INVENTION FOR A BALLOON FLYING MACHINE.

Experiments a Success-In the Car Attached to the Balloon is an Engine Fed with Petroleum, Which Supplies the Motive Power.



HARLES E. HITE, of this city, has invented a balloon which he claims he will be able to direct and drive

Mr. Hite is a well-known scientist. In 1892 he accompanied the Peary Arctic regions. In 1895 he went to Central America to collect material for the biological department of the University of Pennsylvania. Altogether, he has taken part in or directed over a dozen different expeditions, covering the continent from Greenland to South America. He has conducted two Labrador expeditions for the purpose of

many explorations and geological sur-One year ago, Mr. Hite, while toying kind to be used in the dirigible balloon

dorsed the general plan, and said that he looked upon it as practicable.

Of course these experiments are by performed them to convince the incredulous and make assurance doubly sure. It should be understood that there was no attempt to make the machine fly, power of the balloon. The secret of the great pushing force developed by the fan lay in the cylindrical casing by which it was inclosed. The casing through the air by in question is the invention on which means of two fans the balloonist bases his patent claim, an average speed of ten miles an hour. operated by a mo- for by its use the current of air made by the fan impinges itself directly on the outer atmosphere with great force, obviating a loss of air at the sides.

The car is suspended by harness from relief expedition on the steamship a netting identical with the netting of Kite, making valuable researches in the an ordinary balloon, and is guyed fore and aft to prevent oscillation, although there could be little danger of that, as the car is drawn up tightly against the body of the balloon. The car itself is made of the best steel bicycle tubing, and from its upper lateral extremities extend the two spider-web frameworks. These frames are attached rigidly to the car, so that vibration is impossible, studying the Esquimaux, and has made each one supporting a steam motor acting directly on the axle of a fan. The engines are a French invention, and the

IS DRIVEN BY FANS. praise, among them being Professor increased or decreased at will through King, the aeronaut, who heartily in- a residue of expansive element in the boiler. By this method the usual escape of hydrogen, which is the most LABOR STRIKES THE SUBJECT expensive consideration in ballooning, will be prevented, and the balloon be no means new, and Mr. Hite merely dropped or raised into different air currents by altering the density and thereby the lifting power of the gas. A drag rope and anchor will form a part of the extra paraphernalia, and also a that feat not entering into the demon- light staysail on the under forepart of stration, but being left to the lifting the balloon to give greater stability in navigating against winds.

It is expected that the dirigible balloon will make about twenty miles an hour in a still atmosphere, and will have a steaming radius of 500 miles at The ends of the balloon are cleverly reinforced by stays of bamboo, so that they will hold their shape when subjected to the pressure of air, it being an impossibility to inflate an angle with gas.

Mr. Hite is at present getting up the working drawings of this most unique airship. When asked why he placed the propellers at the side instead of at the stern, he explained that if they were put in the rear the motion of such a the fans of their working medium by creating a vacuum.

He believes that the self-propelling balloon will figure largely in the warfare of the future, contemporaneously with the submarine boat, whose development it very closely resembles Aside from a bellicose application, however, he is confident that it can be made an instrument for limited transportation into regions otherwise inaccessible, Several of the European governments, Germany in particular, are paying great attention to ballooning tactics with relation to warfare, and there is in this country a standing offer of \$100,000. made by congress several years ago, for the man who should successfully solve the problem of aerial navigation.

Expurgated.

Mother-What did your father say when he saw his broken pipe? Innocent-Shall I leave out the wicked words, mamma? Mother-Certainly, Innocent-Then I don't believe there is enything to tell you, mamma.

The Brute!

Wife-We have been married twelve years, and not once in that time have missed baking you a cake for your birthday. Have I dear? Hubby-No, my pet. I can look back upon those cakes as milestones in my life.

WOMEN AND MEN.

There is a 15-year-old widow at Covington, Ky. The girl was married a year ago to a 19-year-old boy, all the parents consenting. Her husband died a few days ago.

Franchetti, the banker-composer, is building an opera house at his country dom? Never. seat, where he can have his own works performed without subjecting them to the judgment of managers.

President Barrios of Guatemala wa educated in this country and is a graduate of Yale. He declared himself dictator to protect the interests of forgners in his country, and is any to have American capital develop it.

