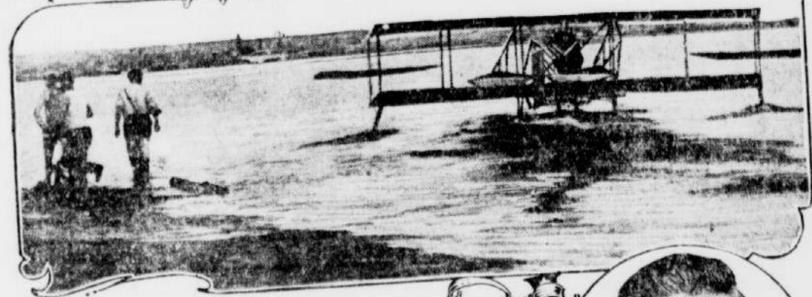


# AEROPLANES IN THE NAVY



THE CURTIS HYDRO-AEROPLANE

WHEN a naval aviator, Lieut. Elyson, was launched in an aeroplane from a catapult recently and his flying machine bore him gracefully aloft without slightest tendency toward stumbling it marked an important advance in the use of airships in the navy.

The aeroplane as an adjunct to military operations has already shown its value both in Tripoli and in Turkey. Besides dropping bombs upon Turks and Arabs it has proved of greater usefulness in reconnoitering the position of the enemy. The Bulgarians have gone a step further and have used the aeroplane for fire control purposes, enabling the battery commanders of the field guns to train their weapons so as to make them tell most effectively against the Sultan's forces. This matter of fire control is as vital to a navy as to an army in action, especially when the guns of a fleet are searching out the weak spots in the land defenses. But heretofore the aeroplane has been less available for navy than for army use.

The catapult tested in Washington is the invention of Captain Chambers of the navy, and is the outcome of various lessons learned while trying to adapt the aeroplane to the needs of the navy. The practicability of sending aeroplanes in flight from a suitable platform on board ship was early demonstrated, but there were various minor problems to be solved. The launching platforms employed were both long and cumbersome. They took up space that would not be available in time of war, and they blocked the fire of some of the guns.

The long runway or sloping platform was therefore prohibitive. With a short track substituted which could be easily and quickly put in place and just as readily demounted and stored out of the way, there arose the question of a means of starting the aeroplane effectively. For this purpose Captain Chambers devised the catapult. For years he had specialized in torpedoes and was familiar with the devices successively tried in getting those weapons overboard from a boat. The catapult tried at Annapolis last summer was a sort of modified torpedo launching outfit of the earlier type, and compressed air was employed to give the initial push.

The trial mechanism was of necessity rather crude, but this fact did not deter Lieutenant Elyson from subjecting himself in a hydro-aeroplane to the extreme shock of the device in order to find out the effects of such a concussion, not only upon the air pilot, but likewise upon the motor attachments and other fittings which might be wrenched loose or deranged. That test was entirely satisfactory in its lessons, but the aviator and his machine got a ducking.

The catapult lately tried at the Washington navy yard is devised so that the hydro-aeroplane attains its launching speed without violence, and this insures the launching of the machine without fear of deranging any of the apparatus or dislodging the aviator from his seat. The runway or starting track is short and can be put in position in several places on a fighting ship without interfering with the maneuvering of the guns or impeding any other operation of importance.

Of course the demonstration at Washington over the Potomac river under fairly ideal weather conditions is not a counterpart of what may confront the naval aviator at sea, but so far as the actual getting away from the ship is concerned that function can be promised under any circumstances which on shore would warrant an aviator in trying to go up in the air. The other side of the problem is that of returning to the ship again, and here success is likely.

Glenn H. Curtiss has devised a form of float or boat for his hydro which is capable of sustaining the flying machine when waves of considerable size

are running, and this will be taken advantage of when the hydro-aeroplane returns from its scouting expedition. The aviator will alight with his machine upon the water on the sheltered side of the vessel, and, thus protected from the stronger sweep of wind and wave, the air pilot and his apparatus will be easily hoisted aboard.

