

hastened and he sat down on the green grass beside the fence and looked away where the sun's rays streamed and the birds were shooting above the gray creeping fog that nestled on the bosom of Long Island sound.

Gods, what a picture for a painter of "Hopes Realized at Dawn." And there he sat in silence thinking of the two faithful partners and the Herald reporter respected his mood and let him speak his first words:

"It's a funny sensation to fly."

For half an hour the man who had demonstrated that he has a machine that can navigate the air with the ease of his ten minutes' experience in the air ship. He was enthusiastic, spoke almost like a child who has seen for the first time something new and is panting out of breath in an effort to tell it to its mother.

Thus did Whitehead describe his sensations from the moment the air ship left the ground until she landed again:

by the inventors that they will be to perfect a machine that will be nearer to the point of success than any other machine thus far made. This new generator of Whitehead promises greater things if the claim the inventor are fulfilled. The power developed by a series of rapid explosions from calcium carbide at the present time the spark expels are not very rapid but Whitehead claims that he can produce explosions with the impetus if required gas generated is forced through a chamber where it comes in contact with a chemical preparation of ingredients of which are known to Whitehead. The contact with the chemical produces a powerful and even piston pressure that dynamites its way through this new power-head has had the chemists chemical preparation and it is at its power. The chemists chemical preparation a "G"

HE SUCCESS that has attended the experiments of the young Brazilian, M. Santo-Ignacio, in essentially ballooning in France has been responsible for a marked impetus in this country in the fascinating and daring sport of flying. The probability is, however, that the final solution of successfully navigating the air will be accomplished by two American inventors combining their brains and energies toward perfecting a flying machine that will do what scores of men have been working to accomplish for many years.

In an alarming fashion at times when the speed was fast. After reaching the corner of Fairfield avenue and Ellsworth street there is a clear stretch of good macadam road and the flying automobile was sent spinning along the road at the rate of twenty miles an hour. For short distances from there on the speed was close to thirty miles, but as the road was not straight or level for any distance this rate of speed could not be maintained. There seems no doubt but that the machine, even with its present common board wheels of only a foot diameter, can reel off forty miles an hour and not exert the engine to its fullest capacity. The location selected to fly the machine was back of Fairfield along the highway where there is a large field

trying the machine was responsible for that. The Herald representative assisted when the opportunity offered, but a stranger about a flying machine is sadly out of place and absolutely in the way when it comes the hour to fly the ship. Ropes were attached to the ship so that she would not get away from her handlers. In the body of the machine were two bags of sand, each weighing 110 pounds, for ballast. Mr. Whitehead started the engine that propels the machine along the ground on the four wooden wheels, while his two assistants clung to the safety ropes. The newspaper man kept well clear of the machine, partly to better watch the operations and partly not to get tangled up in the ropes and wings of the giant white bat. Slowly the machine started at first to run

from the feeding ground in the early morning dawn. The two men with the ropes were tumbling over the hummocks in the field, for it was not clear enough yet to avoid such obstructions readily, and Whitehead waved his hands enthusiastically and excitedly as he watched his invention rise in the air. He had set the dial so that the power would shut off automatically when it had made one revolution in the trees that the machine would not keep flying and smash itself against the trees at the other end of the field. When the power was shut off the air ship settled down as lightly on the ground as a bird and not a stitch was broken or a rod bent.

The air ship was now taken back to the starting point. And now the real test was to be made. Whitehead kept steadily on her course, head on, for the trees. To strike them meant wrecking the air ship and very likely death or broken bones for the daring aeronaut.

Here it was that Whitehead showed how to utilize a common sense principle which he had noticed the birds make use of thousands of times when he had been studying them in their flight for points to make his air ship a success. He simply shifted his weight more to one side than the other. This careened the ship to one side. She turned her nose away from the clump of sprouts when within fifty yards of them and took her course around them as prettily as a yacht on the sea avoids a bar. The ability to control the air ship in this manner appeared to give Whitehead confidence for he began to take time to look at the landscape about him. He looked back and waved his hand exclaiming: "I've got it at last!"

He had now soared through the air for fully half a mile and as the field and a short distance ahead in the aeronaut shut off the power and prepared to light. He appeared to be a little fearful that the machine would dip ahead or tip back when the power was shut off but there was no sign of any such matter on the part of the big bird. She settled down from a height of about fifty feet in two minutes after the propellers stopped. And she lighted on the ground on her four wooden wheels so lightly that Whitehead was not jarred in the least.

man and the two assistants stood still for a moment watching the air ship in amazement. Then they rushed down the slightly sloping grade after the air ship. She was lying now about fifty feet above the ground and made a noise very much like the "chung, chung, chung," of an elevator going down the shaft.

