

LOS ANGELES AS A CENTER OF AERONAUTICAL WORLD

Inventors Constantly at Work Constructing Flying Machines—Airship Will Race With Auto on the Morning of July 4

For many months past, Los Angeles has been the headquarters for investigation of aerial navigation. At no time within the past six months have there been fewer than three airships in the course of construction and several times that number has been exceeded.

Roy Knabenshue, who has made more money from his flights than any other man in America, started his career as an aeronaut in Los Angeles under the direction of Capt. Baldwin, who can truly be termed the dean of American airship builders. Baldwin's "Arrow" was among the first airships to be built in Los Angeles, and it was also one of the most successful. Roy Knabenshue was the aeronaut of the "Arrow" on all of its flights, and under his direction the machine was more successful than anything that has been built by either Capt. Baldwin or Knabenshue.

The first principle to be applied was that of direct application of power by a gasoline engine to a screw propeller which furnished the motive power. The machine was steered by a rudder made of canvas, which was fixed to the rear of the gas bag. It was of the simplest construction possible and more, was done with it than has been accomplished with the more complicated machines which have followed.

Frame Too Heavy
Soon after Baldwin's experiments, Wright made his "Condor." It was a large machine with a heavier engine, but no new principles were embodied in it. The gas bag was found to be too small to contain enough gas to lift the engine and frame, with the operator, and the idea of an ascension with it was abandoned.

George Hoxey had the next machine to be constructed in Los Angeles. The bag was made for him by Alva Reynolds and the gas was manufactured by the French gas maker, who was brought out by Knabenshue.

The gas maker promised to manufacture enough hydrogen to fill the bag in three hours, and in order to do so he neglected to dry the gas enough and accordingly the bag would not lift the frame from the ground. On that occasion a race was to take place between the "Man Angel," invented by Alva Reynolds, and Hoxey's machine. When it was learned that the gas was of Hoxey's machine would not lift the frame and the engine, the engine was taken off and a simple balloon ascension was made. At that time Reynolds' little "Man Angel" was shown to be controllable and dirigible, and it was given the race as no attempt to control or navigate Hoxey's machine was possible.

All Make Same Mistake
Trombly made the next attempt to solve the problem. He had several ideas in regard to steering and propulsion embodied in his machine, but in his case also the gas bag proved too small to lift the frame, engine and operator, and the attempt was given up.

The problem of providing sufficient lifting power by means of an ample gas bag has proved the rock upon which most of the aeronautical hopes of inventors have been dashed. In several instances the gas bag was found to be most valuable, but in almost all of the instances the gas bag was found by actual test to be too small to contain enough gas to lift the frame and engine.

The basis of calculation as to the lifting power of as pure hydrogen gas can be manufactured by the means of sulphuric acid and iron filings is sixty pounds of lift to every cubic foot of gas. It has been found that in order to guarantee that the machine would rise from the ground that several thousand extra feet of gas had to be provided.

Engine Is Defective
George Tomlinson, who was backed in his aeronautical experiments by: Millonair Knox, the gelatine manufacturer, built an airship which was called the Gelatine. The engine was one of the lightest ever built for an airship, and it worked admirably when it was tried out on several occasions. Before Tomlinson had an opportunity for testing the behavior of his craft in the air, however, Knox recalled him to the east, and he left his bag and frame in the aerodrome at Chutes park.

Roy Knabenshue came to Los Angeles a few weeks after Tomlinson was recalled and he made several flights. His longest flight was to South Pasadena. He was not satisfied with the result of his experiments and he went back east after having lost considerable money and time.

The engine, made at an expense of more than \$600, was found to be unsatisfactory. It was a six-cylinder gas engine and developed a speed of more than 5000 revolutions a minute. The frame on which the engine was placed was not stable enough to keep the engine from vibrating with the tremendous speed, and after running a few minutes the engine became overheated and could not proceed.

The steering gear in his latter invention was also unsatisfactory as the rudder became detached several times on each flight. The propellers were placed one on each side and the power thus disposed of was found insufficient to properly propel the machine.

Again Lacks Buoyancy
Patrick Cullinan, electrician of the Laughlin building, next came to the front with an airship, with two gas bags which hung beside each other. His contention was that the force of the aeroplanes gained by the use of two bags more than offset any disadvantage that the extra weight of the second bag might make. As it was first designed, the "American Eagle," for thus it was named, weighed more than 700 pounds, including the weight of the bags. The engine was a four-cylinder gasoline one and it ran splendidly both when it was being tested and when it was placed on the frame of the airship. Mr. Cullinan had a new process for making hydrogen gas, which was found to be too slow after several months' trial.