Mrs. Charles Stewart Parnell, widow of the Irish leader, is about to take ur her residence at Trematon castle, near Plymouth. Trematon castle was formerly one of the great houses of Cornwall. Only the ruins of the thirteenth century castle remain, the present house being of quite modern construction.

ful model in Paris, who has declared top. But it is no more a sin to be rich her intention of posing in the future for none but American artists, is a slight, brown-haired, blue-eyed slip of a girl, with a faultless figure. The chief charm of her face lies in its puzzling contrasts, in the dimples that come and go with every breath; in the eyes that never, even in her gayest moments, lose a certain look of appealing sorrow. "She possesses the eyes of a Mater Dolorosa and the lips of a Bacchante. She is a beautiful sphinx."

When a woman is in doubt concern-

gine and fan are enclosed in the cylindrical box seen on the side of the balloon; the rectangular piece of metal at the extremity of the cylinder is a balloon large enough to carry a pair rudder, which, by directing the draught of the air current, regulates the course of the ship. The steering can also be done by using one fan independent of the other. Five feet is the diameter of the fans, and they are made by the

most celebrated fan blower concern in

In the center of the car is the boiler,

a small contrivance, also French, such as is being used abroad for self-proposition. Although dissimilar in de- pelling carriages. The fuel burned is tail, the two machines are propelled on petroleum and the engines are condenspractically the same principle, the only ing, thereby necessitating only a small difference being the motive power, water supply. It is estimated that the weight of engines, boiler, water and pelled by a man, and in Hite's two fuel combined will be within 300

The fans and framework weigh 250

the country.

pounds, and the balloon and net will come up to about 150, thus making a ter all. Properly speaking, Mr. Hite's total of 700 pounds. The balloon is 20 feet in diameter by 64 feet long, having at these figures a capacity of 20,000 cubic feet of gas. As one cubic foot aerial suspension; and it is here that of hydrogen lifts one ounce averdupois, the balloon when fully inflated may be expected to exert a lifting capacity of It being evident that a balloon of 1,300 pounds, which leaves a balance of 600 pounds surplus weight to be utilized by the aeronaut, his food supply and the inventor was to devise an engine the ordinary tackle and instruments large enough to furnish the requisite carried in a balloon. The old method motive power. To this end Mr. Hite of sand ballast will be done away with. made a small apparatus of paper for as the balloon can be made to seek a experimental purposes, somewhat re- higher or lower level, according to the amount of gas pumped up from reservoirs contained in the car. The resernected with this rocket-like affair, the voirs consist of a flooring of pipes made air coming from the narrow end of the into a false bottom, in which comcylinder gave it a pronounced forward pressed hydrogen is placed. By means ing the trimming of her hat, she simply swing. The inventor then proceeded of a thermo-hydrogen device, the puts on a few more red flowers and to the next step, which was the build- amount of hydrogen in the balloon is feathers.-Washington Post,



THE COMBINED BALLOON AND AIR SHIP From the inventor's Drawings.

TALMAGE'S SERMON.

LAST SUNDAY.

From the Following Text, Matt. vii 12: "Whatsoever Ye Would that Men Should Do to You, Do You Even So to Them."



HE greatest war the world has ever seen is between capital and labor. The strife is not like that which in history is called the Thirty Years' War, for it is a war of centuries, it is a war of the five continents, it is a war

hemispheric. The middle classes 'n this country, upon whom the nation has depended for holding the balance of power and for acting as mediators between the two extremes, are diminishing; and if things go on at the same ratio as they are now going, it will not be very long before there will be no large body through the air would rob middle class in this country, but all will be very rich or very poor, princes or paupers, and the country will be given up to palaces and hovels.

The antagonistic forces are closing in upon each other. The Pennsylvania miners' strikes, the telegraph operators' strikes, the railroad employes' strikes, the movements of the boycotters and the dynamiters are only skirmishes before a general engagement, or, if you prefer it, escapes through the safety-valves of an imprisoned force which promises the explosion of society. You may poohpooh it; you may say that this trouble, like an angry child, will cry itself to sleep; you may belittle it by calling it Fourierism, or Socialism, or St. Simonism, or Nihilism, or Communism; but that will not hinder the fact that it is the mightiest, the darkest, the most terrific threat of this century. All attempts at pacification have been dead failures, and monopoly is more arrogant, and the trades unions more bitter. "Give us more wages," cry the employes. "You shall have less," say the capitalists. "Compel us to do fewer hours of toil in a day." "You shall toil more hours," say the others. "Then, under certain condition, we will not work at all," say these. "Then you shall starve," say those, and the workmen gradually using up that which they accumulate in better times, unless there be some radical change, we shall have soon in this country four million hungry men and women. Now, four millions hungry people cannot be kept quiet. All the enactments of legislatures and all the constabularies of the cities, and all the army and navy of the United States cannot keep four million hungry people quiet. What then? Will this war between capital and labor be settled by human wis-

I shall first show you how this quarrel between monopoly and hard work cannot be stopped, and then I will show you how this controversy will be settled.

