

A Winged Airship.

While M. Santos-Dumont, the Brazilian, is repairing his dirigible balloon in Paris, Gustave Whitehead, a Connecticut inventor, is bidding for aeronautical honors with an airship with wings that soars like a bird. Mr. Whitehead has made several experimental trips, it is claimed, with a certain amount of success and without an accident. His longest flight up to date was half a mile at an elevation of 50 feet from the ground. The airship is certainly a queer looking bird. It acts as strangely as it looks. It can run along the ground at 30 miles an hour, and when the operator wants to travel through the air all he has to do is to



GUSTAVE WHITEHEAD.

make sure he is carrying enough accident insurance, pull a throttle, and hold fast while the machine opens its wings, flaps them, and darts upward, says the Boston Journal.

Mr. Whitehead lives at Bridgeport, Conn. He has been an assistant to Prof. Langley of the Smithsonian Institution and of Prof. Andree. He was assisted in his invention by W. D. Custard of Waco, Tex. Andrew Cellie and James Dickle are his financial backers.

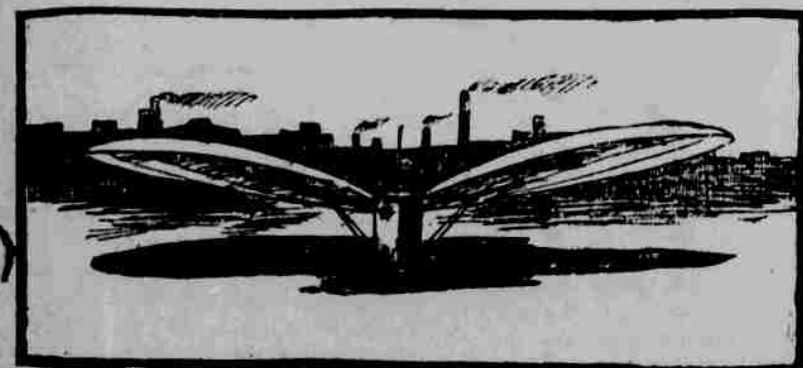
While Mr. Whitehead has demonstrated that his airship can fly, he does not claim that it can be made a commercial success. On the other hand, Inventor Custard claims he has an airship which can be made valuable for business purposes. Custard claims to have the most feasible form of airship, but he lacks a generator that is sufficiently light. By a combination of Custard's airship and Whitehead's generator the inventors believe that the best airship yet devised will result.

This new generator promises great things if the claims of the inventor are fulfilled. He says it is capable of producing enormous power. Whitehead claims that his motor will decrease by 75 per cent the weight of any motor at present in use. The complete motive power, including generator and engine, will weigh about five pounds to the horse-power. This includes fuel for 24 hours.

Whitehead's flying machine is about 16 feet long and its general appearance is that of a huge bat. From each side of the body there are wings made of bamboo poles and covered with muslin. These wings are 26 feet from tip to tip. There is also a steering apparatus. There are two engines, one of 10 horse-power, to run the machine along the ground, and the other of 20 horse-power, used to work the propellers in flying. Mr. Whitehead says:

How He Flies Through Air.

"When I want to fly I start the deck engine and gain a sufficient momen-



FRONT VIEW OF MACHINE.

turn on the ground and then turn the power to the upper engine, which runs the propellers or wings. As soon as the big wings, which measure 26 feet from tip to tip, begin to move, the machine rises in the air at an angle of about six degrees. The machine is 16 feet in length and tapers to both ends. At the stern there is a contrivance similar to a bird's tail. This is intended for regulating the ascent or descent of the machine.

The present machine weighs about 300 pounds. It is rough, and when I build my new one it will weigh many pounds lighter than this one. Instead of using bamboo poles for the ribs, as I have done in this one, I shall in my new machine use seamless steel tubing for the ribs, and for the wings use silk instead of muslin.

"Last Tuesday night I selected as the time to fly my machine. I had tried her three times before with ballast in her and she worked all right, so I felt confident that I could fly in her.

