Isn't it about time for another party, Miss Adams -- before cold weather sets in?

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NEWS FROM THE FLIGHT DEPARTMENT

Messrs. Gurney Smith and W.C. Baker are making a cross-country trip to Detroit, Michigan. With Navigator Baker aboard we are sure Pilot Smith will not miss the airport more than a few feet.

Mr. Frank Groat is traveling this week. Thursday he made a round trip to Charleston, West Virginia, and on Friday he leaves for Washington, D.C. to spend a couple of days.

Mr. Charles Vestal has returned from Lock Haven, Pennsylvania, where he visited the Piper factory. He reports that their strike is over and they will soon be in full production. The shop welcomes this news.

When are H. Brendle and W.C. Baker taking their Private's Flight Test? Baker should be through his spins by now.

Miss Nell Adams is learning to fly. She did acrobatics in the Ryan with Pilot Gurney Smith at the controls.

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AVIATION VOCABULARY

Dihedral: A wing design in which the wing tips are raised above the center section portions of a wing. Its effect is to improve its lateral stability.

Cathedral: A condition in which the wings slope downward from the plane of symmetry of the airplane.

(Through a typographical error the word "ANGLE" was spelled incorrectly in last week's issue of the News.)

Angle of Incidence: A fixed angle between the plane of the wing chord and the line of thrust or any other longitudinal line which is level when the fuselage is level longitudinally. Angle of incidence is the same as angle of wing setting.

PCLM: A designation found on Page 1 of the Operations Record (Form 309) which signifies that the aircraft in question is an (P) airplane, a (C) Cabin plane, a (L) Landplane, and a (M) Monoplane.

New words for next week:

STRUT, SPAR, CASTLE NUT, POLM

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WEIGHT AND BALANCE

by F. H. Ponish

When additional equipment affecting the aircraft balance is installed in an airplane, or when such equipment is removed from the plane, the new C.G. location has to be calculated. This calculation is really very simple.

You know from your previous work that Moment is the product of a weight and its arm. Keep this in mind and you should not have any trouble.

Let us find the new empty C.G. location of an airplane after we install a battery weighing 20 lbs., on an arm of $\neq$ 3. Before the installation of the battery, the aircraft empty weight was 687 and the C.G. location 15.72.

Arrange your work as follows:

	Wt. (lbs.)	Arm (in.)	Moment (in.lb.)
AEW	687	15.72	10799.64
Battery	20	3.00	60.00
New AEW	707		10859.64

New C.G. Location = $\frac{10859.64}{707}$ = 15.36

In the above case we added a 20 lb. weight to the AEW, giving us a new AEW of 707 lbs. By dividing the sum of the moments by the new AEW weight, we obtained the new C.G. location of 15.36.

PROBLEMS:

AEW—935 lbs., C.G. Location—13.45. The following equipment was installed this airplane: Radio transmitter, 20 arm $\neq$ 42; Radio receiver, 15 lbs. arm $\neq$ 4; Battery, 30 lbs. arm $\neq$ 1. Find C.G. Location. Answer: 13.51