The combined gas capacity of the two gas bags was not far from 25,000 cubic feet, and if they had been inflated with pure hydrogen their lifting power would have been nearly 1,500 pounds. But Mr. Cullinan decided to reduce the weight of his frame and to use only two propellers, instead of four as he originally intended. This brought the weight of the frame and engine down to about 400 pounds. He also decided to try city gas to lift the frame instead of pure hydrogen.

Man Angel Is the Best
A trial was made about two weeks ago, but it was found that the city gas was quite incapable of lifting the frame work without the aeronaut, and all the gas did do was to lift the bags. It was

reported that Mr. Cullinan later decided to eliminate all the mechanical features from his machine and to operate it with human power as the Man Angel is. Many altogether new ideas were embodied in the original design of the "American Eagle" and much interest was manifested as to what the machine would do in the air.

The only airship up to the present time that has done all its inventor claims for it is the Man Angel of Alva Reynolds. The Man Angel is the smallest machine that has ever made an ascension, and George Frisbie, the operator of the wings of the machine, has demonstrated many times in the various flights that the Man Angel

can make headway against the wind, and he does not claim that his machine can perform that feat, but in calm weather, he asserts, and his assertions are borne out by the performances of his ship, that the Man Angel can be perfectly controlled and direction can be taken and held. More flights have been made by the little machine now housed at the Chutes aerodrome than any other single ship in America.

New Ship Is Invented
The latest airship to be built in Los Angeles is that which is nearing completion at Fiesta park. Dr. H. E. Smith and J. B. Martin are the inventors and owners of this machine. The bag has been inflated for about three weeks awaiting the completion of the engine. About 12,000 cubic feet of gas will be necessary to lift the framework and engine, and considerably more than that amount will be in the bag when the first trial flight will be made early this week.

According to Mr. Martin, inventor of the machine, the combined weight of the engine and framework will be less than 130 pounds. The bag weighs about 100 pounds, and the netting about eighteen more. George Francis, who was to have been the operator of Mr. Cullinan's "American Eagle" if it had made a flight, will be the aeronaut of the newest airship in Los Angeles. A rudder fastened to the end of the gas bag will aid in steering, although the propellers are arranged so that in case of an accident to the rudder the ship can be steered by means of them.

The engine is four-horsepower, and by means of a patent shaft that power is increased to about seven horsepower. The engine drives four propellers, and Mr. Martin is most confident of the success of his invention.

Although all of the airships that have been made by confident inventors have had points of excellence, only a small percentage of the total number have ever been in the air. The Man Angel, invented by Alva L. Reynolds, has made the most successful flights of any ship in the United States. Last Sunday, from the concession back of the Chutes theater, a most successful flight was made and it is expected that another will be made today.

On the Fourth of July the race for \$1000 a side between the Man Angel and the White Steamer, which Capt. Ryus of the White garage will drive, will take place. The race will be to Pomona, and it is expected that a very close race will result. Last Sunday the Man Angel flew more than eight miles in about twenty minutes, and three landings were made in that time. The distance to Pomona is about thirty miles and it is expected that the airship can make that distance in less than an hour.