Developments in other directions are increasing day by day the reliability of the aeroplane and its value as a military implement. Just as the self-starter has added to the convenience of the up-to-date automobile, a similar device is contributing to the efficiency of the hydro-aeroplane as part of the equipment of a fighting ship. With a good self-starter, by which the air pilot can set his motor going from his seat, and with a launching apparatus like that devised by Captain Chambers, the aircraft will be able to assume its own propulsion the instant it leaves the runway of the catapult.

It is not enough, however, simply to get the flying machine into the air; the scouting aviator has a lot to attend to after he is aloft and started upon his mission.

Until a short while ago the air pilot had his hands dangerously full of things to be manipulated in order to sustain him safely in flight, and a moment's inattention was pretty certain to invite trouble if not disaster. He had no opportunity to make observation of the land beneath him or to release bombs intended to hit a certain spot on the landscape below. The aviator therefore needed a companion whose duties should be limited to reconnoitering and to dropping projectiles upon the enemy.

Now it happened that the machines used by the Italians in Tripoli were not weight carriers, and it was therefore out of the question to support a second person in them. Accordingly the aviator had to do all the work himself, and this explains why bombs dropped from aeroplanes so often failed to hit their mark. The Italian dirigible balloons, on the other hand, because they could be maneuvered deliberately and could lift a number of persons, were successful as bomb throwers, and what they did showed what could be expected of a flying machine properly built for military work.

As a result of study a number of devices have been developed which make it possible now to insure to a large degree the automatic control of an aeroplane's equilibrium, and other apparatus is being perfected which reduces the demands upon the aviator. Quite apart from the military importance of these later inventions, the physical and nervous stresses upon the aviator are fewer. These have proved so exhausting during the war between Italy and Turkey that the pilots have become incapacitated after six months of service, and doctors declare a rest period of at least two years is needful in order to insure their recuperation and fitness again for duty with the flying squadron.

Among the helpful apparatus now being developed by an American firm is a gyroscopic device which gives promise of success in maintaining the stability of an aeroplane in flight. Captain Chambers is engaged in the construction of an aerial compass which will not only give directional guidance, but will also compensate for the drift or sidewise movement of the flying machine.

On the other side of the Atlantic instrument makers have been working away at the same problem with more or less success. The market supply of such apparatus is not large. That there is need of just such an aid to aerial navigation is evidenced by the fact that a German firm was suddenly denuded of its supply by the demands of the war in the Balkans. It is safe to say that no small share of the effective aid rendered by the Bulgarian flying corps has been directly due to these instruments.

In the past aviation generally has been encouraged more as a sporting



LIEUTENANT J. H. TOWERS, U. S. N. HEAD OF THE NAVY AVIATION COURSE

proposition than an art susceptible of practical benefits, and this has really hurt aviation more than it has helped. Speed has appealed pre-eminently to racing men and to what may appropriately be termed the nautical acrobats, and in some senses this speed has saved more lives than it has sacrificed under the hazardous circumstances of its employment. The victorious Vedrines strongly advocated speed on the score that it makes for safety by offsetting or combating more successfully atmospheric vagaries while in flight, but this element of high velocity multiplies the hazard or the difficulty of alighting as well as increasing the danger of engine trouble and shortness of the life of the motor.

For war purposes an aeroplane motor should work efficiently at different speeds because varying drive power will be needed for dissimilar services. A motor of this sort would lend itself to relatively low speed so that the flying machine could return to the ground much as a vessel slackens her headway when coming up to her dock. Captain Chambers has a very definite opinion upon this subject, which he explains as follows:

"A weight-carrying aeroplane, such as a hydro-aeroplane, necessarily needs a motor with considerable range of speed, and the same kind of motor is needed to reduce the danger of alighting. I think aviation would be improved if the terms of future speed contests were arranged so as to require each contestant to go over the course twice—the second time at an average speed 20 per cent. lower than his highest average."