Tells of His Aerial Trip.

"With one of my assistants in the machine with me, and the other one and the newspaper representative following on bicycles, I started the machine from the house out the Fairfield Road for the flying place. Along the good pieces of road I speeded the machine up to 20 miles an hour, but as the wheels under her are only board wheels and but a foot in diameter, the obstructions in the road made her rock when going at such a rate of speed. I am confident that with pneumatic-

tired wheels under her I can run 50 miles an hour on the ordinary macadamized road.

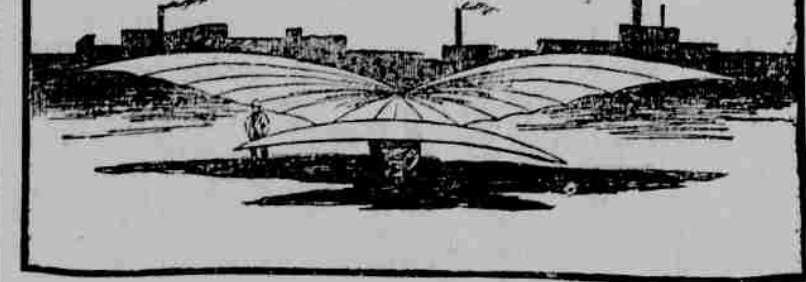
"We arrived at the flying ground about 2 o'clock in the morning. There was a fair moon and we could see well enough to unfold the wings and get the machine in shape for the trial. I selected a long stretch of fields sloping slightly to the north. First I tried the machine with two bags of sand in for ballast. Each bag weighed 110 pounds.

"About 4 o'clock, as the sun was beginning to show itself in the east, I got ready to take my first fly in the machine. I was a little nervous, I admit, but I felt eager to fly. I felt sure that my machine would not fall me. I took out the bags of ballast. Then we tied two ropes to the under part of the machine for my two assistants to hold fast to and not let the machine get away from them. When everything was ready I took my position in the machine and turned the power into the deck engine.

"The machine started ahead nicely, and when she had gained sufficient momentum I shut off the power in the deck engine and started the propeller engine. As soon as the wings began to flap, her nose raised in the air. I was considerably lighter than the two bags of ballast, and the machine rose faster. There was a terrific humming of the wind through the wings and other parts of canvas, and the engine made considerable noise, too.

Clump of Trees Avoided.

"I was now about forty feet above the ground and sailing along evenly. But I saw with considerable apprehension that I was headed straight for a clump of trees. I was not high enough to sail over them, and I couldn't get the steering apparatus to work just then. In fact, I had not had occasion

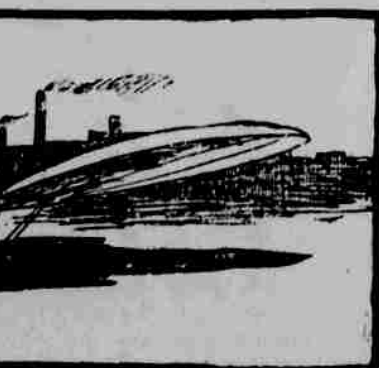


REAR VIEW OF THE SHIP.

to try it before. To hit those trees meant wrecking the machine and perhaps death or broken bones for me. A man thinks fast when he gets into a place like that. When I was within fifty yards of the trees, and my assistants below on the ground were yelling at the tops of their voices to 'look out for the trees,' it suddenly came into my mind that I had seen the birds in their flight tip one wing lower than the other when turning out of a straight line.

"Immediately I shifted my weight to the left of the center of equilibrium. The machine turned its nose to the left and sailed around the clump of trees like a swallow. I had no need for steering apparatus now, and I felt more secure. I tried steering by shifting my weight from side to side, and the machine proved most sensitive to my slightest movement.

