

**LONDON'S GASOLINE-PROPELLED CABS.**

BY THE ENGLISH CORRESPONDENT OF THE SCIENTIFIC AMERICAN.

A new type of cab propelled by a gasoline motor is being introduced into London to take the place of the hansom cabs so much in vogue in the English metropolis. This new type of vehicle, as may be seen from the accompanying engraving, comprises the cab with accommodation for two passengers, and a seat in front for the driver. The cab itself is similar in design to the hansom at present in use, only it is much larger and more roomy. It is provided with a glass front fitted with a spring attachment, which permits its being raised or lowered instantly as desired.

The driver's seat is only half the width of the chassis, sufficiently large to seat the driver only, so that the passengers within the cab can obtain practically an uninterrupted front view. The cab is slung upon four wheels, which renders it far safer and more immune from the dangerous accidents to which the two-wheeler is so subject. The chassis is of Paris manufacture, with a twin cylinder Aster engine developing 12 horse power placed in the front of the vehicle beneath a bonnet in the usual manner. Three speeds and reverse are provided, the maximum speed being 25 miles per hour. The two lesser speeds are comparatively low, especially the first speed, so as to enable the vehicle to readily climb hills. The second speed has been designed so that the car can be easily handled in congested traffic without any possibility of the engine's racing. The drive is transferred from the gear box to the rear live axle through a universal coupling. Change of speed is effected by means of a side lever, and steering by wheel. The gasoline tank is placed beneath the driver's seat; its capacity is seven gallons. Jump spark ignition by means of accumulators is employed. To prevent side slipping as far as possible, which is very frequent upon the London streets, especially in wet weather, owing to asphalt and wood entering so extensively in the paving, the cab has been provided with a long wheel base, and the weight has been reduced to a minimum

by the employment of aluminium. The wheels are equalized, of the artillery type, and shod with pneumatic tires.

These cabs are to ply for hire in the same manner as the present horse-drawn hansoms. The same fare of two miles for 25 cents in American money will be charged. Seventy-five of these cabs are to be in-

York for a journey of like length. Why it is not possible to provide a system of cheap transportation somewhat similar to that of London is a question with which few Americans seem to concern themselves.



ONE OF THE NEW GASOLINE CABS OF THE CITY OF LONDON.

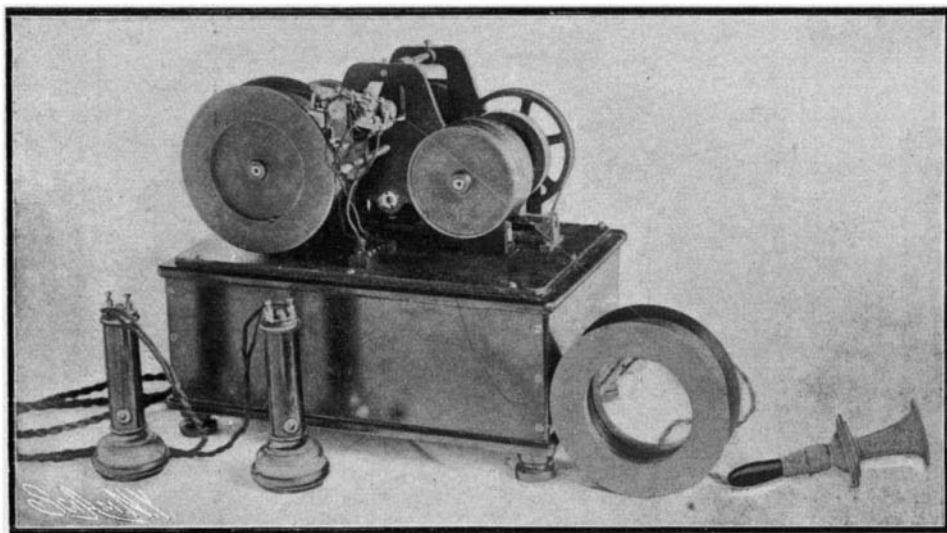
stalled immediately. Ordinary hansom-cab drivers are being taught the management of the vehicles, in preference to employing automobile chauffeurs. The new cabs will not only be safer than the existing hansoms, but will be more speedy and comfortable, and the cost of upkeep, even after allowing for depreciation, will not be so expensive as the horse vehicles.

Compared with these light and rather graceful London cabs, the hansoms that thread the streets of New York in particular, and most large American cities in general, seem decidedly at a disadvantage. New York's public electric vehicles are certainly clumsier in appearance. In cost, too, Americans have to suffer. An Englishman can travel about comfortably for about one-third the money that would be exacted in New