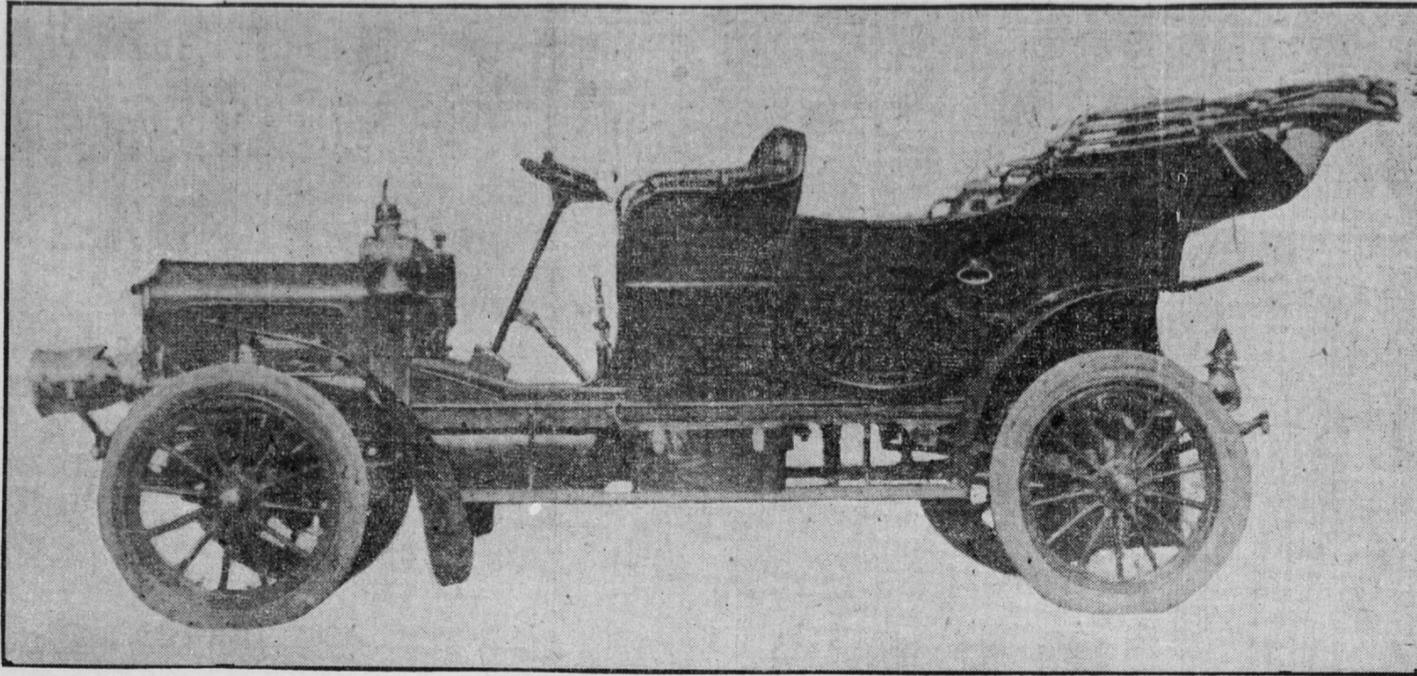
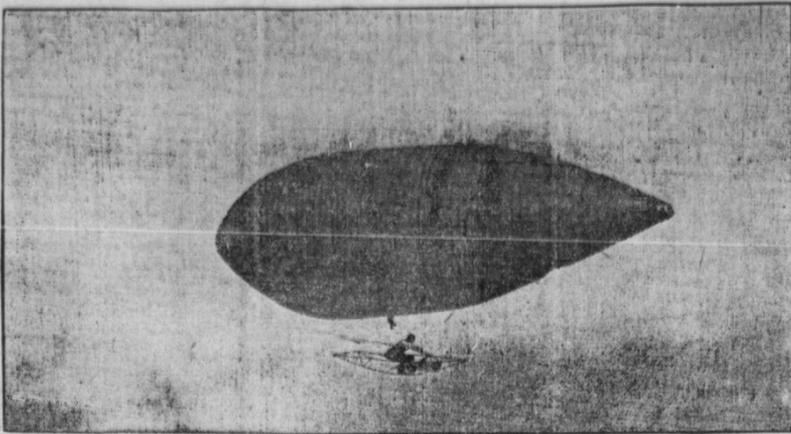
Mr. Reynolds had enough confidence in the prospect of the Man Angel winning to post a bet of \$1000 with The Herald. This bet was taken up by Capt. Ryus. A stock White steamer will be used in the race, the start of which will take place at 10:30 o'clock from the concession in the rear of the Chutes theater.

A flight will also be made this afternoon at 3 o'clock. This will also be made from the concession, and much interest is taken in this flight, as it will to a certain extent give a line on the form of the machine and its chances of winning.

All of the men who are at work on machines far have been at work have helped to give Los Angeles the reputation which it now has, that of the greatest airship city in the country. The climate is admirably adapted to trials of machines and in the morning hours there is little wind to disturb the aerial navigators.

With so many capable mechanics, and men who know thoroughly the scientific obstacles which must be overcome before an airship can be successful, it seems certain that some one will in time stumble on the secret which has so long been undiscovered—that of a practical method of navigating the air.

AIRSHIP MAN ANGEL MATCHED TO RACE WITH AUTO



BIG WHITE STEAMER OWNED BY CAPT. H. D. RYUS WHICH WILL CONTEST WITH AIRSHIP IN RACE TO POMONA ON A WAGER OF \$1000 A SIDE

PLAN WATER BASKET BALL

Originator of the Sport Hopes That Regulations May Be Improved Upon During the Coming Year

"The water camp of the women's colleges" is what they will be calling Bernal Dyas of Los Angeles in a few years if the book he intends to publish shortly is as successful as is to be expected. The swimming tank at once became the center of attraction and class teams were organized to play against each other. Although they were new to the game, the Vassarites grasped the fine points of the play, and before the second school semester had arrived water basketball had taken its place in the lists along with regulation basketball and tennis.

