

Miscellaneous.

NEW ROAD CAR.

The road car shown in our engraving will shortly commence running on various routes in different parts of London, the London and District Omnibus Company (Limited) having entered into arrangements for the purpose with the inventor, Captain Molesworth, R.N. The chief difference between the old and the new vehicle is that the latter are principally supported on the two large wheels, which arrangement not only gives greater facility in running, but by means of the crank axle also brings the car much nearer the ground, passengers being thus able to step easily from the pavement on to the platform in front, which is no higher than an ordinary curbstone. An additional, and perhaps a more acceptable advantage gained in adopting this principle, is that, however rough the ground or however the load may be distributed, the car glides forward with an undulating, easy motion, most enjoyable compared with the rather "rough and tumble" jolting of the old omnibus. The two small wheels in front act rather as a foundation for the driver's seat than as an additional support to the car. This new arrangement affords great facilities for rapidly turning and changing the vehicle's course in crowded thoroughfares, and also enables the driver to have proper command of his horses, to be free from interference from passengers, and also to be in close communication with the conductor, who stands on the platform in front, where, in contrast to the old style, is the door. We have seen and travelled in one of the new vehicles, were much pleased with its comfort, roominess and brightness, and especially with the novel arrangement of the seats on the top; the "knife-board" being abolished for a double row of comfortable garden chairs, so placed as to allow of every one sitting with his or her face to the horses. These chairs are not shown in the illustration, but the majority of the cars are fitted with them.—*London Graphic*.

SLATE PENCIL MACHINE.

It is easier for the schoolboy, with his innate inquisitiveness, to ask how slate pencils are made than it is for the boy of larger growth to answer; however, the machinery employed in making slate pencils is very simple, and the process will be readily understood by studying the annexed engraving.

The bed of the machine has a series of diagonal slots, in which multiple knives, shown in Fig. 3, are clamped by set screws. These knives differ in form and in the size of their curved cutting edges, and the smaller knives succeed the larger ones in acting on the slate blanks.

Opposite the cutting edges of the knives there is a groove adapted to slides capable of carrying blanks, from which the pencils are made. At the receiving end of the machine a frame arranged to slide lengthwise of the main frame is pushed forward by a cam and drawn backward by a weight.

The slate blanks from which the pencils are made are brought to a uniform thickness and length, and are placed on the slides, and put in the machine, one at a time, as the sliding frame falls back.

When the cam pushes the frame forward the slate blank is pushed through the first set of knives. When the next blank is pushed forward in the machine the first one is pressed beyond the second set of knives, and so on. When the blanks emerge from the machine after the first cutting the pencils are half formed.

The blanks are reversed and again put through the machine, when they are separated, and the finished pencils are delivered in a receiver at the end of the machine. This machine is the invention of Mr. J. C. Richards, of Brooklyn, N.Y.—*Illustrated Scientific News*.

TROUVE's utilisation of electricity in combination with surgical instruments is bearing fruit. A case is recorded from Vienna in which a doctor has succeeded in curing a cancer in the stomach mainly by the assistance rendered by the polyscope. The electric probe, which rings a bell when a ball or any metallic substance imbedded in the muscles is reached, is highly prized by Army surgeons, and an application of the same principle to surgical forceps has enabled a Berlin oculist to save the eye of a workman which was damaged by the intrusion of a spark of steel. This case had become so urgent that it was necessary to extract the piece of metal without delay or to excise the eye; but Dr. Hirschberg, by inserting a soft iron probe and subsequently converting it into an electro-magnet, withdrew the particle of metal, and saved the eye.

Sanitary Matters.

TRICHINOSIS.

Several cases of this disease have been recently reported in medical journals, and it seems probable that it is of more frequent occurrence than has been hitherto supposed, the milder cases being mistaken for typhoid fever, rheumatism, etc. This is not to be wondered at, since of some droves of hogs at least five per cent. are infected with this parasite, and it is evident that infected pork must be often eaten without producing ill effects. This is due to the fact that thorough cooking destroys the parasite.

In almost every case in which the disease has been observed in the human subject, it has been proved to be due to eating pork which has been merely smoked or dried. Can any measures be taken by health authorities to prevent danger from this source, and is it worth while to incur the expense of such prevention? As regards fresh pork sent to the markets for immediate consumption, such measures should certainly be taken as they would simply form a part of the systems of abattoirs and meat inspections which every city should have. But as regards salted and smoked or dried meats it is a different matter. It is certainly impossible for the city of New York to undertake an inspection of all such meats brought within her limits. Nor is it clear that it is possible to secure an inspection of this class of meats at the great centres where they are prepared, such as Chicago, Cincinnati, St. Louis, Boston, etc., in such manner that the inspection shall be uniform and reliable, and not bearing more hardly upon the business of one place than on that of another, without legislation by the general government, which, in its turn, would involve very considerable difficulties.

Upon the whole, it seems probable that the best results will be reached by the operation of ordinary business considerations, and that some of the largest packers and shippers of meats will find it to their interest to have meats examined and branded by authorized inspectors of the State or city, which certificate of inspection will confer an additional value upon the meat thus marked. If the examination be made upon the animal before it is cut up, the presence of trichinæ may be determined very easily. A single observer can readily dispose of several hundreds a day. If the hogs that are to be found to be infected are destroyed, the farmers will soon find it worth while to take the precautions necessary to prevent infections of the animals. As soon as the presence of trichinæ in pork begins to entail pecuniary loss on the dealers in and packers of pork, the matter will be properly attended to, and probably not until then.—*Sanitary Engineer*.

PASTEUR'S NEW DISEASE.

In the *Lancet* for February 5, we called attention to the remarkable effects which M. Pasteur had obtained by inoculating rabbits and guinea pigs with the saliva of a child which had died from hydrophobia. The animals, it will be remembered, died thirty-six hours after inoculation, and in their blood was found a bacterial organism, which was quite peculiar, which could be cultivated, and then produced, when inoculated into other animals, symptoms identical with those observed in the others. M. Pasteur did not assert that this was the special microbic organism of rabies, but he considered that his experiments and the microscopical characters of the organism warranted the assertion that the disease was not septicæmia, but a malady altogether new to experimental pathology. In order to ascertain whether a similar affection can be produced by the inoculation of the saliva of persons who have died from other common diseases, M. Pasteur has made some inoculations with such saliva, but without any results. But since the case of hydrophobia was in a child, M. Pasteur applied to M. Parrot for some saliva from children dying from diseases which are regarded as non-specific, and received some from the bodies of three children who had died the preceding day from broncho-pneumonia. In rabbits inoculated with this saliva there was found precisely the same organism as had been discovered in those which had been inoculated with the saliva from the case of hydrophobia. He thinks it certain, therefore, that this organism may often be found, and that it is one of those which have their habitat in the commencement of the alimentary tract. Hence, as he points out, it is not in any way connected with rabies, but it is a surprising fact there should exist in the saliva, at least of children, a special organism which is capable of causing so rapidly the death of rabbits and dogs, even when inoculated in very small doses. It is a fact of very great importance in the etiology of diseases which may be ascribed to microscopic organisms.—*Lancet*.