Futile remedies. In the first place there will come no pacification to this trouble through an outcry against rich men merely because they are rich. There is no member of a trades union on earth that would not be rich if he could be. Sometimes through a fortunate invention, or through some accident of prosperity, a man who had nothing comes to a large estate, and we see him arrogant and supercillous, and taking people by the throat just as other people took him by the throat, There is something very mean about Marcelle Berenger, the most beauti- human nature when it comes to the than it is a sin to be poor. There are those who have gathered a great estate through fraud, and then there are millionaires who have gathered their fortunes through foresight in regard to changes in the markets, and through brilliant business faculty, and every dollar of their estate is as honest as the dollar which the plumber gets for mending a pipe, or the mason gets for building a wall. There are those who keep in poverty because of their own fault. They might have been well-off, but they gave themselves to strong drink, or they smoked or chewed up their earnings, or they lived beyond their means, while others on the same wages and on the same salaries went on to competency. I know a man who is all the time complaining of his poverty and crying out against rich men, while he hiself keeps two dogs, and chews and smokes, and is filled to the chin with whisky and beer!

Micawber sold to David Copperfield: "Copperfield, my boy, one pound income, twenty shillings and sixpence expenses: result misery. But, Copperfield, my boy, one pound income, expenses nineteen shillings and sixpence; result, happiness." And there are vast multitudes of people who are kept poor because they are the victims of their own improvidence. It ts no sin to be rich, and it is no sin to be poor. I protest against this outcry which I hear against those who, through economy and self-dental and assidulty, have come to large fortune. This bombardment of commercial success will never stop this quarrel be-

tween capital and labor. Neither will the contest be settled by cynical and unsympathetic treatment of the laboring classes. There are those who speak of them as though they were buty cattle or draught horses. Their nerves are nothing. their domestic comfort is nothing. their happiness is nothing. They have no more sympathy for them than a hound has for a hare, or a hawk for a ben, or a tiger for a catt. When Jean Valjean, the greatest here of Victor Hugo's writings, after a life of suffering and brave endurance, goes into incarceration and death, they clap the book shut and say, "Good for him!" | whatever."

They stamp their feet with indignation and say just the opposite of "Save the working-classes." They have all their sympathies with Shylock, and not with Antonio and Portia. They are plutocrats, and their feelings are infernal. They are filled with irritation stop this awful imbroglio between capital and labor they will lift not so

much as the tip end of the little finger. Neither will there be any pacification of this angry controversy through violence. God never blessed murder.

Well, if this controversy between

capital and labor cannot be settled by

human wisdom, if today capital and

labor stand with their thumbs on each

other's throat-as they do-it is time

for us to look somewhere else for relief and it points from my text roseate and jubilant and puts one hand on the broadcloth shoulder of capital, and puts the other on the home-spun covered shoulder of toll, and says, with a voice that will grandly and gloriously settle this, and settle everything, Whatsoever ye would that men should do to you, do you even so to them." That is, the lady of the household will say: "I must treat the maid in the kitchen just as I would like to be treated if I were downstairs, and it were my work to wash, and cook, and sweep, and it were the duty of the maid in the kitchen to preside in this parlor." The maid in the kitchen must say: "If my employer seems to be more prosperous than I, that is no fault of hers; I shall not treat her as an enemy. I will have the same industry and fidelity down-stairs as I would expect from my subordinates, if I happened to be the wife of a silk

importer." The owner of an iron mill, having taken a doze of my text before leaving home in the morning, will go into his foundry, and, passing into what is called the puddling-room, he will see a man there stripped to the waist, and besweated and exhausted with the labor and the toil and he will say to him: "Why it seems to be very hot in here. You look very much exscarlet fever. If you want your wages a little earlier this week so as to pay the nurse and get the medicines, just come into my office any time."

After awhile, crash goes the money market, and there is no more demand for the articles manufactured in that iron mill, and the owner does not else to lift. know what to do. He says, "Shall I wages?" He walks the floor of his counting-room all day, hardly knowing what to do. Towards evening he calls all the laborers together. They stand all around, some with arms akimbo, some with folded arms, wondering what the boss is going to do now. The manufacturer says: "Men, times are very hard; I don't make twenty dollars where I used to make one hundred. Somehow, there is no demand now for what we manufacture, or but very little demand. You see I am at vast expense, and I have called you towould advise. I don't want to shut up the mill because that would force you out of work, and you have always been seem to like me, and the bairns must be looked after, and your wife will fter awhile want a new dress I don't

know what to do.' There is a dead halt for a minute or two, and then one of the workmen steps out from the ranks of his fellows, and says: "Boss, you have been very good to us, and when you prospered we prospered, and now you are in a tight place and I am sorry, and we have got to sympathize with you. don't know how the others feel, but ent from our wages, and that when so to them." the times get good you will remember us and raise them again." The workman looks around to his comrades, and says: "Boys, what do you say to this? All in favor of my proposition will say ay." "Ay! ay! ay!" shout two hundred voices.

