GIFT SUBSCRIPTIONS

One of the most frequent concerns expressed in letters to the SSA office relates to the extent and nature of publicity currently given soaring in the United States. People want to know why soaring isn't better known why it isn't publicized more, and what's being done at headquarters to help popularize the sport. The answer to the last question takes a variety of forms. There is development and publication of literature, such as the items listed on page 139 of the Directory, intended to answer the questions of those who enquire about soaring. Material assistance is provided to those individuals arranging for promotional displays of sailplanes in public. Literature and photographs are sent to authors preparing articles on soaring for other publications. Informational literature is provided to Schweizer Aircraft for distribution to those who respond to the SAC advertisements in other aviation publications. And of course SSA conducts its own modest advertising campaign and has a large and enthusiastic membership committee under the guidance of Al Uhalt that sells SSA and soaring on a broad front.

SSA members themselves are certainly among the best qualified individuals of all to do the job of publicizing soaring, and one of the best means of their doing so was made available last January when the Board of Directors made gift subscriptions available at the price of $3.00. Any member may give such a subscription on a one-year, non-renewable basis, to any individual who has never before been a member of the Society.

Since the availability of these gift subscriptions was announced in the March issue of *Soaring* only ten have been given. To a degree this was the editor's fault for not providing more publicity for this benefit. To correct this situation we will run a display ad in the magazine in the future in order to keep the matter of gift subscriptions fresh in members' minds.

It is certainly beyond reason to expect every SSA member to begin a gift subscription on the spot. But it might be pointed out that if this happened the circulation and the effectiveness of the magazine as a means of popularizing the sport would roughly double and that improvements in *Soaring*, such as additional pages or a color cover, would be closer to realization.

Most of us tend to have friends, acquaintances and co-workers with interests similar to, or overlapping our own. Thus we need not look very far for a suitable person to whom to give *Soaring*. If we have exhausted these possibilities there is always the youngster on the next block who builds model airplanes, or the near-by fixed-base operator who may leave the magazine in the flight office where it can be seen and read by many many pilots, or the local librarian who will see that the magazine gets on the proper rack.

This is the time of giving. If soaring is close to your heart you might like to consider giving such a subscription. If you are concerned about effective publicity for the sport, the price of a single tow, in the form of a gift subscription, might be worth your serious consideration.

BUILDING METAL SAILPLANES

RICHARD E. SCHREDER

The amateur builder of a metal sailplane should have a working knowledge of the strength of the metals that he is using so that he can understand why the designer puts a specific size and number of bolts or rivets in any given part. If you decide to make any changes from the basic design that you are building, get approval from the designer or a competent engineer who understands structural design.

Following is a table of tension, shear and bearing strengths of commonly used aircraft metals. (Table A, due to its singular width, is reproduced on page 29. Four additional tables showing ultimate allowable loads on columns and tubes, could not be printed due to copyright law, but can be obtained from SSA on request. Please remit 50 cents to cover handling—Ed.)

TABLE C — Ultimate Strength of AN Bolts
Hexagonal-head Bolts

AN number	Nominal diameter	Steel (Spec. 46S21) Shear $F_{su} = 75{,}000$	Steel (Spec. 46S21) Tension $F_{tu} = 125{,}000$	Steel (Spec. 46S21) Bending $F_b = 180{,}000$	24ST (Spec. 46A9) Shear $F_{su} = 35{,}000$	24ST (Spec. 46A9) Tension $F_{tu} = 62{,}000$	24ST (Spec. 46A9) Bending $F_b = 72{,}000$
3	3/16	2,126	2,136	116	992	1,059	46
4	1/4	3,681	3,982	276	1,717	1,975	110
5	5/16	5,751	6,429	539	2,684	3,189	216
6	3/8	8,287	9,953	932	3,868	4,937	373
7	7/16	11,272	13,433	1,480	5,261	6,663	592
8	1/2	14,722	18,356	2,210	6,871	9,104	884
9	9/16	18,637	23,313	3,150	8,697	11,563	1,260
10	5/8	23,010	29,676	4,320	10,738	14,719	1,730
12	3/4	33,135	43,494	7,450	15,463	21,573	2,980
14	7/8	45,097	59,515	11,840	21,046	29,520	4,740
16	1	58,905	80,159	17,670	27,489	39,759	7,070

Shear and bending strength based on full diameter; tension strength, on root diameter. All threads are NF-3.
Steel clevis bolts AN-23 to AN-36 have the same shear and bending strength as the above tabulated steel hex-head bolts. Do not use clevis bolts in tension.