"I had gone fully half a mile now, and ahead of me about 200 yards the open field ended with a big woods. I prepared to descend. Here is where I



FRONT VIEW OF MACHINE.

became apprehensive again, for many machines at the point where the wings are stopped do not settle horizontally, but dive ahead or fall tail downward to the ground. I shut off power by degrees, and the machine settled slowly on a perfectly horizontal plane to the ground, scarcely jarring me when the wheels struck the earth.

"The best that has been done in the past in getting motive power has been seven and eight pounds to the horse-power. This means so much weight that it is impossible for the machine to fly. My entire motor power, which includes two engines, the generator and 20 pounds of calcium carbide for fuel, which amount is sufficient for 20 hours of flight, weighs only two hours and five pounds per horse-power."

BID FOR THE SKY KINGDOM.

Dumont Wishes to be a Magellan of the Air.

I wish to be the Magellan of the air—the first circumnavigator of the globe independent of earth and water. I would rather do that than anything else I can conceive. Kingdoms and victories and gold would be nothing beside the glory of that deed. I am told that it is a mad dream, that it is folly. I do not think so. Given a start, a science is developed at racing speed in this age of ours, so full of excitement, of romance, of innumerable interests. I cannot endure the man or woman who says that this is a prosaic time. Did past time ever know a thrill comparable to that I feel soaring as a

bird soars in the air so pure, so clear, so lonely.

It is the one stainless element of the world. I know now why birds sing. It is because they fly, and to fly is a divine intoxication, an exaltation of every sense. Racing they call the sport of kings. Well, if that be so I can only say of flying that it is the sport of the gods. Have not the angels wings? Now you can understand how I feel when half a mile above fair, glittering Paris. I am enjoying one of the pleasures of paradise. What a supreme joy it will be to go around the world in the air—to pass over all the nations, to look upon cities to laugh at the waters impotent to harm one, to share with the homing pigeon, the eagle and the swallow the sovereign delight of the universe! And I will do it too. I will go round the earth. It was my boyhood's dream in Rio de Janeiro. I first imagined the journey in the tropics. Here in the north, if God is good, I will make its realization possible.

Ten years ago where were the motors that are going by us? De Dion and Mors and Panhard had all their fame to earn. Where a generation ago were a thousand and one accomplishments and necessary facts of today? As these things were then, so are aeronautics now. Believe me, before I am gray you will see fleets of aerial yachts beating out toward golden sunsets, squadrons of pleasure craft in the sky, and it may be, huge battleships will throw their somber shadows upon the earth.—M. Santos Dumont in Chicago Chronicle.

Early Advertisement.

The discovery of the primeval advertisement has not, of course, re-

warded our research. For we have not access to the strata wherein we might at least dig for its remains. The earliest of any kind which we have been able to unearth occurs in a Rider's Dairy for 1736, which possibly belonged to the newspaper collector. It is that of a dentist. We give it with its own spelling and punctuation: "Artificial Teeth, set in so firm, as to eat with them, and so Exact, as not to be distinguished from natural; they are not to be taken out at night as is by some falsely suggested, but may be worn years together; yet they are so fitted, that they may be taken out and put in by the Person that uses them at Pleasure, and are an ornament to the Mouth, and greatly helpful to the Speech; Also Teeth clean'd and drawn by John Watts * * * Racquet Court, Fleet Street." Many also are the advertisements of losses of money and property through footpads, whether it be "a lusty young fellow who wore his own hair" or "a pock-fretten man in a pair of everlasting Breeches," or on Wimbledon Common "a tall man in a blue frock and a light Bob wig on a bay Horse with a Swish tail and look'd like a genteel galloping hunter."—The Bookman.

Platinum is Becoming Scarce.

The scarcity of platinum is beginning to cause some concern among the electrical manufacturers of the country. For about five years the price of this valuable metal has steadily risen until today it is listed at a higher price than ever since its discovery and every indication points to still higher prices. Platinum is now quoted at about \$38 an ounce, about twice the quotation of gold, while five years ago it sold as low as \$5 an ounce. Since the flooding of the platinum mines in the Transvaal, which occurred after the breaking out of the Boer war, manufacturers have had to rely on Siberia for their supply of the valuable metal.