The layman has heard so much of anti-balloon guns and other weapons for the annihilation of all kinds of aircraft, that he pictures the flying machine as being knocked into bits by the precise fire of these weapons. As a matter of fact, during the war in Tripoli the Italian aeroplanes were not seldom hit, never disastrously, and when up in the air three thousand feet they were not touched at all. American naval aviators, with their hydro-aeroplanes, have proved that it is entirely feasible for them to reach this height, and so far as endurance of flight is concerned, they hold the record—Lieutenant Towers of the navy having traveled for six hours ten minutes and twenty seconds in a standard navy Curtiss hydro-aeroplane. Inventors have developed an aeroplane wireless outfit of very moderate weight, and with this equipment aviators are able to cover a range of fifty miles.

The next naval conflict is likely to find hydro-aeroplanes a feature of the essential equipment of all large men-of-war, and the flying machine must be considered seriously and not as a mere fad or a mechanical achievement of no material value. In peace-time maneuvers the French have clearly shown that the aeroplane is capable of doing scout duty of an important character, detecting not only ships upon the water, but the presence of submarines supposedly hidden below the surface of the sea; and recent experiments with armor piercing bombs—dropped from aircraft—have turned a new page in the art of warfare.

**Old Fight Renewed.**  
"My old barber has left the city."  
"You seem very regretful."  
"Yes; he had been trying to sell me a bottle of hair tonic for the last 15 years, and so far I had succeeded in standing him off. Now I shall have to start the battle all over with a new man."

## The Divine Healer

By REV. PARLEY E. ZARTMANN, D.D.  
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TEXT: "Who moved so at this? The faith which is through him hath given him this perfect soundness in the presence of you all." Acts 3:12, 16.



These two verses are very important; they mark the crisis in the story of the first apostolic miracle after Pentecost; the story sets forth the type of the ministry, message and motive of the church; we see that spiritual work (even above physical lines) went hand in hand with spiritual power, and

we must face two or three plain questions as to matters of fact.

Is Christ the same as he was then? Is he able to do now what he did then? Are we in the same condition of need—difficulties, habits, sins? How far may I expect help from Jesus? If God's word shows me what Jesus is able to do, will I trust him for it, as men and women did then? The study of the story and of the entire work of God will give me an affirmative answer to all these questions except the last one—that I must answer for myself; for it is still true that, although Jesus is able to save to the uttermost, he can save only those who come to God by him and who will accept the healing power of the Great Physician.

The gospels tell us of many varieties of sickness dealt with by Jesus; these are all types of sin and of Christ's power to heal. Take four typical illustrations: Leprosy, or the guilt and defilement of sin; palsy, or the impotence of sin; fever, or the passion of sin; demonic possession, or the slavery of sin.

Or, take three typical cases from the gospel according to St. Luke: (1) 5:17, palsied limbs; (2) 6:6-10, the withered hands; (3) 13:10-13, the bowed-down woman. In all these cases Jesus not only healed the body, but he stands forth as able to heal the sin of which the bodily ailment is a type. No case is too hard for Jesus. His diagnosis is thorough and correct; his treatment is appropriate and adequate; his power is "unto the uttermost." There will be no need to come again. He cures in different ways, but always with perfect understanding and with satisfactory results.

The man at the Beautiful Gate of the temple expected only alms from Peter and John, but he got what was of surpassing quality and value—healing, in the name and through the power of Jesus of Nazareth. "And they were filled with wonder and amazement at that which had happened unto him." That hour of prayer became an opportunity for the manifestation of the power of Jesus Christ, an unexpected blessing to the lame man, and the occasion of a great sermon by Peter. How graciously and generously God deals with us! "Exceedingly abundantly above all that we ask or think." Not alms, but healing; not silver, but salvation; not gold, but grace and gladness; not outside, begging, but beyond the Beautiful Gate, inside the temple, "walking and leaping, and praising God."