Whitehead had grown calmer now and seemed to be enjoying the exhilaration of the novelty. He was headed straight for a clump of chestnut sprouts that grew on a high knoll. He was now about forty feet in the air and would have been high enough to escape the sprouts had they not been on a high ridge. He saw the danger ahead and when within two hundred yards of the sprouts made several attempts to manipulate the machinery to turn from the straight course, head on, for the trees. To strike them meant wrecking the air ship and very likely death or broken bones for the daring aeronaut.

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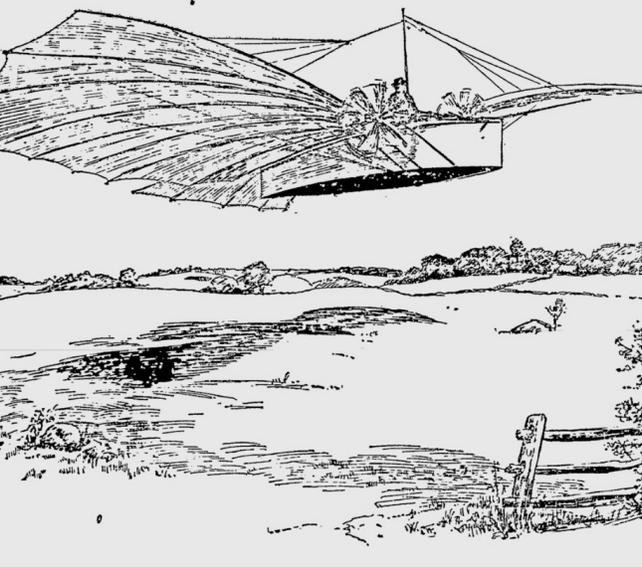
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This gave me more confidence and I tried steering the machine to the right by shifting my weight to the right part of the center of equilibrium. The machine responded to the slight shifting of weight. It was most sensitive.

I had soared through the air now for half a mile far ahead the long field ended with a piece of wood within a hundred yards of the woods I shut off the power. I began to feel a little nervous about how the machine would act in settling to the ground, for so many machines have shown a tendency to fall either on the end and such a fall means broken bones. My machine began to settle evenly and I landed on it with scarcely a jar. And not a thing was broken.

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GUSTAVE WHITEHEAD'S STORY.



WHITEHEAD'S FLYING MACHINE SOARING ABOVE THE TREES

Gustave Whitehead, of Bridgeport, and W. D. Custead, of Waco, Texas, have co-operated and are now working on a flying machine which is expected to revolutionize the world of aeronautics. Accompanying this article are pictures of both the Custead and Whitehead flying machines. Mr. Whitehead is employed at the Whitcomb & Hobbs works as night watchman and during about half the time that is allotted to most men to sleep he is working on his flying machine. Some weeks ago Mr. Whitehead took his machine out beyond Fairfield in a large field and tried it. There was no doubt of its being able to fly but at the time the inventor did not feel like risking himself in it for a trial.

Tuesday night, however, of the last week, Mr. Whitehead, Andrew Collins and James Dickie, his two partners in the flying machine, and a representative of the Herald left the little shed on Pine street where the machine is housed and took it to a suitable spot beyond Fairfield where its inventor had planned to take his first flight.

The start was made shortly after midnight in order not to attract attention. The wings or propellers were folded tightly to the sides of the body of the air ship. The two engines were carefully tried before starting out and the new scintilla generator was gone over a last time by Mr. Whitehead to see that it was in perfect order. There was only room for two in the machine. Whitehead and Collins occupying the seats while James Dickie and the Herald representative followed on bicycles.

The machine rolls along the ground on small wooden wheels, only a foot in diameter, and, owing to their being so small, the obstructions in the road made it rock from one side to the other

and few trees to avoid in flying the air ship. It was about 2 o'clock Wednesday morning when the great white wings of the air ship were spread out ready to leap through the air. Mr. Whitehead determined to fly in the machine himself. She behaved so nicely that he felt that there would no longer be any trouble about his flying in the place of the 220 pounds of sand that was used for ballast on the first trip.

The engines were carefully tested again and every joint and rod in the structure was carefully gone over and critically inspected. The bags of sand were taken out of the machine.

By this time the light was good. Faint traces of the rising sun began to suggest themselves in the east. An early morning milkman stopped in the road to see what was going on. His horse nearly ran away when the big white wings flapped to see if they were all right.

