

Plant Culture in Moss.

A novel feature, and one that attracted some attention at the recent Regent's Park show, was some baskets of plants said to have been grown in prepared moss and entirely without soil. The exhibitor was Captain Halford Thompson, who claims to have discovered a new method of thus growing plants. Some time ago a Frenchman of the name of Dumesnil patented a kind of fertilizing moss for the purpose of growing plants without soil. With this production of M. Dumesnil, Captain Thompson states that he made several experiments, which resulted in his considering it open to serious objections, and was by no means certain in its results. These defects Captain Thompson has endeavored to remedy in a new preparation with which he has experimented, and by means of which he states he produced the luxuriant plants which he exhibited on Wednesday. Having found that by Dumesnil's moss it was quite possible to grow plants without soil, he set to work to prepare a fertilizing substance which would enable plants to be grown in it without the precautions necessary in using Dumesnil's moss, and he thinks that he has been perfectly successful in his endeavors.

He states that "plants in full bloom can be taken out of the ground or out of pots, and after all the earth has been carefully washed off, planted in moss which has been previously prepared with fertilizing fiber. They never even flag, but grow more luxuriantly than in soil." The plants shown by Captain Thompson fully bore out his statement, for it would be difficult to imagine more luxuriant plants than those he showed. They consisted of tuberose, begonias, variegated vitis, gardenias, fuchsias, tradescantias, and others. All were furnished with healthy foliage, and were for the most part carrying flowers. The advantages of this method are stated by the inventor to be two-fold; first, the extreme lightness of a number of plants when grown together in one basket; another is the portability, an advantage which renders plants grown in this way particularly suitable for the embellishment of rooms and windows. No doubt to those who live in towns, where potting soil is not easily procured, this moss would be a special boon, on account of its lightness, portability, and cleanliness; but in the country, where mould is readily obtained, it would probably be less trouble to grow plants in the usual way, and we presume that Captain Thompson's invention commends itself to townspeople. In a small pamphlet the method of applying this moss is explained as follows:

"Take the plants you wish to put into the basket, carefully wash off all earth from the roots with tepid water, taking care not to injure the roots in doing so; then plant them in the ordinary way in the moss, which should be previously well wetted; if possible, keep the basket in a warm place free from draught for three or four days. The plants can, if wished, be transplanted from earth when in full bloom; they will not feel the check. After two months the upper layer of moss should be removed, and a similar quantity of my moss put in its place. If selaginella is grown on the surface of the moss (as in some of the baskets shown before the Botanical Society), it should be carefully removed first and replaced after the moss has been changed. The baskets do not require watering oftener than plants grown in earth do. The weight of the baskets will show if they want water."—*The Garden*.

Burning of the Dead.

The body burns, whether placed in the earth or fire; in one case it takes 10 to 20 years, and in the other so many minutes. Cremation is the proper and scientific way to dispose of dead organic matter. When the body is cremated, there is no further fear from disease germs in the body. The only plausible objection which has been offered against cremation is that in case of homicide through the administration of deadly poisons valuable evidence might be destroyed; but this is not a serious objection in the face of the many advantages gained. All innovations in sanitary science have had to fight their way inch by inch. Vaccination had a hard struggle, but came out triumphant, and so we predict for cremation a glorious victory, a triumph of good sense and science.—*Ionian Sentinel*.

Selling Eggs by Weight.

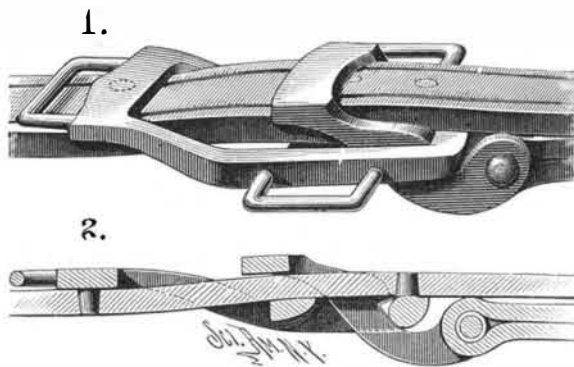
There seems to be no good reason why the general practice of selling eggs by the dozen should not be superseded by the more rational one of selling them by weight. There is from twenty to thirty per cent difference in weight of eggs, yet the custom is almost universal in the Eastern markets of selling them by the dozen at a uniform price. Even ducks' eggs, which are much larger and regarded by some as richer, bring no more than the smallest hens' eggs of not half the weight. In California, eggs, fruits, and many other articles that are here sold by the dozen, the bunch, or by measure, are sold by weight. The practice, says the *American Agriculturist*, is a good one, and works beneficially for all parties, especially for the producer. It operates as a premium upon the cultivation of the most productive varieties of fruits, vegetables, and farm stock. The farmer who is painstaking with his poultry and gets the largest weight in eggs has a fair reward for his skill and industry. The present custom is a premium to light weight and good layers. We need a change in the interest of fair dealing in trade, and if necessary it should be enforced by legislation. If the Legislature is competent to fix the weight of a bushel of corn or potatoes, it can easily regulate the weight of a dozen