Is Christ the same today? Can he do that work of forgiveness and sanctification now? And is he willing to do it? Thousands can testify and say "Yes." On which side of the gate are you? Are you outside, distressed, diseased, despairing, dying? Do you cry out in vain for help? There is no reason why you may not be on the other side, rejoicing in the sense of sins forgiven, righteousness imputed, life imparted, joy planted. Only one reason—"Will thou be made whole?"

"Perfect soundness," and in a moment, "And immediately." He is the healer divine. As such he is able not only to make "better," but to make "well." "My case is too hard." I do not know how far your disease has gone, how dark the night may seem, how deep the sin dwell, but I do know the power of this healer in each and every case entrusted to him—nothing is too hard for God. His ability is omnipotent and his love matches his power. He may deal painfully, but it will also be effectively.

In the days of his flesh he healed by a word, or a touch; now by the Holy Spirit. Still the Great Physician stands in the presence of sin-burdened ones saying, "Arise," "stretch forth thine hand," "thou art loosed from thine infirmity," "I will be thine clean." Put him to the test, and find "Jesus Christ, the same, yesterday, today, yes, and forever." "Ye, the faith which is through him hath given him this perfect soundness in the presence of you all."

The origin of all men is the same, and virtue is the only nobility.—Seneca.

The only way to have a friend is to be one.—Emerson.

No man is so great as mankind.—Parker.

**Getting Back to Jefferson.**  
The Wilson administration refused to help rob China of her independence under pretext of securing that country a loan. President Wilson and Secretary Bryan actually think the liberty of a people more important than the profits of an international syndicate of Shylocks.

If President Wilson doesn't look out, he will make this a government which Washington and Jefferson could recognize, and of which Wall Street will despair.

## HAS STEPLESS CARS

Will Save Gothamites 125,000 Miles a Year in Steps.

Governor of New York Expected to Sign Bill Doing Away With the Ancient Type—Old Horse Cars Are Doomed.

New York—By the introduction of a new style of street car the New York Railways company is about to save the good people of this city an annual climb from the level of the street of 125,000 miles a year, and a descent to the street of exactly the same length. It has come about through its engineers recognizing that it was ridiculous to make their passengers continue every time they boarded a street car to climb above all the machinery and that a little ingenuity would enable them to design a car with practically no climbing at all.

Once the figures are given anyone can verify this calculation for himself. In the year ended June 30, 1912, the New York Railways company and its predecessor, the Metropolitan Street Railway company, carried just over 264,000,000 passengers. The height of the step of the so-called stepples car from the street is ten inches and the height of the old-style car, which it is to replace, is about 40 inches. Consequently there is a saving of 30 inches every time a passenger gets on or off the car, and this works out at 125,000 miles a year for the entire system.

The double-decked, stepples car, which bears so strong a family resemblance to the other new style of car, will continue, however, for some time alone in its glory.

It was only after considering carefully the many different brands of street car in use in other cities that the New York Railways company evolved the side-door, stepples, prepayment car. Montreal, for example, has a side-door, prepayment car, and Philadelphia prides itself on its "near side car." The latter was inspired by the desire to provide room for more passengers and to enable them to enter and leave at such a point that they would encounter as little as possible of the mud of the street.

While the newest thing in street cars is being installed in New York, the oldest is about to be abandoned. New York has for several years been the only one of the big cities to retain horse cars. In some instances this was necessary because of congested traffic, but new subways have relieved this to such an extent that electric power now is practical.

Governor Sulzer now has under consideration a bill requiring all street car companies of the city to cease operating horse cars after January 1 next. This measure has passed the legislature, and if accepted by the governor, will affect six lines in Manhattan, but even without this legislation it is probable that in a few months the last of the old horse cars will have been driven to the barns, never to run again.