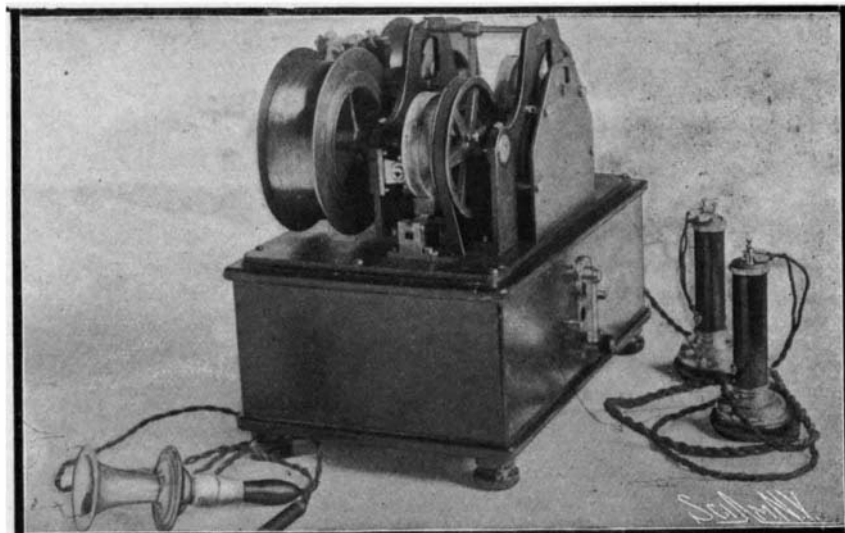
**THE NEW TELEGRAPHONE.**

The Poulsen telegraphone has been so fully described in these columns that the only excuse for still another account of the instrument is to be found in the marked improvements which have been made. New instruments have been brought to this country which are considerably more compact and more efficient than the old. The principle of the invention, however, remains unchanged. It will be remembered that current from the secondary coil of an ordinary microphone and induction coil system is sent through a small electro-magnet, past which a steel surface is moved. Each molecule of the steel surface is magnetized to a degree corresponding with the current variations set up by the voice in the speaking circuit. In order to reproduce the sounds of the voice thus magnetically recorded, it is necessary simply to connect the coil with an ordinary telephone receiver, and to pass the magnetized steel surface again under the magnet. In one of the forms previously described in these columns, the steel surface was a wire, spirally

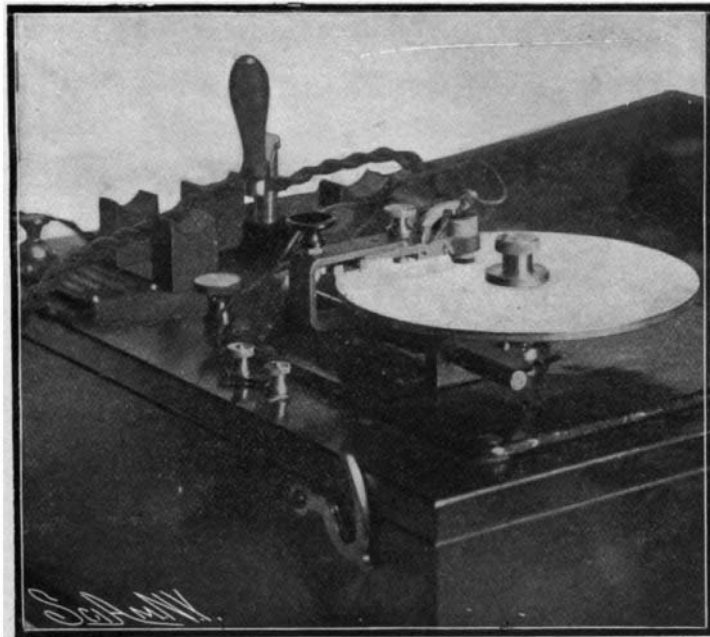
wound about a drum, rotated at a constant speed, mechanically or by hand. In its general appearance, the instrument was not unlike the Edison phonograph; it had a carriage which moved forward at a constant speed as the cylinder with its wire turned beneath it. Impelled probably by the desire to produce an instrument resembling the disk type of phonograph, Poulsen has designed an instrument in which a steel plate is used instead of a wire spirally-wound about a cylinder. In its manner of operation this new instrument resembles the ordinary gramophone. The disk is rotated by clockwork in the same way. The records are not produced with the full loudness of the ordinary gramophone; still, they are entirely distinct and are singularly free from the scratching



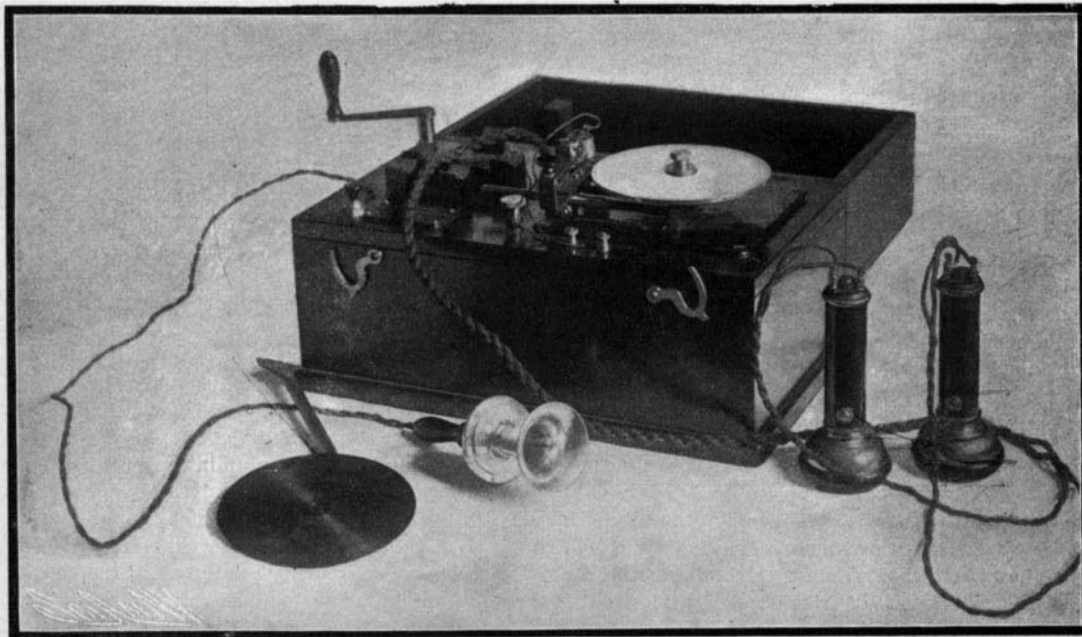
Wire Type of Telegraphone with One of the Reels Removed.



End View of the Wire Telegraphone.



Details of the Disk Type of Telegraphone.



The Poulsen Telegraphone.—Disk Type.

**THE IMPROVED TELEGRAPHONE.**