

THE BRANGER CUP RACE FOR MINIATURE MOTOR BOATS.

BY THE PARIS CORRESPONDENT OF THE SCIENTIFIC AMERICAN.

Considerable interest was recently manifested in Paris in a series of races for model motor boats. A cup for one of these events was presented by M. Branger, a well-known French photographer of sporting subjects. The races were held on the lake of the Bois de Boulogne over a course some 150 meters (492.125 feet) in length, and they were watched with interest not only by the children but by their elders as well.

Some of the little craft traversed the distance at surprising speed, and a number of curious forms of miniature launches were to be seen, as the accompanying illustrations show. One of the conditions of the contests was that none of the competitors was to exceed 5 feet in length. Some of the latter were considerably smaller; in fact, one of the winners was but 23.6 inches long. There were twenty-four starters in the races, which were watched with great interest by a large crowd of spectators.

There were races for different classes and a special class contested for the cup. Some of the boats were driven by electricity, while others were provided with explosive motors; one of the latter was of 1 1/4 horse-power and was, as can be seen in the illustration, a single-cylinder, air-cooled motor fitted with high-tension magneto ignition, fly-wheel, friction clutch, etc.

Despite a damp and rainy day, these toy racers made a very fair performance, as can be seen by the following table of winners:

Racers 0.60 Meter (23.62 inches) in Length: Winner, "Girard IV." (owned by Girard), 2 minutes 27 seconds.

Racers 1 Meter (39.37 inches) in Length: Winner, "L'Eclair" (owned by Leroy and Breton), in 2 minutes

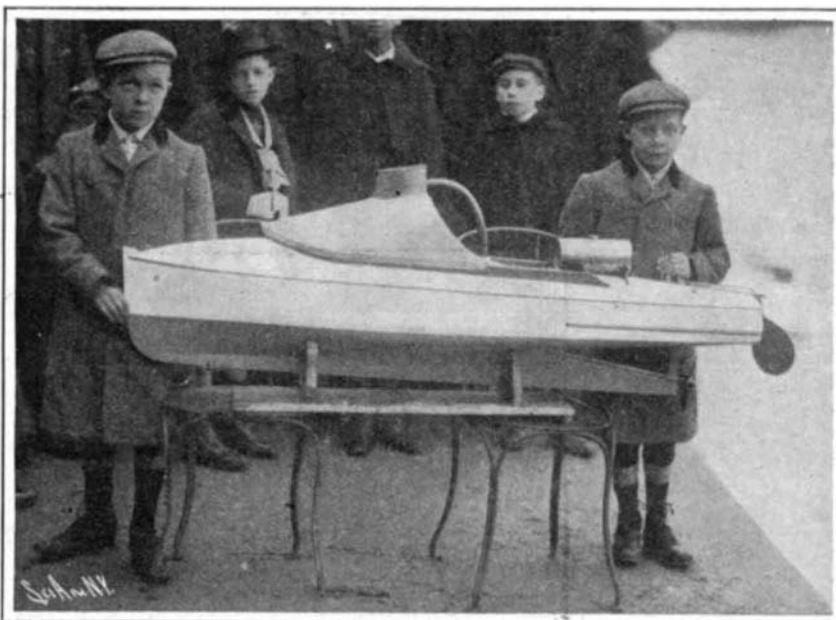
second in 2 minutes 20 seconds; and "Lorraine" was third in 2 minutes 25 seconds. The consolation prize was won by "Catarina" in 1 minute 16 seconds. This first toy motor-boat meet was very amusing, and was attended and directed by several constructors of motor

The Effects of Ether and Chloroform on Plants.

The forcing of plants by means of ether has attained great practical importance. The process, however, is not applicable to all plants, for the growth of many species is retarded by ether, which appears to exert on them an inhibiting action as it does on the nervous system of animals. Alfred Burgerstein has recently published the results of experiments on the effects of ether and chloroform on a great variety of plants. He studied especially the action of ether on the buds of deciduous trees and shrubs and the effects of both ether and chloroform on the growth of bulbs and the germination of seeds. The unfolding of some buds was accelerated, that of others unaffected by etherization. Begonia buds were retarded. Etherized narcissus bulbs sprouted a week earlier and etherized onions three days later than untreated bulbs, while tulips were not affected by ether.