But the mill-owner, getting in some new machinery, exposes himself very much, and takes cold, and it settles into pneumonia, and he dies. In the procession to the tomb are all the workmen, tears rolling down their cheeks, and off upon the ground; but an hour before the procession gets to the cemetery the wives and the children of those workmen are at grave waiting for the arrival of the funeral pageant. The minister or religion may have delivered an eloquent eulogium before they started from the house, but the most impressive things are said that day by the workingclasses standing around the tomb.

That night in all the cabins of the working-people where they have family prayers the widowhood and the bered. No glaring populations look with his hands. over the iron fence of the cemetery; but, hovering over the scene, the benediction of God and man is coming for Viceroy. the fulfillment of the Christ-like inmen should do to you, do you even so to them."

"Oh," says some man here, "that is him cry out, 'Make way,'" all Utopian, that is apocryphal, that is impossible." No. I cut out of a paper this: "One of the pleasantest incidents recorded in a long time is reported from Sheffield, England. The wages of the men in the iron works at Sheffield are regulated by a board of arbitration, by whose decision both masters and men are bound. For some time past the iron and steel trade has been etxremely unprofitable, and the employers exanot, without much less, pay the wages fixed by the board, which neither employers nor employed have the power to change. To avoid this difficulty, the workmen in one of the largest steel works in Sheffield hit upon a device as rare as it was generous. They offered to work for their shut out from immortality of sin.

But you go with me and I will show you-not so far off as Sheffield, England-factories, banking houses, store houses, and costly enterprises where this Christ-like injunction of my text is fully kept, and you could no more get the employer to practice an injusand irascibility on this subject. To tice upon his men, or the men to conspire against the employer, than you could get your right hand and your left hand, your right eye and your left eye, your right ear and your left ear, into physiological antagonism. Now, where is this to begin? In our homes, in our stores, on our farms-not waiting for other people to do their duty. Is there a divergence now between the parlor and the kitchen? Then there is something wrong, either in the parlor or the kitchen, perhaps in both. Are the clerks in your store irate against the firm? Then there is something wrong, either behind the counter, or in the private office, or perhaps in both.

The great want of the world today is the fulfillment of this Christ-like injunction, that which he promulgated in his sermon Olivetic. All the political economists under the archivault of the heavens in convention for a thousand years cannot settle this controversy between monopoly and hard work, between capital and labor. Duesheavy piece of timber to be lifted, perhaps for some fortress, and a corporal was overseeing the work, and he was giving commands to some soldiers as they lifted: "Heave away, there! yo heave!" Well, the timber was too heavy; they could not get it up. There was a gentleman riding by on a horse, and he stopped and said to this corporal, "Wny don't you help them lift? That timber is too heavy for them to lift." "No," he said, "I won't; I am a corporal." The gentleman got off his horse and came up to the place? 'Now," he said to the soldiers, "all together-yo heave!" and the timber went to its place. "Now," said the gentleman to the corporal, "when you have a piece of timber too heavy for hausted. I hear your child is sick with | the men to lift, and you want help, you send to your commander-in-chief." was Washington. Now, that is about all the Gospel I know-the Gospel of giving somebody a lift, a lift out of darkness, a lift out of earth into heaven. That is all the Gospel I know-the Gospel of helping somebody

The greatest friend of capitalist and stop the mill, or shall run it on half toiler, and the one who will st bring time, or shall I cut down the men's them together in complete accord, was born one Christmas night while the curtains of heaven swung, stirred by the wings angelic. Owner of all things -all the continents, all worlds, and all the islands of light. Capitalist of immensity, crossing over to our condition. Coming into our world, not by gate of palace, but by door of barn. Spending his first night amid the shepherds. Cathering afterward around him the fishermen to be his chief attendants. With adze, and saw, and chisel, and axe, and in a carpenter shop showing himself brother with the tradesmen. gether this afternoon to see what you Owner of all things, and yet on a hillock back of Jerusalem one day resigning everything for others, keeping not so much as a shekel to pay for his very faithful, and I like you, and you obsequies: by charity buried in the suburbs of a city that had cast him out. Before the cross of such a capitalist, and such a carpenter, all men can afford to shake bands and worship. Here is the every man's Christ. None so high, but he was higher. None so poor, but he was poorer. At his feet the hostile extremes will yet renounce their animosities, and countenances which have glowered with the prejudices and revenge of centuries shall brighten with the smile of heaven as he commands: "Whatsoever ye would propose that we take off twenty per that men should do to you, do you even

An Italian Solomon.

