

# The WINGS CLUB Winch

by Sam Freeman

"De Winch," number II is finished. It has already broken down, due to faulty design in the transmission of power; been re-designed, and is now a finished product working a hundred per cent.

We approached the building of a winch with great confidence and a huge burst of enthusiasm, due no doubt to our having seen and operated a winch during last summer. Why, it was simple. All we had to do was build up a drum design and build the level winder, and there we had it. Oh, yes, we had vague and sundry ideas that a source of power was necessary, but with our enthusiasm why worry about a little thing like that? Like the famed ditty from overseas:

"The first three months and all went well."

Our initial burst of speed carried us through the design work and actually "De Winch" started to take shape. The drum was constructed and mounted on a base. Now, just a moment about the so-called "pre-natal care." We built the drum so that its empty diameter was that of an automobile tire. We had had experience with winches with small-size drums and found that, although plenty of power was available, somehow the necessary speed was lacking. This was particularly noticeable when launching a high performance ship on a calm day; hence, the reason for a large drum. Also, at this point, I might mention the bearings. We used the best ball bearings available, figuring that it would not only be poor economy to use anything else, but also quite hazardous. So far, our figuring seems to be amply justified.

"The second three months and things went well."

Well, that is, we began to realize that we were creating a problem child. In fact, problems and delays were "what we had de mostest of." Also, our burst of enthusiasm began to change to plain hard plugging—actually, we began to look on "De Winch" as requiring a heck of a lot of work. Also, our confidence in our ability to overcome all the difficulties seemed to be tried sorely at times. The level winder was giving us no end of trouble. We designed and built one and promptly junked it. At last, we built our level winder similar to one we had seen on another winch. A combination of worm and gear transmission of power to a chain in the runway in which the level winder travels. It worked! Perfectly!

"'De Winch' was finished, all set to go."

"The third three months"—well, we wouldn't need them. No sir, our "brain child" was ready now. But no, it wouldn't run. We had to mount it on something to transport it—and then, near tragedy. "De Winch" was prematurely thrust out into the world. Yes, we got kicked out of the shop in which our "brain child" had been built. Quick action was necessary if it was to be saved. A friendly garage keeper opened his doors to us. A temporary haven at least. A wrecked Plymouth was bought and the motor, radiator, transmission and emergency brake taken out. Yes, bless the emergency brake on Mr. Chrysler's products—it is on the drive shaft. It saved us designing a brake for "De Winch." We then brought in our old '32 Ford V-8 tow car and removed the body from the dash-

board back. On this we mounted "De Winch" at the extreme rear end, facing rearward. We then mounted the Plymouth motor at right angles across the frame. A chain drive was all that was needed. But the end of the motor and the end of the winch didn't line up. Oh, well, we'll put a small shaft in between and slap on a couple of extra gears and bearings. Both ideas were wrong. The first time we attempted to use "De Winch" we found out. We had given no thought as to the size of the gears—size I mean—not ratio; and discovered, much to our disappointment, that they were too small; the chain skipped. Also, the jack shaft crystalized and broke. Back to the shop again—a longer shaft through the drum, line up the gears—fourteen-inch gears this time—put on the special chain, and she works. At last, "De Winch" is a hundred per cent, with any rope speed up to eighty M. P. H.

We operate from Coatesville, Pa. Airport, and many thermal flights have been made in the "Mint Julep," boosted up first by "De Winch." Boy, is everyone pleased.

SAMUEL T. FREEMAN, Wings Soaring Club.

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## 280 MILE GOAL FLIGHT

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With the city beneath me at 2000 feet, there was a moment of hesitation. It was 5:30 and there was a possibility of flying till 7:00, and on top of that a 2000 feet start; possibly 40 miles more. But the goal would be lost, and perhaps only five miles more could be made. While trying to decide one way or the other, I was going tail wind, with a ground speed of about 70 M.P.H. and the city was slipping away. So, I suddenly turned back to a ball field I had picked out in the middle of the city. But to my dismay, there was no forward speed at all, and the sinking speed was very high. Whereupon, the speed of the ship was increased to 80, just enabling me to squeak in over a row of trees to the ball park, which turned out to be the old Cessna Airport at Wichita, Kansas.

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## CONTRIBUTIONS BY MEMBERS

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rial be included in SOARING. It is a call for contributions from the average reader. Remember this, that whatever questions you have on your mind, there are other members who are equally puzzled on the same points. If you find the answer, the others want to know about it. You do not have to be a "big shot," or an experienced pilot. If you are, you probably know all about it, anyway. Most of you are comparatively newcomers to gliding and soaring, and some of you have had nothing to do with the sport before joining the Soaring Society. It is for you that the magazine is published, and it is your privilege that your problems be solved. Send them to our office and let the rest of us hear about them.