let us use their arc welders for the foundation reinforcements and the steel framework for the building end.

As a result of the help we had, we have a 60 foot span by 50 foot depth hangar at a cost of $4,488.33.

We learned a lot and, on a similar building, could reduce this cost even more. If any club is interested, we would be glad to supply you with more information and loan you our 8mm motion picture history of the operation. Contact C. R. Smith, 314 So. Darlington, Tulsa, Oklahoma, if you are really interested and he will send you all the "dope."

OBSERVATIONS THAT WOULD AID YOU IN BUILDING A HANGAR

1. You could save money by building a scaffolding, as shown on Wonder Building plans. We paid $252.44 to rent scaffolding over a six month period. Lumber would be less and could be utilized for other purposes after the building was completed.

2. At the time of building, we had 24 members. Eight of these members applied 88% of the 682 man-hours. In spite of good intentions, we expect most clubs would work this way.

3. It took us three months longer than we thought it would take. 98% of the work was done on weekends.

4. The foundation required more man-hours than we anticipated and cost more than expected.

5. Don't try to build a hangar during your active flying season, unless you have a clear understanding and schedule for flying and working. This caused dissention in our club. Those that worked, while others flew, complained. Building interfered with flying, which also caused complaints. We didn't fly enough while building. This was due to misjudgment of the length of time required to build, which extended into our spring flying season. We had hoped to move in by March; instead it was May 1st.

6. Be sure to appoint a construction foreman and abide by his decisions and instructions. You can't have all bosses and no workers. Besides, too much time is spent arguing over what to do next and when, if yau have too many "foremen." We estimate we could have accomplished the same work in 500 manhours instead of 682 by better organization.

7. It will be more work than you think, but a nice hangar is something to be proud of and will do a lot to hold the club together. After it is done, you will have a useful and valuable asset.

SAFETY FIRST

TWENTY & ONE SUGGESTIONS

by JOSEPH G. ANTHONY

The following items are safety suggestions drawn up as a guide for the student glider pilots under the supervision of the author. They represent a summary of the things he has tried to hammer into heads as instruction progresses.

A. GROUND HANDLING

1. Use ground handling towlines of adequate length to prevent sailplane overrunning auto.

2. Don't leave sailplane unattended if not tied down.

3. On flight line, idle ships should be parked with one wing lowered into wind, weighted with parachute or some heavy object which is cushioned to prevent damage to wing.

4. *NEVER, NEVER* connect a towline from launching tug, tow car or winch to an empty sailplane.

5. When in take-off position, with towline connected, do not allow any person to stand forward of wing or tail surfaces.

B. TIE-DOWNS

1. Tie down tail to prevailing wind or to storm approach direction.

2. Use adequate tie-down ropes. Manila rope should be replaced each year. Nylon rope or webbing is preferable.

3. Use buried anchors. Don't rely on stakes driven into loose soil.

4. Before flying, make sure the ship isn't "waterlogged." Water, snow or sand can put the C.G. well beyond safe limits.

5. Use a check list in preflight inspection; include removal of gust locks and pitot covers.

C. SAFETY IN FLIGHT

1. Maintain flying speed.

2. There is no substitute for a swivel-neck. Never assume you are the only one in the thermal or in the air.

3. Another plane at your altitude will always appear to be at horizon level. If it appears to be above the horizon, it is at a higher altitude; if below the horizon, at a lower altitude.

4. Maintaining position in aero towing can be made easier by using the horizon as reference. In high position towing, keep the tow-plane's wing on the horizon; in low position, put his wheels just high enough above the horizon to stay out of his prop wash.

5. Don't wait until you are below 1000 ft. AGL to select your landing site.

1. Maintain flying speed.

6. Below 1000 ft. AGL you are just about committed to a landing, so plan accordingly. Although you may hope to pick up another thermal, don't get beyond safe gliding distance to your selected landing site.

7. Once your landing site has been selected, you are committed to it, so don't change to another nor turn away from the field.

8. Don't try to make every landing at the very edge of the field or runway. There's no *good* reason for using only 300 ft. of a 4000 ft. runway.

1. Maintain flying speed.

9. When setting up your landing pattern, flying speed should be increased and maintained 25% to 40% above stalling speed.

10. Don't hurry any phase or operation. Take sufficient time to be certain that *you and your ship* are properly prepared, both on the ground and in the air.

11. Be alert to changing conditions, wind, weather, terrain or whatever and have an acceptable alternate plan of action to follow which won't leave you "head up and locked." REMEMBER, PLAN AHEAD!

1. Lastly, maintain flying speed.