

Another valuable and peculiar feature of this instrument is that the operator may be surrounded by all manner of loud noises and only his voice will be transmitted, and then he may speak almost in a whisper. This is a very valuable quality, as city lines are generally troubled with induction, accidental disturbances on the diaphragms of transmitters of the common type furnishing their full share of the load. This new method shuts out all accidentals.

James Lowth, the inventor, was the first and has been the only experimenter in this field, and to his efforts and exhaustive experiments is due the present perfection of the system, which is now controlled by the Lowth Stetho-Telephone Company, of Chicago. This novel device will rank among the most curious and wonderful of inventions.

A GAS-PROPELLED CARRIAGE.

At the exhibition of machinery which was held in Munich during the past year, the attention of the visitor was attracted to a vehicle with a motor constructed by the Rhine Gas Motor Works, Benz & Co., of Mannheim. This motor is driven by gas which it generates

for the more expensive horse power in many cases.—*Illustrirte Zeitung.*

A Crew Disabled by Lightning.

The Guion line steamer Alaska, from New York, which lately arrived at Queenstown, brings intelligence of the ship Edward, from Havre, with a cargo of iron ore, whose captain reported that the vessel encountered a terrible electrical storm in the Atlantic on the night of the 31st ult., when in latitude 41 43 N., longitude 54 42 W., lasting for several hours. The vessel was continuously enveloped in lightning, which prostrated on the deck eleven seamen, and deprived them of sight for nearly half a day. The second officer and the boatswain were also dashed to the deck, and received serious injury, and the former was speechless for five hours. Three balls of fire exploded with a tremendous report over the main rigging, scattering flaming fragments over the ship, and driving the remaining members of the crew in terror into the fore-castle. From 3 A. M. until 7 P. M. the captain and mate were the only persons on board capable of doing any work, and on them devolved the task of keeping the vessel before the east-

the moulting period they remain torpid and take no food.

"During its growth the mygale makes an unknown number of moults, that is, it sheds its outer coat when that has become uncomfortably close fitting, in the same manner as the common crab of our coast. At these times members lost from the body by accidents are partially replaced. If a leg is lost, the first moult produces a perfectly formed but short leg, subsequent moults increasing the size of the leg.

"While the mygale is a dread to most forms of insect life, there is one of which it, in turn, stands in mortal terror. Abundant in the same regions is a large wasp, with bluish-green body and golden-red wings. The body is about two inches long, the spread of wings nearly an inch greater. These wasps (*Pepsis formosa*) fly uneasily about in search of food for themselves until they discover a 'tarantula,' when a more definite course of action is assumed. The flight of the wasp is now in circles around its prey, gradually approaching it, the mygale meanwhile, in terror, showing fight, standing semi-erect on the two hinder pair of legs. A favorable opportunity presenting, the wasp stings the



A GAS-PROPELLED CARRIAGE.

from benzine or analogous material. As can be seen from the accompanying cut, this new vehicle is well shaped compared with others of the same class. The motor, which is not visible from the outside, is placed in the rear of the three-wheeled carriage over the main axle, and the benzine used in its propulsion is carried in a closed copper receptacle secured under the seat, from which it passes drop by drop to the generator, and which holds enough benzine for a journey of about 75 miles. The gas mixture is ignited in a closed cylinder by means of an electric spark—a very safe and reliable arrangement. After regulating the admission of the gas, the motor can be started by simply turning a hand lever. The operator climbs upon the seat and, by pressing the lever at his left, sets the motor into operation, and it starts the vehicle, being connected with the back wheels. The speed of the motor can be increased or diminished at will by turning the lever backward or forward, and it can be stopped by pulling on the lever. The vehicle is steered in the same manner as a tricycle, by a small front wheel. It can attain a speed of about ten miles an hour, but in crowded streets it can be made to move as slowly as an ordinary vehicle. A quart of benzine is sufficient for an hour's trip, making the cost of the motive power about seven cents per hour, and the experiments with the vehicle in the streets of Munich during the exhibition proved the practicability of substituting this kind of motive power

erly gale. The captain states that all on board the ship were trembling with fear during the time that the electrical storm lasted, which was the most terrible he ever witnessed, and he adds that no doubt the iron ore with which the Edward was laden acted as a magnet to attract the lightning.

The Texan Tarantula and Its Foe.

Dr. Horn, Philadelphia's distinguished entomologist, writes to the *Ledger* the following:

"In the not too fertile parts of the region from Texas to California lives a large spider known to the inhabitants as the tarantula and to naturalists as *Mygale Hentzii*. Its body is two inches or more in length, clothed with rusty brown hair, the legs long, and when extended covering an oval of four by five inches. As may be imagined, the mygale is not a handsome insect, and while it is looked upon with terror by most people, no one cares to handle it unless quite certain it is dead.

"In place of the web which usually forms the house of spiders, the mygale excavates a burrow in the loose soil, from which it wanders in search of its prey, consisting principally of members of the grasshopper family, or Cicades. The jaws are large and powerful, armed with long, stout fangs, with which they can pierce and kill their prey. One full meal will at times supply their needs for several weeks. In fact, during

spider and renews the circle flight, repeating the sting until the spider becomes completely paralyzed. When the wasp is assured of the helplessness of the spider, it seizes him and drags him to a previously prepared nest. The eggs of the wasp are then deposited and the spider covered up. The eggs soon hatch, the spider is gradually eaten, and a new wasp appears to repeat the actions of its parent.

"By the sting of the wasp the spider is not killed, simply paralyzed, so that during the time it is being fed upon it retains vitality, furnishing living food to the newly hatched larvæ, which, by a curious instinct, feed first on those parts of the spider not essential to the maintaining of the little vitality remaining.

"Our common mud wasp, *Chalybion*, has similar habits. Its nests, made of elastic mud, are familiar to most people, as they are found abundantly in sheltered places about barns and other outhouses. These, when opened, will be found filled with spiders in the helpless condition already mentioned, among them a larva and some partly eaten spiders."

The Population of Germany.

The results of the German census, taken on December 1, 1885, have been long known. But it is only in this month's number of the Statistical Record of the German Empire that the details are published. Total, 46,855,704.