communicated indirectly through media. Webster and other lexicographers use the terms synonymously. Dr. Hunt thinks both terms should be discarded, and the word 'communicable' substituted. The term 'zymotic,' as applied by Tarr, received its impetus from Liebig's 'Chemistry of agriculture;' but there is now, with our present views, no use in retaining it. 'Epidemic,' as applied to those diseases which affect large bodies of the people, as nations; 'endemic,' those which affect localities; and 'sporadic,' which occur isolated, — are used with various meanings. The term 'sporadic' should be abandoned. In concluding, he thought the number of terms now used in the nomenclature of disease could with great advantage to science be reduced at least one-half.

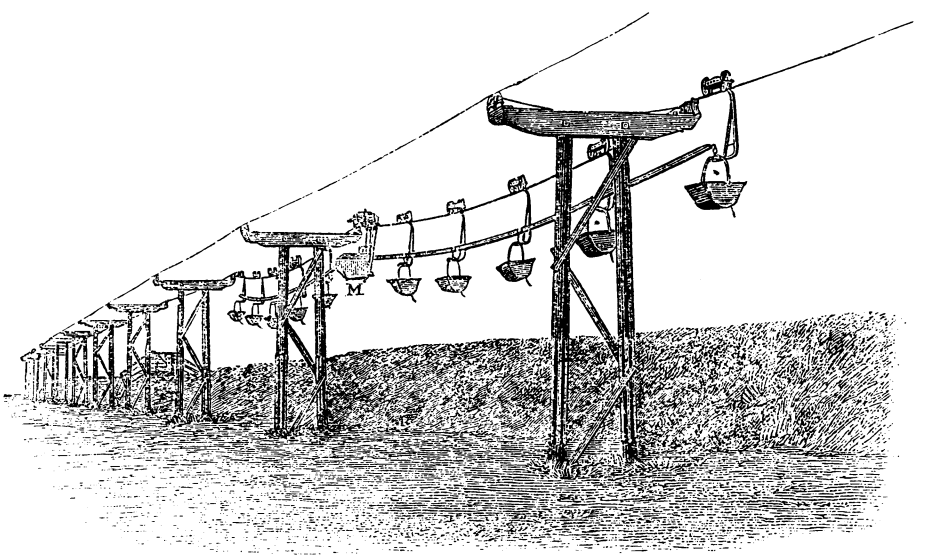

FIG. 1.

TELPHERAGE.[1]

THE experimental telpherage train at Glynde, England, which was described in *Science* of Nov. 13, consists of an electric locomotive, seen in fig. 1 at about the middle of the train, and propelled by the electromotor *M* (fig. 4), and ten skeps, or buckets, which hang by their travelling-wheels from the steel line. Each skep weighs 101 lbs., and carries 250 to 300 lbs. of dry clay; and by distributing these evenly, and somewhat widely apart, the strain on the steel line is small, although the total weight of the train and clay is about two tons; also, as equal weights are simultaneously ascending and descending similar inclines on the several spans, the effect of the sag on the mechanical resistance of the train is neutralized, and little more resistance is experienced than in hauling a similar train along a rigid road.

The automatic governing of the speed of the train is effected in two ways, — first, there is a governor attached to each motor, which interrupts the electric circuit, and cuts off the power when the speed becomes too high; secondly, there is a brake which is brought into action should the speed attain a still higher value. To avoid the formation of a permanent electric arc when the circuit is broken, the governor (fig. 2) is so arranged that the diverging weights are in *unstable* equilibrium between two stops: they fly out at about 1,700 revolutions per minute of the motor, and fly back at about 1,600. When the circuit is closed, the current is conveyed across the metallic contact at *C*. When the weights *W W* fly out, this contact is first broken, but no spark occurs, because a connection of small resistance is continued at *B* between the piece of carbon and a piece of steel, which, being pressed out by a spring, follows the carbon for a short distance as the arm *A* begins to fly out. This contact is next broken, producing an electric arc; which, however, is instantly extinguished by the lever *A* flying out to the dotted position. The brake is shown on fig. 3, and consists simply of a pair of weights, *W W*, which, at a limiting speed greater than 1,700 revolutions per minute of the motor, press the brake-blocks *B B* against the rim *C C*, and introduce the necessary amount of retarding friction. In practice, however, with the gradients such as exist at Glynde, and which do not exceed 1 in 13, the

[1] Condensed from *Nature* of Nov. 5.

economic method of automatically cutting off the power with the governor is all that is necessary to control the speed of the train, the brake rarely coming into action. With steeper gradients, however, the brake would undoubtedly be very useful.