Renovating Old Cars.

A car-refitting company in New York city buys old Pullman coaches, tears the inside furnishings out and refits them according to the wishes of its customers. Whatever kind of private car a man may wish he may order—parlors, handsomely carpeted, sitting-rooms, dining-rooms, sleeping compartments, smoking-rooms—all with equipment more or less perfect, according to the price. And cars are refitted in this way and sold for prices varying from \$1,500 to \$15,000. Very handsome and serviceable cars have been built from the old "castaways," and the man of moderate means can travel privately and comfortably in a home of his own.

Water Two Miles Deep.

If the surface of the globe were perfectly level, water would cover it to the depth of two miles.

The flea that interrupts the dog that is chasing the rabbit, is like the corporation that pays starvation wages to its men—robbing the creature from which it sucks its blood.



A heart is lost in the game of golf! Cupid has taken charge of the green, And hazards are frequent, night and off. With a styptic constantly between.

The victim studies his charmer's play. Follows her course with an anxious eye. Hoping she'll land in the self-same way. Making the game a like-as-we-flie.

The parson's nibble would help them then. For to the altar the course would be. And when the game would begin again A wedding-ring would serve as the tee.

As single players no more arrayed Against each other, but man and wife, Their future would be a series played Of foursomes upon the links of life.

—F. W. W.



Between Heart and Bayonet.

BY JAMES NOEL JOHNSON.

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"Boys," cried the Colonel, dashing up, "do you see that redoubt?" The Colonel paused but a second. He had spoken with the air of one who is granting a favor rather than delivering a command.

Capt. Blake and Lieut. Summers answered with an exultant shout that echoed from every lip in their company.

A single impulse throbbled in each heart simultaneously, and the leap of one foot was the movement of all.

Until now the company had stood, all their arteries conduits of burning flame. Their faces gave evidence of the repressive struggle within them.

They had cast sullen, envious eyes on other ranks of men that, loosed from restraint, were hurrying, like glad streams, into the sea of action.

Oh, the sickening agony, the soul neuralgia of the brave soldier who is compelled for a time to become the passive object of roaring conflict!

The wild shouts of his brother troopers in action ring in his ears, firing his enthusiasm, but his feet are chained to the ground.

All around him and through him runs the thrill of battle. His nerves are leaping and vibrating like strings swept by heroic melodies, but he is chained to passivity.

Ever and anon a shot strikes into the human wall. A man detached drops and lies on the ground. There is reproach in the fading eyes, for the man had been shot as he stood as helpless as if tied to a tree.

But now the Colonel's word had cut the thought from Capt. Blake's impatient men, and gave them the liberty of action. And each man pressed forward as if victory sat on the hill to be claimed by him alone.

An accommodating wind shouldered aside the masses of smoke and exposed the redoubt.

About the mouths of the great guns was blown the foaming clouds of death. The redoubt seemed a great monster idol, belching flame and destruction to the feet of which hundreds of human sacrifices were already being cast.

Capt. Blake and Lieut. Summers charged in front of their exultant troopers, their swords lifted in glittering menace. They had no need to cheer on their men. To keep free and ahead of the exultant rush was all the officers needed to do.

Each of the two officers knew that, in that sublimed moment, his mind was in many things the reflex of the other's.



Each saw her in the scene.

were flying as swiftly as the missiles of death that both worshiped with the frenzy of idolatry.

Above that instinctive purpose of shattering the monster on the hill, each man saw laurels, blood red, he expected to clasp and carry away to be proudly placed at the beautiful feet of Christine Eggleston.

She was at home—each saw her in the same anxious attitude, at the doorway, a soft hand roving her eyes, gazing toward the south. The men rushed, shoulder to shoulder, but at which was she gazing most anxiously? Neither could tell—each had his hope and his fear. But the uncertainty of it all flew through the soul of each like a sword.

Each officer had a clear premonition that but one of the two would escape that cauldron of death.

