the value of this arrangement, which he had himself adopted with great success, and obtained a magnificent field of Cabbages for his young lambs.

Cirencester Agricultural College.—The Committee of the proposed new college have selected the design of Messrs. Dakes and Hamilton, architects of Gloucester and Cheltenham, from a large number, among which, we understand, were some from architects of great eminence in London. The college will occupy the delightful site on Lord Bathurst's grounds, known as Port-farm, near the railway station at the junction of the Stroud and Tetbury's roads, thus presenting a perspective of two bold fronts; the farm itself being attached to the end of the main building, altered to meet the domestic requirements of the institution, and decorated sufficiently to be in character with the new structure, which, with this addition, will form an entire frontage of nearly 250 feet. The design is in the Tudor style, of three stories high; the upper story being lit by picturesque old fashioned dormer windows, of the style so prevalent among the collegiate buildings of Oxford. The centre is occupied by a bold tower, the upper part of which is intended to form an observatory for metereological and other scientific purposes. We understand that the committee intend to complete only the main portion of the building at present, and that the works are to be speedily commenced. —*Wilts Independent.*

lishes a Royal ordinance, instituting at Paris a council of *prud'hommes*, composed of 15 members and 10 substitutes, elected from among the manufacturers, foremen, or licensed operatives, engaged in all branches of the metallic industry. The latter are divided into five categories, which are each to elect two, three, or four *prud'hommes*, according to the importance of their respective branches of industry. The duty of that council will be to terminate by conciliatory means, without any judiciary forms or expense to the parties, the differences which daily arise between the manufacturers and the workmen they employ, the foremen, and the operatives and apprentices. Any appeal from their decisions is to be tried by the Tribunal of Commerce. *Similar councils already* exist in 66 cities and towns of France, where they have exercised the most beneficial influence. From 1830 to 1839, the number of affairs submitted to their appreciation was 135,730; of these 128,319 were conciliated, and 3,573 abandoned by the parties. The councils pronounced 3,838 judgments, against which only 155 appeals were made.

State of Agriculture in France.—The *Journal des Debuts* publishes the following observations on the state of agriculture in France:—"Our situation is deplorable. Meat in France is scarce and dear. It is a species of food almost unknown to the population in general. The peasants, particularly in the poor departments, do not eat flesh meat ten times in the year. Our operatives cannot procure sufficient, and thence arises our inferiority in many respects with regard to manufactures. It is well known that the English operative can perform twice as much work, on an average, as a French workman. This fact has been established in the construction of our railroads; but when it was inquired what was the relative proportion of animal food consumed by each labourer, it was ascertained that the British labourers consumed twice as much flesh meat as the French. We can easily comprehend, therefore, the disadvantage which our manufacturers labour under in the competition with other countries in consequence of the high price of meat. The inferiority of our agricultural produce acts in a most unfavourable degree upon our manufactures. It has often been asserted that France ought to produce sufficient iron for her own consumption. Iron has been declared as necessary in war as in agriculture. Horses likewise are necessary in war, and we still have been obliged to import 30,000 more than we exported between the years 1823 and 1841. Those were the reasons why the proposition of M. d'Angeville on irrigation was so well received in the Chamber of Deputies on Tuesday. The numerous classes which devote themselves to agriculture will learn with gratitude that their interests are attended to. The proposition of d'Angeville, as amended by the committee, stands thus: 'Every proprietor who wishes to avail himself of irrigation for his lands may demand the passage of all natural or artificial water of which he has a right to dispose through an intermediate property, on the condition of paying a just indemnity.'"

The Colouring Matter of Plants, called chromule, is contained in cells protected by the epidermis, or thin transparent covering of the surface, which, by its transparency, permits the colour to be transmitted. It is chemically composed of carbon in large quantities, hydrogen, and a small proportion of oxygen; it is found in the leaves of plants, and proceeds from the carbon fixed by the decomposition of carbonic acid; its colour in this situation is green, and as such it may be considered as carbon, presented by the vegetable kingdom in its *least degree* of combination with oxygen. Many leaves change their colour at the approach of winter, and frequently assume a bright red appearance (as is the case with the Virginian creeper,) a circumstance caused by their having