The way in which a single wheel-track is made to serve for one train, or rather two wheel-tracks

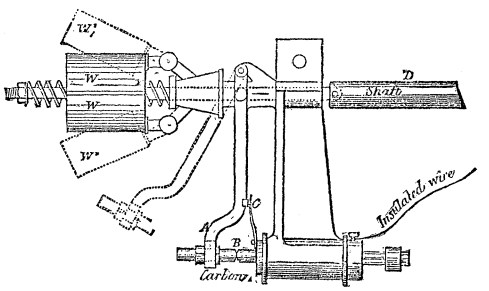

FIG. 2.

for two trains, instead of the necessity of having four wheel-tracks for two trains, as in the ordinary electric railways, is seen from fig. 4. [D is

It is found that for moderate inclines direct driving, with pitch chains, of two wheels with

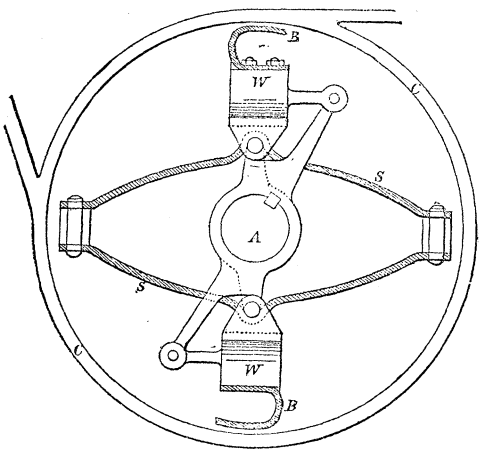

FIG. 3.

india-rubber treads, gives a gravitation grip sufficiently large for satisfactory haulage.

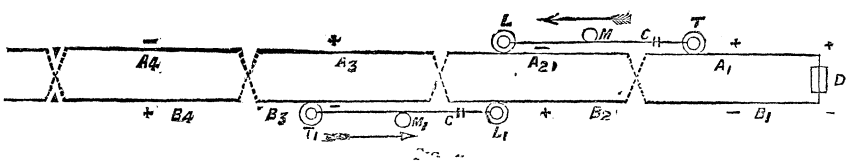

FIG. 4.

the dynamo maintaining two long conductors permanently at different potentials indicated by the signs + and — of each section. The wheels L and T of one train, and L_1 and T_1 of the other, are insulated from their trucks, and joined by a conductor attached respectively to the terminals of the motors M and M_1. A current, consequently, is always passing from a + section to a — section through each motor. Mechanically, then, each train is supported by what is practically one continuous steel rod; but in reality at the tops of the posts the rods are electrically subdivided into sections, and joined across by insulated wires, one of which may be seen at the top of the posts in fig. 1. The wires connecting the two skeps with the motor, shown in fig. 4, are not seen in fig. 1, as they were too thin to appear in the photograph from which this figure was taken. To prevent the metallic wheels of the skeps short-circuiting the two sections as they cross the tops of the posts, there are insulated gap-pieces, which may be seen in fig. 1, at the tops of the posts where the steel rod is electrically divided.

THE PRE-COLUMBIAN HISTORY OF GUATEMALA.

THE well-known historian of Spanish America, Antonio de Herrera, in describing the first conquest of Guatemala, states that the natives of the province of Utlatlan had 'painted records,' which carried their national chronicles back eight hundred years, that is, to about the year 700 A.D.

Utlatlan was the Mexican name of the region in western Guatemala inhabited by the tribe called Quiches, whose capital city, Gumarcaah, was destroyed by Alvarado in 1524. Its ruins are still plainly visible near the little village of Santa Cruz del Quiche. So complete was the havoc of the Spanish conquerors that not a single building was left standing; and, of those 'painted records' referred to by the historian, not a shred is in existence. Fortunately for the antiquary, intelligent members of the tribe learned to write their tongue in characters devised for it by the early Spanish missionaries, and took pains to apply this knowledge to the preservation of their tribal traditions. In some cases they had a practical incentive to this