

AERIAL OPERATIONS

The Expedition planned on using a small ski-wheel equipped airplane to land on the surface of the glacier close in by the objectives and thus eliminate many miles of hiking in to the Range.

Fred Melberg, of Seattle, purchased a three-place Piper Super Cruiser (105 h.p.) for this operation and then designed and constructed a set of skis that were attached by brackets to extended wheel axles.

These skis were made by Mr. Wallace Burr of Seattle, from laminated hickory and weighed a total of 81 pounds. They were 16" wide and had a large hole in the middle, through which the regular rubber tire of the airplane protruded about 3-4 inches.

Thus, theoretically, the plane could land on the snow, using the skis, with the protruding wheels burrowing the 3 inches into the snow, or at the airfield on the wheels. Of course when landing at the airfield the skis would scrape, so small metal skegs were fastened on the tail end of the skis. A safety cable was attached at both ends of the skegs, in addition to the shock cord at the front.

A trial landing was made on the Juneau Ice Cap near Camp #10 (elev. 3800) in the late afternoon of a sunny day. The snow was soft and mushy (ankle-deep) so the plane came to an abrupt stop in 150 ft. after first touching the snow. It was like stopping in thick mud, and at full power the engine was unable to even get the craft moving again.

The following morning the glacier froze quite hard; yet with deflated tires, Fred was unable to gain sufficient takeoff speed. The tires extending into the breakable crust produced too much drag.

On the second morning, after snowshoeing a runway on the day before, we were able to get off in about 1,000 feet. The runway had an unbreakable crust. Wheels were inflated and the metal skegs removed.

With this test, Fred felt it impossible to make landings on the glaciers near King Peak and Mt. Augusta where the elevation was higher (5,000 feet and over).

Had retractable skis been used, landings - or more important, the takeoff - would probably have been possible. Successful landings might have been made with modifications to this fixed-ski setup which would eliminate the drag. Later, when on the glacier, we felt that on cold mornings (about twice a week) after the snow had frozen very hard, that regular wheel landings (without skis) could be made, using a light plane. This was verified (and suggested) by a pilot, Mr. C. Kirk. Heavy duty landing wheels (tandem) would be recommended. It would be desirable to have someone on the snow before attempting the landing to check the surface and if possible snowshoe off the rough spots the day before when the snow is soft. This may be an emergency operation only.