of eggs, and thus promote exact justice between buyer and seller.

While this would to a certain extent be a more equitable arrangement, it is, nevertheless, wrong in principle, from the fact that the weights of eggs do not vary directly as their diameters, but as the cubes thereof, and unless the price were graded in the same ratio the system would not be an equitable one. Taken altogether, there seems to be no more just or simple way than selling eggs by weight.

TRACE BUCKLE.

The main part of the buckle is made in skeleton form and of considerable length, with end and center cross bars, and is curved outward at its rear end to permit the tug to pass under the first cross bar and over the others. The end cross bars are provided with tongues, which project in opposite



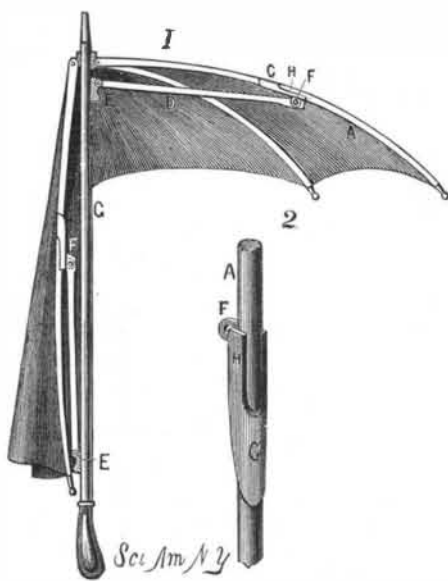
BAUDER'S TRACE BUCKLE.

directions, as shown in Fig. 2, and which pass through suitable holes made in the tug. The forward part of the buckle—termed by the inventor the "grip loop"—is attached to the hame tug by a bolt, and the side bars of the loop are bent so as to pass up through the main part between the cross bars, and allow the tug to pass through it under its cross bar. The outer edges of the sides of the loop are formed with notches, which receive the lips formed upon the edge of the end cross bars, thus fulcruming the loop so that its cross bar will grip the tug upon the center cross bar of the main part of the buckle. The notches and lips also serve to always maintain the proper relative positions of the main parts of the buckle, and to prevent the tug from being injuriously compressed and worn by the bar of the loop. Constructed in this manner the buckle is very durable and easy on the tug, which is readily adjusted.

This invention has been patented by Mr. C. C. Bauder. Further information may be obtained by addressing Messrs. Bauder Bros., at either Sanborn, Dakota, or Burnside, Ill.

UMBRELLA AND PARASOL FRAME.

The ribs are pivoted to a ring secured to the stick near the end. The braces, D, are pivoted to a sleeve sliding on the stick and to lugs on the ribs. This sleeve is not provided with the usual slot, and the stick has no spring catches. The outer ends of the braces are flattened, forked, and squared; and on each rib is soldered a semitubular forked piece, C (shown enlarged in Fig. 2), in such a way that one shank will be at each side of the lug. The opposite squared edges of the ends of the braces rest against the bottom edges of the spring shanks, H. When the umbrella is opened, the bottom edges of the shanks rest against the straight upper



CARRARA'S UMBRELLA AND PARASOL FRAME.

edges of the ends of the braces, and thus hold the various parts in place. When the umbrella is to be closed the sleeve is drawn down, thereby causing the upper ends of the braces to turn on the lugs; and when it is closed the opposite or upper edges of the flattened ends of the braces will rest against the spring shanks, and hold the parts in their new position. By this means a cheap, simple, and effective construction is secured.

This invention has been patented by Mr. Antonio Carrara, and additional particulars can be obtained by addressing Mr. Alfred Girardot, of 35 East Kinney Street, Newark, N. J.