When the public service commission took office on July 1, 1907, there were 16 horse-car lines in operation. Of these four have been abandoned and six are now wholly or partially operated by storage battery cars. The six still running are the Avenue C line, from the Desbrosses street ferry across town to East Twenty-fourth street; the Bleeker street line, from Bleeker street and Broadway to Fourteenth street and Ninth avenue; the Chambers street line, from Chambers street ferry to Grand street ferry; the Metropolitan cross-town line, from Desbrosses street ferry to Grand street ferry; the Seventeenth and Eighteenth streets line, from Broadway to the Twenty-third street ferry, and the Sixth avenue-Desbrosses street ferry line, from Sixth avenue and Third street to the Desbrosses street ferry.

## JUDGE AND JURY IN CLASH

Jurist Orders Verdict of Acquittal, but Jurors Are Obdurate, and Refuse to Sign.

Memphis, Tenn.—Judge and Jury clashed in the second division of the criminal court here, and as a result, a verdict acquitting a man of a murder charge was made a part of the court's record without the signature of the jurors.

C. E. Murrell, railroad fireman, was charged with having murdered Moss Todd. Presiding Judge Palmer ruled that the evidence showed self-defense, and directed a verdict of not guilty. After consultation with members of the jury, Foreman Cooney refused to write the verdict. Judge Palmer explained that he could permit no other verdict to stand, in view of the testimony.

"You have a right to your opinion," retorted Cooney, still obdurate, "but you are not the keeper of my conscience." Finally, however, the verdict was written, but the jurors carried their point to the extent of not affixing their signatures.

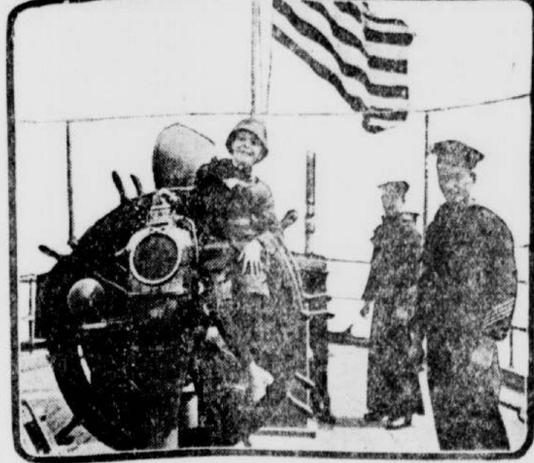
**Chicago Woman Praised Press.**  
Boston, Mass.—The further extension of the juvenile courts system was urged by Mrs. Frederic Schöff of Philadelphia at the convention of the national congress of Mothers' and Parent-Teachers' associations. At a round table on "The press in extension work," Mrs. Edgar A. Hall of Chicago took the position that the newspaper is one of the chief educators of the day.

## BITING FLY PROVES AN ALIBI

California Scientists Exonerate It as Paralytic Carrier After Experimenting.

Sacramento, Cal.—Sufficient evidence to convict the stable, or biting, fly as a carrier of the infantile paralytic germ has not been established through the experiments which the California board of health has been conducting. Thus far the fly, which Harvard and Rockefeller institute

## MR. DANIELS' SON LIKES SEA LIFE



Frank A. Daniels, the nine-year-old son of the secretary of the navy, has developed a strong liking for life on a shipboard. The picture shows him sitting against the wheel of the Dolphin, his father's official yacht.

## NEW TROUSERS LEAD TO WOE CITY GETS MODEL CHARTER

Motorman Falls Downstairs in Hallway "Dressing Room"—Gets Damages of \$125.

Chicago—A new suit of clothes almost led to the death of Martin F. Barry, 707 South Fourth court. Limping and holding his hand to his back, he appeared before Judge Martin.

Wishing to visit his mother in Iowa in some of the glory ascribed to Solomon, he first joined a "suit club." He drew a suit and went to the tailor shop.

Later he made a second visit to the shop to try on his new suit. The coat and the vest caused no difficulty. He could see they had the correct lines without inconvenience. But he wished to try on the trousers. There was no vacant room for the accommodation of particular customers. So the tailor shoved Barry into a dark hallway to disrobe.