Blacker grew the clouds, and the peals of thunder fused into a continuous roar. Vague lightning played through the wall. Men dropped like

ripe fruit from a shaken tree. Shouts of exultation often dropped into dying groans. Still unharmed, side by side. His rival officers fought, the same impulses moving their bodies, the same vision flaming in their minds. But if each officer knew the other's



Drove his shoulder like a glut.

mind was engaged with the same thoughts and images, he couldn't resist the belief that the other held a dark purpose in addition unworthy of himself, but to be expected in the other.

They were enemies, of course. In self-defense they couldn't wish each other well.

"He'd rather die than lose Christine. He'd see me die with secret joy. I believe he would kill me if he knew he would never be suspected. I am too magnanimous. I am too chivalrous to nourish such a thought respecting him, but I am sure he would kill me if he could. I'll be between twin perils throughout this action." This horrible suspicion flew through the jealous mind of Capt. Blake, and, with reference to the Captain, it sped on through the jealous heart of Lieut. Summers.

Each, in his present morbid state, furious with two passions, wrongly felt the other would connive at his death!

Now the men are in the very teeth of the awful monster. Great mouths open and spurt out tearing missiles of death. All sounds, small and tremendous, run together in a continuous roar that becomes half silence. All passions are reduced to one primal, elemental desire—the lust of slaughter. This is the pressing, omnivorous instinct. From the rim of that vortex, hope, love, despair, fear, all fly like feeble wisps of vapor. Through plunging arms; through pressing foil; through pointed eyes; through lifted lip; through singing nostril, but one feeling surges—the lust of slaughter.

Lieut. Summers is at the side of his rival, and both fight with that cool resolution and tremendous execution of fearless men exalted by a dual purpose.

Suddenly, without experiencing any distinct pain, Lieut. Summers felt the strength flow from his great arms. Outstretched, their weight overbalanced him, and he dropped forward. Bells rang in his ears a moment, but by omnipotent will force he struggled to his all-fours, and then gained his feet by the assistance of Capt. Blake. A feeble thread of smoke was then seen crawling from his coat a little below the heart.

"My laurels for my grave!" he grimly thought, and smiled.

The next instant a dim, straight object came plunging down through the smoke, spearing toward the heart of Capt. Blake. In the snarl of the crowd and jam, he had no power to avoid it, had he known it was coming. Would neither brave man go back with laurels?

Instantly Lieut. Summers, with the last spurting energy of a dying flame, drove his shoulder, like a glut, between the bayonet and its intended sheath.

Now the death-dealing monster had blown its last breath. The great guns died in sudden silence, and above the echoes arose the lusty shout of victory.

Lieut. Summers saw laurels through fading eyes. A great, strong hero, his grimy face streaked with tears, bent over him.

"Forgive me!" he began.

"Oh, don't mention that," spoke the dying man. "Forgive me for my unworthy suspicion. Now, go home with laurels—yours and mine. Take them all to—her."

Keep Them Interested.

Keep your children busy if you would have them happy. When the occupation is some daily labor which has been wisely allotted, see that it is accomplished as well as it is possible for the child to accomplish it under existing circumstances. But whether it be in work or play, let him understand that no matter how well he may have done today—and do not be chary of your praise—he has within himself that which will make it possible for him to do still better tomorrow. This treatment, instead of discouraging, says Woman's Home Companion, will encourage by inciting the child toward even better work, and will early implant that spirit of divine discontent which allows of no absolute satisfaction in that which has been accomplished until the achievement reaches perfection. This is the discontent which Emerson preaches, and which is holy if doubt is not allowed to creep in to mar the aspiration.

The Oldest French Immortal.

Legouve, the oldest of the French Immortals, is 94 and is still industrious probably in deference to his famous saying: "It is often said that God condemned man to work. This is absurd. God condemned man to live and gave him work as a mitigating circumstance."

THE MISSISSIPPI RIVER.

Queer Freaks of the Current Which is Easily Deflected.