The Duke of Ossone, while Viceroy of Naples, delivered many quaint and clever judgments. The case is related where a young Spanish exquisite named Bertrand Solus, while lounging about in the busy part of the city, was run against by a porter carrying a bundle of wood on his shoulder.

The porter had called out, "Make way, please!" several times, but without effect. He had then tried to get by without collision, but his bundle caught the young man's velvet dress and tore it. Solus was highly indignant, and had the porter arrested. The Viceroy, who had privately investigated the matter, told the portsy to pretend he was dumb, and at the trial to reply by signs to any question

that might be put to him. When the case came on, and Solus had made his complaint, the Viceroy turned to the porter and asked him what he had to say in reply. The porerphanage in the mansion are remem- ter only shook his head and made signa

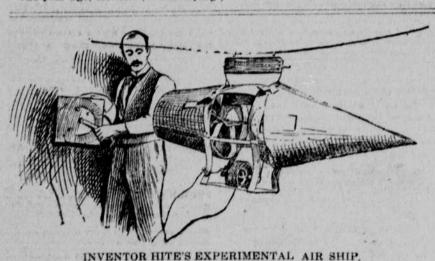
> "What judgment do you want me to give against a dumb man?" asked the

"Oh, your excellency," replied Solus. jurction, "Whatsoever ye would that falling into the trap, "the man is an imposter. I assure you he is not dumb. Before he ran into me I distinctly heard

"Then," said the Viceroy sternly, "It you heard him ask you make way for him, why did you not? The fault of the accident was entirely with yourself, and you must give this poor man compensation for the trouble you have given him in bringing him here.

Victoria.-Queen Victoria shingbrightly as a ruler in a galaxy of poets, painters and men and women of gentus in her own country and in every land. Rev. Robert S. MacArthur, Baptist, New York City.

Adam.—It was not a punishment but a blessing that Adam was shut out of Eden, shut out from the tree of life, employers one week without any pay Rev. C. M. Coburn, Methodist, Denver, Col.



with a bit of paper, had suggested to are capable of developing seventeen him the idea of aerial navigation. This and one-half horse-power apiece, alwas the inception of his "dirigible bal- though little larger than a bucket. Enloon," on the plans of which, now protected by patent, he has been working ever since. In description this peculiar airship is nothing more than a of small but powerful steam engines apable of driving a pair of fans. Mr. Hite has worked along independent lines in the planning of his balloon, and it is significant of the feasibility of his project that the only other airship resembling his, which has given any practical demonstration of sustained flight, is that of Carl Meyers, flown successfully at the Nashville Exwhich in Meyer's is a single fan prohigh-speed fans actuated by turbines. pounds, certainly a marvel of lightness The aerodrome, Mr. Hite considers a from which to obtain thirty-five horsefragile toy, capable of no useful appli- power. cation, and only demonstrating the ability of a man to construct a flying machine on the principle of a bird's wing, but subserving no useful end afcontrivance is not a flying machine, the problem he is dealing with being one of aerial locomotion rather than of the simplicity of his scheme is appar-

large size could be made to support a considerable weight, the first care of sembling a rocket. By blowing at the end of the flexible paper tube coning of a small experimental car, fitted at either end with pasteboard cones. corresponding to the two respective ends of the rocket. The frame of the car was aluminum, and its lower body contained a one-half horse-power electrie motor, geared to a four-bladed rotary fan by a round belc. A stout wire was stretched across the room in which the experiments were about to be conducted, and the car was suspended from two traveling pulleys. Wires from a storage battery were attached to the motor, and Mr. Hite turned on the rheostat. The fan began to revolve rapidly, and the machine quickly traversed the length of the apartment. Not thoroughly satisfied with this performance, and in order to test the capabilities of the fan to its utmost, he loaded the framework of the machine with three heavy Winchester rifles and turned on the current again; apparently there was no diminu. tion whatever in the speed of the car, and that, too, while running over a wire not perfectly taut, and dragging the two flexible feed wires of the storage battery in addition.

An exhibition of the efficiency of the model was given before Professor Arthur Goodspeed, professor of physics at the University of Pennsylvania, who considered the application of power a correct principle, and commended the ingenuity of the idea. A large number of sefentific men who saw the model warking were all enthusiastic in its