Etherization continued for 48 hours, using 3 volumes of ether to 10,000 volumes of air, exerted no further injurious effect on bulbs, but the same proportion of chloroform killed them all in 8 hours. The germination of air-dried seeds was accelerated by exposing them for 24 hours to an atmosphere containing from 2 to 8 volumes of ether to 10,000 volumes of air, but the proportion of seeds that germinated was not altered. Chloroform, employed in the same manner, accelerated the germination of some seeds and retarded that of others, but it generally reduced the proportion of seedlings. When the seeds were first soaked in water etherization diminished their germinating power and chloroform, in most cases, killed them.

The growth of bean, pumpkin, and sunflower plants was almost or entirely checked in an atmosphere containing 0.004 per cent of chloroform, but the same proportion of ether promoted their growth and the plants

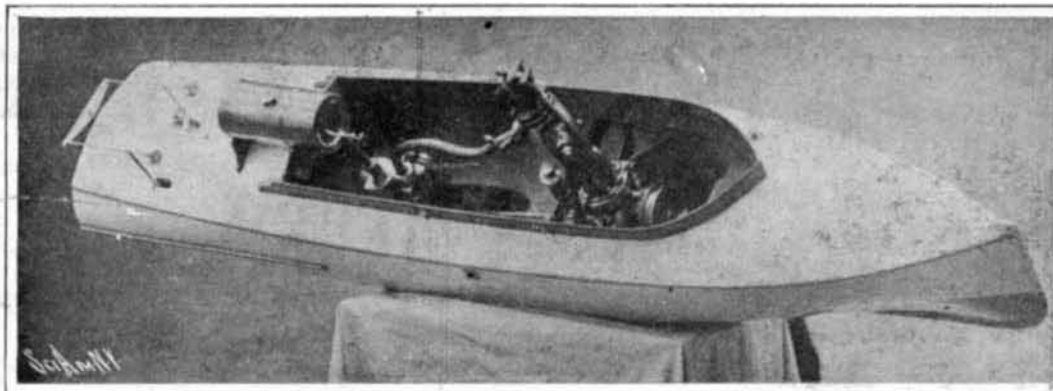


The "Girard I.," Winner of the "Coupe Branger."

boats, who gained not a little information as to the speed capabilities of different forms of hulls.

The Death of Henry C. Sergeant.

In the death of Henry C. Sergeant, which occurred January 30 at his home in Westfield, N. J., America has lost one of her most brilliant inventors. To the inventive genius of Mr. Sergeant the elevated railroad companies owe the chopping boxes, which enabled them to stop the use of uncanceled tickets on their lines,



Plan View of the "Girard I.," Showing the 1 1/4-Horse-Power Air-Cooled Motor, the Gasoline Tank, and Carbureter.



A Group of Model Motor Boats, Showing the Different Types and Sizes.

47 seconds; 2, "Girard III.," in 4 minutes 30 seconds.

The winner of this event was given the superb silver medal donated by "Les Sports."

Racers 1 1/2 Meters (59.05 inches) in Length: 1, "Girard I.," in 1 minute 5 seconds (5.16 miles an hour); 2, "Lorraine" (owned by Pierre de Fontbrune), in 1 minute 50 seconds; 3, "Catarina" (owned by Le-tang), in 2 minutes 45 seconds.

The race for the "Coupe Branger" was won by the "Girard I." in 1 minute 20 seconds. "L'Eclair" was

and materially to increase their profits. His first invention, which he worked out when only eighteen years old, was a machine for making wagon wheels. In 1862 he patented a governor for marine engines to prevent the racing of propellers. This governor the United States government at once adopted for war vessels. He took out patents on more than fifty air compressors and drills, and his development of the drill that bears his name made it possible to carry out some of the greatest engineering achievements of the last quarter century.

threw in air thrice as strong in ether. The effects on the power of reaction to light and gravitation were analogous to the effects on growth.

It appears, therefore, that the entire vital energy of some plants is increased and that of others diminished by ether and chloroform.

The special commission appointed to consider the construction of bridges will recommend to the New York Legislature the construction of two bridges from Staten Island and one from Manhattan to New Jersey.



A Well-Designed Entry.



Preparing Some of the Contestants for the Races.