"I have been much impressed with the importance of small things in late years," said an old steamboat man to a New Orleans Times-Democrat reporter, "and the Mississippi river has furnished me with rather good examples. I can understand now why Caesar looked out upon the Nile in such curious amazement and offered all that he stood for to the Egyptian priest if he would show him the source of that wonderful river. But the antics of the Nile look like insignificant nothing to me when compared with the strange conduct of the stream that oozes out of the earth at Itasca and hurries on its murky and devious way toward the Gulf of Mexico. Towns along the Mississippi that once stood right on the brink of the river have been isolated even in my day, and there are, too, all along the course of the stream little empires in view where the river has encroached upon small centers of population, finally eating the earth away and forcing the inhabitants to seek other quarters. There are hundreds of these places that are almost forgotten now, even by the men who are constantly on the river. What brings about these violent changes along the banks of the river? Not floods. It is just the ordinary doings of the stream. In the first place the current of the Mississippi is wonderfully swift, and the sediment deposited at any point where resistance to the flow is offered is very great. Tie a string to the neck of a bottle and sink it with the mouth of the bottle up and open. If held in one place where the flow is normal, in an extremely short period of time the bottle will fill with sediment. Stretch a net across the river, a net so finely woven that nothing but the pure water of the river can pass through, and on account of the rapidity of the flow and the greatness of the deposit of sediment, almost in a twinkling the river would be dammed at that point. Experts have admitted this. This brings me to the point of my narrative. The flow of current is frequently interfered with by sunken boats, perhaps by a jackstaff sticking up above the surface. The current is diverted by degrees, generally touching the far side of the stream, a mile from the point where it again meets resistance and immediately begins the building of a sandbar. I have seen a thousand examples of this sort during my career on the river, and I have known of instances where the root of a tree or the mere twig of a willow have brought about similar conditions. These things have tended to make a riddle out of the river, yet the stream, after awhile, will be handled so as to undo all that it has accomplished."

BRAINS BEAT MUSCLE.

What a Scientific Farmer Did with Worn Out Land.

A little over a year ago we made some extended comment upon an illustration of what might be done on an abandoned farm by a man who knew his business, says the Boston Transcript. Such a farm has been purchased and redeemed in the little town of Paxton, about seven miles from Worcester, and away from the railroad by a Long Island man, who brought with him a thorough knowledge of truck farming. His success the first year does not seem to have been exceptional. We have heard a great deal about the smallness of the potato crop this year, and undoubtedly the conditions have been less favorable than usual, but our Paxton farmer put thirty-seven acres into the tubers, from which he expects to produce a crop of some 4,500 bushels, or from 125 to 150 bushels to the acre. In fact, he has now for some time been sending potatoes to Worcester, the nearest large town, and receiving from \$4.50 to \$5 a barrel. Even at the lowest yield mentioned this will stand him in a return of over \$200 an acre from land that probably did not cost him a twentieth part of that sum. Of course, there is a considerable debt account, but allowing for all that the profits are fat. Farmers in his neighborhood are beginning to think that their troubles are not entirely due to worn-out land and generally changed conditions. The fact that they do not know how to make the most of what they have had something to do with it.

FISH FLEE FROM THUNDER.

Seek Refuge From Storm in Deep Water Away From Coast.

Fishermen along the Atlantic coast know the peculiar effect of thunderstorms on fish, and save themselves unnecessary work because they do know it. Of the army of 40,000 fishermen that occasionally or regularly wet lines in the waters contiguous to New York, 35,000 never think of going ashore after two or three days of thunder and lightning. They know better. The other 5,000, hopeful and imaginative, with nothing better to do, take a chance at it any way, and come home with fisherman's luck. The highest authorities among bay men say that thunder drives the fish into deep water off shore and that vivid lightning so disturbs their sleep that they take a day or two off for rest and recuperation. Thus it happens that on the third day after a hard storm with fumiination and pyrotechnics, the catch is phenomenal, whereas on the first or second day after there is no sport except sailing o'er the bounding billows or grunting on a ground swell.

For the picture of health—a good frame.