The Deflection of Streams by Terrestrial Rotation.

The influence which the rotation of the earth exerts upon bodies on its surface, free to respond to it, has long directed the attention of scientists to discover whether streams in their course show any tendency from this cause to act more upon one bank than upon the other.

It was long ago perceived that rivers flowing to the north or to the south should by the rotation of the earth be thrown severally against their east or west banks. It is even many years since it was shown by Ferrel that these tendencies are but illustrations of a more general law, that all streams in the northern hemisphere are by terrestrial rotation pressed against their right banks, and all in the southern are pressed against their left banks, the degree of pressure being independent of the direction of flow. Yet the question of the sufficiency of the cause for the production of observable modifications in the topography of stream valleys is still an open one. A number of geologists have observed peculiarities of stream valleys which they referred to the operation of the law, while others have looked in vain for phenomenal evidence of its efficiency.

In an article appearing in the *Amer. Jour. of Science*, a writer asserts that he has finally obtained sufficient proof that such action does take place to an appreciable extent, notwithstanding the attempted demonstration by others that the cause is insufficient to effect any change in banks of a river, due to the increased pressure of the water. Due account must be taken to eliminate the effects of short curvatures in rivers, in obtaining results due to rotation, while a general curvature in the course of a valley through which the stream flows has the same tendency, though in a less degree, as does the curvature of a short bend, and this tendency must in many cases nullify and conceal the results of rotation.

Visible examples of the work of rotation are therefore to be sought especially in streams which, with courses in the main direct, are slowly deepening their valleys by the excavation of homogeneous material. The best locality known to the writer is the south side of Long Island, a plain of remarkable evenness, descending with gentle inclination from the morainic ridge of the interior to the Atlantic Ocean. It is crossed by a great number of small streams which have excavated shallow valleys in the homogeneous modified drift of the plain. Each of these little valleys is limited on the west or right side by a bluff from ten to twenty feet high, while its gentle slope on the left side merges imperceptibly with the general plain. The stream in each case flows closely the bluff at the right. There seems to be no room for reasonable doubt that these peculiar features are the result of terrestrial rotation. As the streams carve their valleys deeper, they are induced by rotation to excavate their right banks more than their left, gradually shifting their positions to the right and maintaining stream cliffs on that side only.

New Zealand Grapes.

There is one kind of fruit that does not grow well in New Zealand, in spite of everything said to the contrary, and that is the grape. It is true enough that grapes are often grown to perfection under glass in many parts of the colony, but they do not grow well in the open air. All the vineyards planted here within the last ten years have resulted in either partial or total failure. In certain localities, it is true, the vine has been cultivated successfully in the open air; but it was under exceptional circumstances and in favorable or sheltered situations. The vine requires heat in the summer to ripen the fruit, and cold in the winter to ripen the wood; but unfortunately the New Zealand climate is without these characteristics, and, moreover, it is so moist or humid that it promotes too much activity in the growth of the vine in the winter, and in the summer the fruit is almost certain, during the process of ripening, to become mildewed. The rainfall is perhaps not too heavy to interfere with the growth of the grape, but it rains on too many days in the year. The chief obstacle, however, in the way of vine culture in New Zealand is the absence of the extremes of heat and cold. The result is that nearly all the grapes found in the market are either imported or grown under glass. Under these circumstances, it is not surprising that this delicious fruit always commands a high price in New Zealand.

New Discoveries in Italy.

M. Le Blant, the director of the School of France, at Rome, has forwarded a communication to the Academie des Instructions, stating that the excavations recently made at Subiaco have brought to light some splendid statues, which appear to have been sent by the Emperor Nero from Rome, for the decoration of his villa in that vicinity. A chamber has been also discovered, hung around with tablets upon which are portraits, in basso-relievo, of celebrated authors, and probably this room served as a library. But the most important finds have been made near Marino, about 15 kilometers from Rome. The workmen have cleared out chambers adorned with mosaics and variegated marbles, as well as a vast courtyard encircled by a colonnade and long galleries communicating one with the other to various parts of the villa. These covered passages are filled with priceless sculptures, statues, and bassi-relievi of various designs. Lead pipes, bearing the imprint of the genitive names of Messalina and Voconius Pollo, probably successive owners of the villa in question, have been also brought to view.