Scientific American

A BOAT ON WHEELS.

BY JOHN L. VON BLON.

The queerest ship that ever sailed is a yacht on wheels, a graceful land-going clipper, that glides over the pathless stretches of sun-blistered plain, and carries her plucky navigators to and from their gold mine in the desert. Solitary gold hunters who have seen her white sails silhouetted against the bleak brown background in their aimless wanderings have

brought to the outer world strange and ludicrous tales of a phantom ship that sped by them like a bird on the wing. The spectacle of a trim-built craft such as ordinarily belongs to the sea skimming over that barren expanse where not a drop of water ever falls might well alarm less superstitious persons.

This vehicle was built by Charles S. and Carl H. Hoyt, brothers, of Cleveland, O., eight months ago, and has been constantly in use since, running thousands of miles. Her owners have a gold mine in the buttes near the station of Rosamond, on the western border of the desert, and owing to lack of a suitable site they established their camp nine miles away. Between this place and the mine is a remarkable dry lake. Its surface is as hard as concrete, and swept as smooth as a tennis court by the sands forever driven over it by the fierce winds rushing down through the Tehachepi Pass. While trudging wearily over this level tract.

before a gale that almost blew them off their feet, one of the Hoyts suggested that if they had a wagon with sails they might make the trip easier and quicker. This idea was followed out and with surprising success.

With only saw and ax and hammer and knives for tools, the young men began the work of construction. The material available consisted of the odds and ends to be found around a mining camp. The first requisite was a support for the machine, and for this the axle of an ordinary worn-out buggy was used, two iron wheels 30 inches in diameter, which had done service on a farming implement, being attached. Other parts were improvised with similar skill and ingenuity, and after a month of diligent application the workmen turned out a stanch "boat," 14 feet long, 8 feet across in front and tapering to the rear, with a mast 15 feet high, mainsail 10 feet on the boom and 10 feet on the mast, jib and jibboom to match. A steering contrivance like those on hook-and-ladder trucks was devised, and "Desert Queen" stood ready for her trial

trip. The initial run was doomed to end in disaster. While tearing along before a strong wind at a terrific rate the machine got beyond control and a sudden gust brought her to grief with a crash. Bruised men, broken timbers and wrecked sails littered the ground. Neither of the Hoyts will ever forget the experience, for they will always bear the marks of the casualty as a reminder. Nothing daunted, they set to work rebuilding, and after many days repaired the damage and made necessary improvements, and now she carries her owners and their tools and supplies to and from the mine daily, and often on Sundays and holidays they take out excursion parties of half a dozen people, usually

admiring visitors who have gone many miles to see the sight. Hundreds have been attracted to Rosamond from all directions for a look at "Desert Queen."

Speed is the astonishing quality of the craft, and almost beyond belief. Time and again she has sailed fifty miles an hour on the dry lake in favorable winds. On the open desert she has been speeded up considerably, and once is said to have made a straight run of forty miles in eighty minutes. She answers her helm perfectly and sails about as "close" to the wind as the ordinary water craft of her size.

A fast ride on "Desert Queen," amid surroundings more desolate than the lonely sea itself, is a thrilling and exciting experience. You go dodging between the dots of greasewood and cacti as you leave the camp for the solitude when the wind rises. Here and there grotesque yucca trees stand like sentinels, with gaunt



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YACHTING ON THE GREAT DESERT.

arms outstretched to reach you: horned toads scurry away over the hot sands, and lizards dart, looking like blue streaks, for the shelter, but not always quickly enough, for the "Queen's" wheels have crushed many before they could move; jackrabbits go skittering through the brush, and little ash-colored desert chipmunks scatter the sand about in their frenzied haste to get into their retreats; now and then a coyote, long and gray and lean—the picture of starved want—rises upon his scraggy hind legs and sniffs; occasionally you will run over a deadly "sidewinder" (rattlesnake) and hear the whirring of the rattles, or pass the bleaching bones of some poor creature that suffered the horrors of starvation and probably sucked the blood from its own parched tongue before the end

These are familiar scenes, and at first you notice them. Then the wind grows stronger and the pace madder. You tie a string to your hat and anchor it to your suspender; your handkerchief is whipped from your neck and goes sailing and writhing up and away

tains to Death Valley. Wilder becomes the speed, and you hang on frantically with both hands and find it hard to catch your breath. The man at the helm and the man hauling in canvas are too busy to see you gasp and shiver, but at last the sails are all lowered and the wonderful voyage is ended. But then it has not begun to blow yet on the Mojave Desert! Thirty minutes later you could not stand anywhere on the ground over which you have passed without a post to

cling to!

SOME INTERESTING FEATURES OF THE KRUPP WORKS AT ESSEN.

BY HENRY L. GEISSEL.

One of the most attractive features at the Columbian Exposition in Chicago was that of the great Krupp works. Since that time this firm has made no similar exhibition, but it is just announced that a display, which will cost over a million dollars, is being arranged for the industrial exposition to be held in Düsseldorf. There is no industrial plant in the world the story of which is more interesting.

Within a few German miles of the Rhine, north of the Ruhr, in fertile, undulating, yet not attractive country, surrounded by the most important coal mines in Germany, lies the town of Essen. With the exception of a time-honored cathedral, Essen, despite its age, can boast of no historical relic of ancient days. The square before the town hall is embellished by a bronze monument from the mas-

ter hand of the sculptor Schaper, representing not a king or hero, but a man clad in a simple citizen's coat, whose right hand rests on an anvil, and whose penetrating eyes are overhung by a thinker's brow. The granite pedestal bears in golden letters the words:

"ALFRED KRUPP."

The town of Essen has erected this life-like statue in grateful commemoration for generations now and to come of her most distinguished son. For this man, sprung from an old and honorable family in Essen, within the time of half a generation, raised the small unknown country town to its present importance and celebrity. He did not sit in the Council of Aldermen, but in the small steel foundry, inherited from his father, which employed hardly a dozen workmen. This steel foundry, however, rose to world-wide fame, and grew beyond all limits. At the time of Alfred Krupp's death, in 1887, the number of employés and workmen of his works was 25,000.

On April 1, 1901, the number of hands employed in all the Krupp works, including 3,823 engineers and

> office men, amounted to 46.077. A few figures. for which the writer is indebted to the courtesy of the administration of the Krupp works (who also, by the way, supplied the photographs reproduced with this article), show the immense extent of Krupp's establish ments.

During the year 1900 the works at Essen consumed 937,172 tons of coal, or an average of 3,123 tons per day, representing four railroad trains of 40 cars, each of a capacity of 20 tons. The other Krupp works concumed 655 tops making a total of 1,592,-296 tons, or 5,307 tons per day. The consumption of water at the Essen works, during the same year, amounted to 560,000,000 cubic feet, or equaled the annual water consumption of the city of Amsterdam.

The gas consumption at the Essen works in 1900 was 665,000,000 cubic feet, as compared with 660,000,000 cubic feet consumed in 1900 by the city of Breslau. The number of gas-lights outside of the workshops was 2,658, and that within the shops 43,012. The gas works of the Krupp works is the sixth largest in the German

The electric plant of the steel works includes seven distributing stations, 128 miles of cable, 1,062 arc



IN THE GUN SHOPS AT ESSEN.

—away out of sight almost before you realize that it is gone. The wind here is different from any that ever blew in any other part of the world. The "Queen" is fairly flying now and but a little sail is up. The air is filled with sand and pebbles as large as buckshot, and they pelt you hard; all around towering spirals of dust-small end of the spiral down-go springing across the plain, whirling up sand to feed the terrible storm that is sweeping from the Sierra Madre Moun-