No sooner had Barry thrust his right foot into the right leg of his new trousers than he lost his balance. He fell down stairs leading to a cellar and lay a bruised, crumpled heap on a hard cement floor, one foot in his new trousers and one in the old.

Fifty-six days passed before Barry could take up his work as a motorman, and his visit to his mother in Iowa was postponed. He nursed his back and his grievance until he appeared in court craving \$1,000 in damages from the tailor.

The jury returned a verdict awarding Barry \$125.

## JOHN D. ALMOST A PAUPER

Oil Magnate's Cleveland Property Was \$3,000 More Valuable in 1912 Than at Present.

Cleveland, O.—John D. Rockefeller is rapidly losing his wealth and is becoming practically a poor man, according to the report of John T. Fisher, tax assessor for Cleveland Heights, in which place the Forest Hill estate of the oil king is situated.

The figures show that a year ago Mr. Rockefeller returned his personal



John D. Rockefeller.

property as worth \$7,190. This year Mr. Rockefeller is poorer by \$2,905 than he was a year ago, his return of personal property being \$4,285.

The figures show that John D. has nine horses worth \$55 each, ten head of cattle worth \$40 each, and furniture worth \$3,300. He has no automobiles here at this time of the year the assessments are made, so none is returned for taxation.

## Bride's Room in Church.

New York—Plans for alterations to the Church of Incarnation, on Madison avenue, which Rev. Howard Robbins is rector, provide for a bride's room, which is believed to be an innovation in church arrangements. The organ loft in the rear of the church will be removed, and in its place a beautifully equipped room will be built. Here the bride may arrange her attire after the drive from home and assure herself that she is in readiness for the march to the altar.

## Women Police for Frisco.

San Francisco—The board of supervisors here have decided that the twenty-five additional police officers to be appointed, three will be women.

## Fears to Be Soldier; Dies.

Geneva—A Swiss, twenty years old, committed suicide at Schaffhausen by shooting himself with a revolver in a cafe because of his fear of military service. It was said at the inquest that he communicated his intention to his younger sister, aged eighteen, who offered to replace him secretly, but the young man refused the bargain.

A French scientist declares that man is descended from the bullfrog. Which may account for the croakers

## CUT OUT FOR A DIPLOMAT

A Labouchere anecdote which has not been done to death is given in the new volume of recollections by Sir Henry Lucy ("Toby, M. P."), to whom it was told by Labby himself. It concerned the younger son of a peer, who thought that a berth in the diplomatic service was as desirable a place as any for one who took life rather easily. He knew nothing of the special subjects upon which the prelimi-

nary examination was based, but there was at least the promise of a lark. As far as he could make out, he did not supply a single correct answer to the long list of questions. Nevertheless, he came out first in the competition. It was a surprise even for a confident young lordling. Meeting one of the examiners at dinner a few days later, he ventured to ask how the thing came about. "We at once saw

you knew nothing," was the reply. "But your manner was so free from constraint under what to some people would have been peculiarly embarrassing circumstances that we said to each other, 'That's the very man to make a diplomatist.' So we gave you a start on your career."

**Ungallant Chinese Proverb.**  
"A woman's heart," says the Chinese proverb, "is like the moon. It changes continually, but it always has a man in it."

## Uplift of Baseball.

A ball game on a summer afternoon serves to take a man's mind from routine matters and refreshes him. It gives him an outlet for his feelings as well, for the opposing team and the umpire are the scapegoats of American grouches. But for the boys there is another aspect of baseball. The player who ranks high must be in good physical condition and he cannot be in such a condition unless he cares for himself in the proper way. The boys of the large cities have

strengthened. So let the national game, the greatest of all games, be upheld and kept free from decadent influences, for it is worth our while.—Greenville (S. C.) News.

## One Indication.

"Well, dear, do you think it is going to be smooth sailing with our new cook?"  
"I'm afraid not, Jack. I rather think from the way she handled the supper dishes there are going to be breakers ahead."