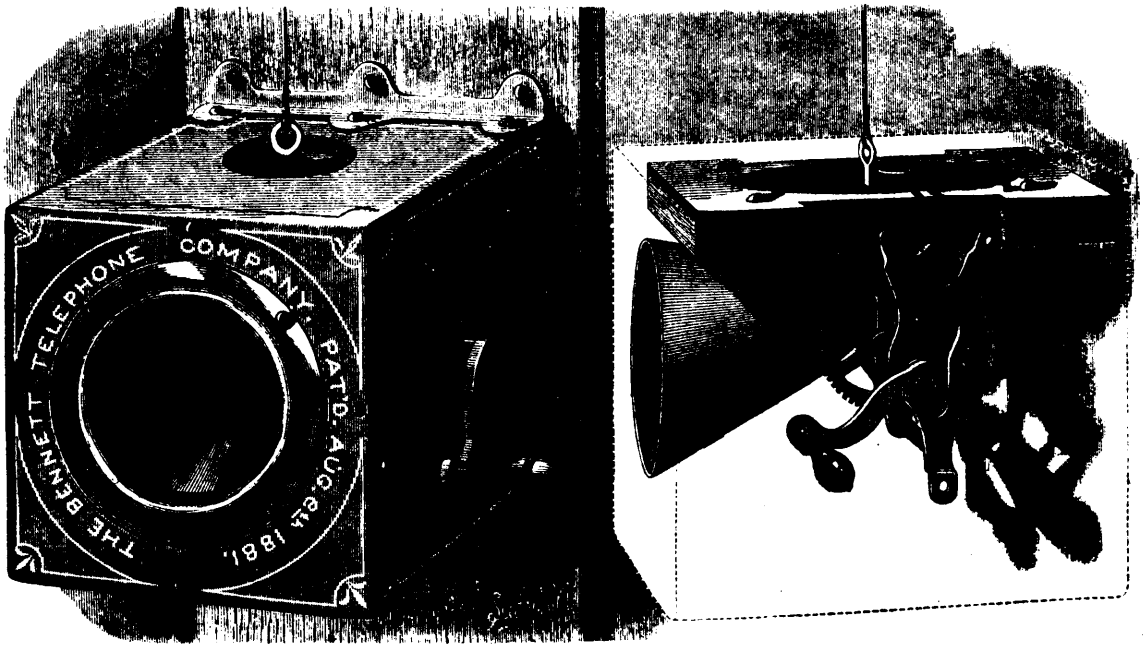

BENNETT'S ACOUSTIC TELEPHONE.

trench to a minimum in width, while at the same time giving it a depth which, it appears, is about a meter. The circumstances that led Mr. Bourdin to devise the apparatus under consideration are quite curious. A few years ago be had to locate a system of telegraph lines between the different factories and shops that lie scattered over the domains of a wealthy and active Russian property owner, General de Maltzoff. It seems that in that country it is very difficult to preserve aerial wires. The peasants have some respect for lines belonging to the government, as it would cost too dear to touch them ; but private lines are constantly being damaged by them, for they do not hesitate to take the wires at any time to mend a broken cart or for any other similar purpose. It becomes absolutely necessary, therefore, to have recourse to underground lines, and it is of the utmost importance to lay them by some means that shall prove as expeditious and as inexpensive as possible. This is why Mr. Bourdin sought to solve the latter problem by the use of his plow, and it was by the aid of this apparatus that he performed the work intrusted to him.

As regards the speed with which cables may be laid by this means, we are enabled to give some account of it from information furnished us by an agriculturist. An ordinary plow, drawn by three horses, and always moving in a straight line, can make, according to his estimate, four kilometers per hour at a maximum, the furrow opened being thirty centimeters in depth. This speed could not be much exceeded even in very mellow soil, since it represents the maximum speed of horses while walking ; and it is not possible to plow on a trot. However, by increasing the power of traction, the special arrangements of the wire-lying plow ought to permit the speed to be increased a little and to reach at least five kilometers per hour ; and such, in fact, is the speed reached by the inventor during the work done by him in Russia. The difficulty of plowing deep lies especially in the resistance of the subsoil ; and the depth of the superficial layer determines the maximum depth of the former. Very often this depth will not have to be very great ; but cases will occur in which the laying of subterranean cables will be greatly facilitated by the use of the plow that we have just described.--*La Lumière Electrique.*

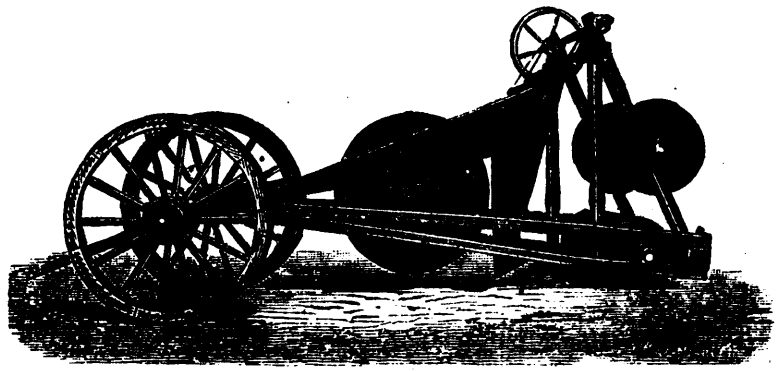

FIG. 1.—PLOW FOR LAYING ELECTRIC CABLES.