The nervous tension was growing at every clock tick and no one showed more than Whitehead who still whispered at times but as the light grew stronger began to speak in the normal tone of voice. He stationed his two assistants behind the machine with instructions to hold on to the ropes and not let the machine get away. Then he took his position in the great bird. He opened the throttle of the ground propeller and shot along the green sod at a rapid rate.

"I'm going to start the wings!" he yelled. "Hold her now." The two assistants held on the best they could but the ship shot up in the air almost like a kite.

It was an exciting moment. "We can't hold her!" shrieked one of the rope men.

"Let go, then!" shouted Whitehead back. They let go, and as they did so the machine dived up through the air like a bird released from a cage. Whitehead was greatly excited and his hands flew over one part of the machinery to another. The newspaper

man and the two assistants stood still for a moment watching the air ship in amazement. Then they rushed down the slightly sloping grade after the air ship. She was lying now about fifty feet above the ground and made a noise very much like the "chung, chung, chung," of an elevator going down the shaft.

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And while my brain was whirling with these new sensations of delight I saw ahead a lump of trees that the machine was pointed straight for. I knew that I must in some way steer around those trees or raise above them. I was a hundred yards distant from them and I knew that I could not do so by rising higher, and also that I had no means of steering around them by using the machinery. Then like a flash when to escape the trees came to mind. I had watched the plane when they turned out of a straight course to avoid some object slightly diagonal to the horizontal. To turn to the right the bird would lower the left wing or side of its body. I thought I ought to obey the same principle and when within about fifty yards of the clump of trees I shifted my weight to the left side of the machine. It swung over a little and then to turn from the straight course, and we sailed around them as easily as it was to sail straight ahead.

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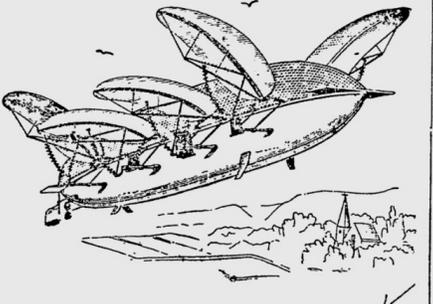
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CUSTEAD'S AIR SHIP

GUSTAVE WHITEHEAD

(Specially Photographed for the Herald.)

How the inventor's face beamed with joy! His partners threw their arms around his neck and patted him on the back and asked him to describe his feelings while he was flying.

"I told you it would be a success," was all he could say for some time. He was like a man who is exhausted after passing through a severe ordeal. And this had been a severe ordeal to him. For months, yes, years, he had been looking forward to this time, when he would fly like a bird through the air by means that he had studied out with his own brain. He was ex-

other hand inventor Custead claims that his airship can be made a commercial success for it differs from Whitehead's in that it rises from the ground vertically while Whitehead's machine must have a running start like a goose before leaving the ground for the flight. Custead claims to be the most feasible form of air ship but he lacks a generator that is sufficiently light and will do the work required to propel the air ship. Whitehead, however, has the generator and by the combination of Custead's air ship and Whitehead's generator it is believed

but not one of them Whitehead has discovered valuable.

The only demonstration generator's commercial value in its use in the flying machine is no doubt that Whitehead's generator to propel the air ship along the ground on its wheels also for the power for the engine makes the propellers go through the air.

The one great drawback to the motive power to run a has been the great weight of the generator. Whitehead claims that decrease by seventy-five per cent of any motor at present. The complete motive power generator and engine, will weigh ten pounds to ten or twenty horse power. Custead's generator of carbide are required twenty hours. Thus far a time a flying machine has been thirty minutes.

Whitehead's flying machine has a long and thin fuselage is that of a huge bat, the side of the body there are of bamboo poles and copper. These wings are thirty from tip to tip. There is also in the stern of the machine intended to regulate the descent of the ship. There engines, one of ten horse run the machine on the wheels and the other ten propellers in flying. The engine weighs twenty-two pounds. The twenty horse engine weighs fifty pounds.

Mr. Whitehead and Mr. Custead are now building an air ship. Mr. Whitehead is backed by a company of South Texas with unlimited capital. They firmly believe in the success of Custead's invention. The generator is a four-horse power.

Mr. Custead's air ship was built in Texas where he lives. He is now in New York on the new generator. Whitehead is now in Texas. Whitehead has patents to fully protect it no difficulty in receiving the generator is under any patent.

It is probable that the generator will be manufactured in Bridgeport where every facility is at hand for manufacture of such articles.

The coolest spot in Bridgeport, Texas, is at 44 Cannon Street. The best plan is to have a quarter, with ventilating, and ice cream machine.