

THOUGHTS CONCERNING MOTIVE POWER: By J.A.D. McCurdy.

March 12, 1909:- It seems to me that in obtaining a motor with which to propel a flying machine such as a tetrahedral structure, we should have these three points in view and their importance is in the order named. (1) Reliability, (2) Brake Horse-Power, (3) Weight.

It has been considered that the first requisite for such a motor is one of light weight and to naturally obtain greatest horse-power consistent with that weight. For instance if a motor should weigh, say, 400 lbs we might be liable to put that aside without more consideration because it is too heavy; we might not seriously consider that its great horse-power would more than compensate for its great weight.

A motor which will only produce a push of 200 lbs will as in the case of the Silver-Dart lift not only its own weight of 260 lbs but the aviator and machine making in all a total of 860 lbs. The landings made with this great weight are without jar or any shaking up to the machine.

Now in the case of the Cygnet what we must have above all other things is push, coupled with a certain definite pitch speed. This means horse-power. Now why should we try to install in this machine a motor which is of comparatively light construction and which produces not sufficient horse-power to drive the machine. The motor we have is a thirty horse-power motor and weighs itself 260 lbs. This is all right for a machine which only requires 20 H.P. to fly.