# The C. H. Paterson Biplane

By CLEVE T. SHAFFER


ALL-California-manufactured are the two excellent passenger-carrying biplanes newly built by the Paterson aeroplane company of San Francisco for the San Francisco Aviators, now flying under the management of J. T. McTarnahan.

In the design of these machines, Frank Bryant, a well known successful San Francisco Bleriot and Curtiss pilot, has drawn upon many types and incorporated many parts and ideas from varied machines.

The modern tendency toward tractor screws (which, by the way, is fast supplanting the old rear propeller drive) is the principal feature in the design of these machines.

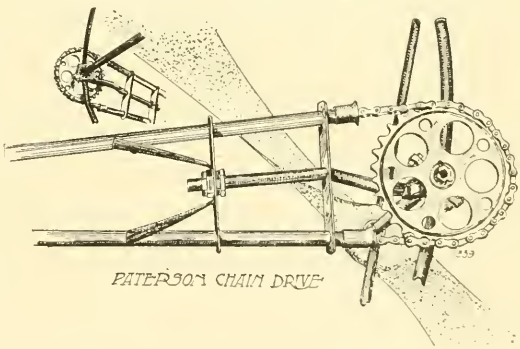
A suggestion of the Gage biplane is noticeable in the tubing truss underneath center section and skid bracing, also in rib or plane section. A divergence from popular practice in headless tractor screw design is the use of Curtiss type of outriggers and empennage instead of attaching the latter at the end of a monoplane type of fuselage.

Weight 1100 pounds. Spread 38 feet by 6¾. Speed (stated) 50 miles per hour. Paterson propellers of 8 feet 6 inches diameter, 10 feet pitch, are geared 1 to 2½ of engine. Ground thrust 480 pounds at 1200 R.P.M. This is claimed to increase to 1400 R.P.M. in flight, consequently the pitch speed is 5600 feet, if the stated observed speed is correct we have 12 miles per hour slip or over 25%, which is interesting in the light of claimed efficiency for high pitch low revolution screws.

(Note: Aviation statistic sharks please grab dope sheets and figure if pitch too low or revolutions too nigh; note also that machines have a good gliding angle, possibly 1 in 10. Witness: Aviator Francis when over the City of Oakland ran out of gasoline and "volplaned" back to field. Compare results with article on Parmelee's Wright, propeller drive, using same 60 H.P. engine.)

Planes are double covered, fabric on top and bottom tightened at rear of plane by lacing.

Double guying is a good feature around center section. Outriggers are of large




diameter. Single lever controls elevator and aileron flaps. Engine in each is a 60 H.P. Hall Scott, which is giving entire satisfaction, the combination of California-made engine and plane being hard to beat. 1915 in large letters is written on the underside of each, a good advertisement for the fair.

Hess-Bright radial bearings clamped in forgings take both side and end thrust. Attention is directed to the novel method of tightening chains without the use of center stay, strain being taken by tubing encircling chains. (See sketch.) Machines

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are steady in flight, carrying passengers with ease and their strong running gear makes landing easy.

Mr. Charles H. Paterson should certainly be congratulated on the excellently built machines which his firm have turned out. The machines being well and strongly built in every particular.

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The California Aviation Company, of San Francisco, is building a unique type of monoplane-biplane which is reported to be for the Japanese Government, they having recently constructed several machines for Japanese individuals and report considerable business in parts, motors and supplies from Japanese. Upon completion of above machine our correspondent in San Francisco will be permitted to inspect and describe same for "Aeronautics." CLEVE T. SHAFFER.