Dyas, who is really the originator of the game, hopes that the rules may be further improved upon and that the coming year will see the new game played at Smith, Holyoke, Bryn Mawr and other women's colleges beside Poughkeepsie. A ball of regulation size will be constructed and the game promises to be played as much by the fair ones as its counterpart, water polo, is by the athletes of the rougher sex.

ROCKEFELLER HARD TO LAND

Eastern Dealer Tells of Experience in Getting King of Standard Oil to Buy a Machine

An eastern dealer recently told how he succeeded, after repeated efforts, in getting John D. Rockefeller interested in an automobile. "After repeated efforts," said the dealer, "I finally succeeded in getting Mr. Rockefeller interested to the extent of a demonstration, and at the time appointed I drove to his house in an Olds runabout. Mr. Rockefeller ordered out his best team, and seated beside his coachman, followed about 100 feet behind me, while I drove up and down hill for a five-mile demonstration. At times he urged his horses to their utmost, but I always kept just far enough ahead. On the return to the house he asked rather anxiously how much gasoline I had used, and when informed of the small quantity he ordered the machine delivered at once. Since then I have sold him two other machines of the same type, but have had to take the old machines in exchange, allowing him a substantial amount for them."

TAKES LONGEST TOUR ON RECORD

CHARLES J. GLIDDEN SEES WORLD FROM AUTO

Visits Countries Where White Men Are Very Rarely Seen and Has Many Unique Experiences

By Associated Press.
CHICAGO, June 30.—Charles J. Glidden, a veteran automobile tourist and founder of the trophy tour bearing his name, reached Chicago yesterday on his way home to Boston. Mr. Glidden and his wife sailed from Japan last month, where they closed for the time being the remarkable automobile tour of the

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Wiley's Band

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THREE DAILY SESSIONS.

10 a. m. 2 p. m. 8 p. m.

MOTHER GOOSE FOR REBUS READERS

A large rebus puzzle featuring various objects and animals. The text 'MOTHER GOOSE FOR REBUS READERS' is at the top. Below it are several illustrations: a goose, a riddle, a net, a mouse, a coat, a hat, a clock, a box, a flower, and a man. The rebus is intended to be read as 'MOTHER GOOSE FOR REBUS READERS'.

MUGGSY M'GRAW IS CRAFTY MANAGER

Placed Soapy Substance Around the Home Plate With Result That Opposing Batmen Lost Their Grip

Eastern baseball players are handing around a good story on McGraw's Cubs, who received such a wallop at Chicago during the last series there. The Chicago National players claimed that one of the reasons they made fifty-two hits in the first three games was that they have been wise to the trick that handicaps every visiting team. The Cubs claim that the dirt around the home plate is mixed with some greasy or soapy substance that causes the bat to slip out of the batters' hands if they rub their hands in it. The same dirt is around the pitchers' slabs also to make the ball hard to hold. The Cubs' pitchers and batters have not rubbed their hands in this dirt and have not suffered as a consequence. Pfeister said Thursday night after the game: "I am sure that there is some substance in that dirt that makes the balls slippery, and once or twice I felt it and after that I didn't use any more of the dirt on my hands. Schulte rubbed his hands in dirt taken from beneath the visiting players' bench and had no trouble in landing a home run."

MAY TEST DOVE ORDINANCE

San Bernardino Sportsmen Object to Conflicting Provisions in Law

Special to The Herald.

SAN BERNARDINO, June 30.—Local sportsmen are considering making a

test of the county ordinance relative to shooting doves.

The state law provides that the season shall open July 1, and it is probable that a number will go out after the birds.

The county ordinance makes the season from October 1 to 31 inclusive.

The sportsmen claim the county ordinance is invalid and have legal authority to back them in the stand. District Attorney Sprecher, however, states that he will prosecute anyone caught hunting doves in July or any other time to October 1, and the game wardens have been instructed to keep a sharp lookout for violators of the ordinance.

The ordinance which cut down the season to one day was held to be unreasonable, but the present ordinance making the season thirty days is claimed by the authorities to be so drawn as to stand the objections of the courts.

Homeless children received and placed in homes for adoption. Apply Rev. O. V. Rice, Superintendent Children's Home society, 334 Bradbury building, Los Angeles.

THE CLUBMAN

isn't a pleasant fellow to meet on a dark night—but

JESSE MOORE WHISKEY

is the favorite at all clubs and homes on any night.

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