

But there is a great difference when the stock is young. The muscle and bones here require to be increased, so that gluten and phosphates are taken from the soil. No equivalent for these substances is returned to the soil, so that the effort of rearing young stock must be gradually to exhaust the soil—and experience has proved this to be the case. If, when you find that your soil has been exhausted from this cause, you break it up, and expect to raise oats on it, you will be disappointed; because the animals have been depriving it of the very same substances that oats require,

Why the full-grown Animal requires food.

I have said that when they are restless they did not increase so much in weight. This brings me to an important point. We have been talking of the various parts of the animals' body being built by the substances which they eat, but you might say—that when the bodies of animals are once built up, why give them any more food? This food is necessary, however, from the habits of motion with which animals are endowed. Every motion is attended by a waste of substance. We are perpetually moving and our bodies are perpetually wasting away. It is calculated that we change the substance of our bodies once every three years, so that this hand which I now hold up to you, is not the same I had three years ago. It is the same in external marks and form, but the substance which compose it are very different. You can understand how this is done without any great revolution of the system, by supposing that a man takes a brick from a building every day, and replaces another; in process of time the building becomes entirely new, and not composed of the same substance as before. The movements made by the body necessarily produce this constant removal of parts. These parts are discharged from the system, and other portions of matter take their place. I before shewed you that exercise rendered it necessary that a great quantity of starch should be introduced into the system to support internal combination, and I now also support this fact by another—that exercise renders it necessary that animals should take more of the other kinds of food also, in order to supply the waste of substance induced by the very exercise. You will see, therefore, how it is that the full grown animal requires a constant supply of food, and how also, in the rearing of stock, the greatest economy is secured by keeping the animals at rest in the dark, in warm roomy sheds. This waste of substance, then, must be made up by the food which the animal eats, and the portion devoted to this purpose may, therefore, be called the sustaining food. But if you want to add anything to the weight of the body, the animal must have an additional quantity of food; and in order to secure the various properties in the animal, different kinds of food must be used. If you desire simply to keep the animal in good condition, you must give it a due proportion of these substances—starch, to supply the respiratory organs—gluten and saline substances to keep up the flesh and bones—and fat, to lubricate the joints, and give the animal a sleeky skin. In this case, an extra supply of any of the kinds of food is not required; and the substance which combines the three in itself is the best. If you look at the composition of oats you will see that they, perhaps, better than any other grain unite a due proportion of all these substances, and therefore it is that they have been selected, in preference to any other as the staple article of their food. But suppose you wish to keep the animals for some other purpose—for their manures, in the first instance, as they do in Lincolnshire; or in the second place, for their beef; thirdly, for the veal of the young stock; or fourthly, for milk:—then you must adopt the food to these varied wants.

NEWS.

UNITED STATES.

NEW RATES OF POSTAGE.—The following are the rates of Postage under the new law, which went into operation July 1st:

On Letters,

Single letters, or any number of Pieces not exceeding half an ounce, 300 miles or less.....	5	cents.
If over 300 miles.....	10	“
Drop-letters (not mailed).....	2	“
For each additional half ounce or part thereof, add single postage.		

On Newspapers.

Newspapers of 1900 square inches, or less, by editors or publishers, from their office of publication, any distance not exceeding 30 miles.....	Free
Over 30 miles and not exceeding 100.....	1 cent.
Over 100 miles, and out of the State.....	1 1/2 “
All sizes over 1900 square inches, postage the same as pamphlets.	

On Magazines, Pamphlets, &c.

Pamphlets, Magazines, and periodicals, any distance, for one ounce or less each copy.....	2 1/2 “
Each additional ounce.....	1 “

On Circulars.

Quarto, post, single cap, or paper not larger than single cap, folded, directed, and unsealed, for every sheet, and distance.....	2 “
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The entire herd of short horned cattle of E. P. Prentice, Esq., of Albany, was sold in that city on Wednesday of last week.—The cows were sold from \$225 to \$100; heifers in proportion.—There was a great deal of interest attending the sale, which shows that the spirit for agriculture is wide awake in this State.

It is said that a first-rate man of war, of the present day, requires upwards of 70,000 cubic feet of timber, and 180,000 lbs. of hemp are used in the cordage. It is estimated that the extent of ground that the timber for a ninety gun ship would cover, would be fifty acres.

William Johnston, a merchant and ship-owner of Kircudbright, Scotland, has bequeathed £5500 sterling for the erection and endowment of a free school in that town—£2000 for the immediate erection of a building, and the remainder for the support of teachers. Such munificence in the cause of education, wherever found deserves to be recorded.

The Pittsburg Chronicle states that about fifteen hundred buildings are in the course of erection in the “burnt district.” The number already completed is supposed to be something over one hundred. By next autumn the greater portion of the burnt district will be rebuilt, and in most cases with good and substantial brick buildings.

A State Agricultural convention assembled at Columbus, O., last week. Ex-Governor Trimble, of Highland country, was President. Twenty-three counties were represented. It was determined to make an application to the Legislature for aid in support of the interests of agriculture. The convention had not adjourned at the latest advices.

A writer in the National Intelligencer recommends to the consideration of the Post Office department the English and French system of sending money by the post Office, “by which,” says the writer “any sum, from a shilling to fifty pounds, can be sent through the mail, by depositing with the postmaster the sum required to be transmitted, and taking a certificate of the deposit, which is redeemable at the post office of the town or city to which it is forwarded.

The affairs of Switzerland are now finally settled. The Grand Councils of Solcure, Argau, and Bernc, have almost unanimously ratified the convention concluded between their delegates and the commissioners of Lucerne, for the liberation of the prisoners captured by the latter canton. The ransom to be paid for such prisoners as do not belong to Lucerne will amount to £20,000. Letters from Zurich of the 7th state that the capital sentence pronounced against Dr. Steiges has been confirmed by the Supreme Grand Council, which alone can pardon him. The Governments of Zurich and Bernc had each sent one of their members to intercede in his favour.

DISRUPTION OF THE GLASGOW NORMAL SEMINARY.—The property of the Glasgow Normal Seminary having passed into the possession of the Established Church, in consequence of an arrangement between the Educational Committee of that body and the Government, the buildings of the institution were on Thursday week vacated by the masters, students, and scholars. The friends of the institution, in conjunction with the Educational Committee of the Free Church, having some time ago purchased grounds in Cowcaddens for the erection of a new Seminary, with suitable play-grounds, the buildings have already been commenced, and have made considerable progress; but in the meantime, a temporary wooden erection, of spacious dimensions, and rendered as commodious and comfortable as circumstances will admit of, was prepared for the reception of the various classes on their leaving the former buildings. To this temporary school-house, which