

We Shall Not Scrap Our Gas Jobs

Read This and Act Now

1935
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ABOUT a year and a half ago a conference of expert model designers and builders was held at Newark, N. J. At this conference a member who is not a model expert, condemned gas models.

A number of the members sensed that he was out to prevent the activity of gas model building from gaining popularity and expanding. The gas model champions rose to the challenge.

Since then the International Gas Model Airplane Assn. was organized under the sponsorship of MODEL AIRPLANE NEWS. The whole purpose of this organization was, and is, to promote gas model activities in every form which will be beneficial to model builders and in a manner which will not be detrimental to them, to the art or to anyone with whom they come in contact. It was felt at that time by its director, Mr. Charles Grant, that if all the gas model builders were united under one head it would be, in their hands, an organization impervious to attacks by the inexpert. This organization has grown to a membership of over 3,000 and is composed of about 85 units, located in various parts of the world. In fact, there is a unit in nearly every important country as well as in every one of the United States of America.

Recently the enemies of gas-powered flight have attempted to do what we believed they would eventually do; that is, to stop the flying and operation of gas models on a nation-wide basis. We therefore call upon you, as one of the leaders and dominating forces in the IGMAA, to collect every bit of "ammunition" possible with which you can combat any action which subversive forces have taken or may take. We cannot impress upon you too strongly that now is the time to act. We make the following suggestions which may help you:

A meeting should be called immediately of all who may be interested in gas model activities in your district. They should be made acquainted with the situation. Inasmuch as attempts are being made to influence the Department of Commerce to ban gas model flying, we suggest that each and every one of the IGMAA members, individually or belonging to a unit, should write Mr. Fred D. Fagg, Jr., Director, Bureau of Air Commerce, United States Department of Commerce, Washington, D. C., and express his views on the matter and assure Mr. Fagg that every possible effort will be made to safeguard the rights of property owners and anyone with whom they may come in contact while operating gas models. Any other comments which they wish to make in defense of gas model flying will be exceedingly helpful.

We also urge that you get in contact with every influential man in your district or state and enlist his aid to put this highly educational feature over and take definite steps against its suppression. Possibly you may know some important men in the political or industrial field; whether they are state senators, congressmen, mayors or

heads of industrial organizations.

In behalf of your own rights and all the members of the organization we beg you to take action.

Another way may be used to combat suppression of the art is to make every one possible acquainted with the value which will result to young men participating in it. This is especially true when one considers the benefits which are derived from this activity. At the present time it has proved to be the greatest force to come forward as far as the education of young men in aeronautics is concerned. Nor is this confined to the science of aeronautics. It is a highly educational thing and those who participate in the art have to do research work in nearly every known science. The fact that this is done under their own initiative and volition is very much more beneficial than any knowledge which may be received from educational courses given by teachers in schools. The science of physics, chemistry, the study of electricity, structural design, the strength of materials and airplane design are all included.

Not only this, but the most important thing of all takes place. They learn how to APPLY the knowledge received from their research and studies. This is a function which at present our schools do not fulfill completely. The art of craftsmanship is highly emphasized. The young man learns to use his hands as well as his mind and to coordinate these two human factors. A young man cannot build a gas model without understanding something about the operation of a gasoline engine and about the function of the parts which go to make it up; such as the spark, coil, spark plug, condenser and other parts of the engine proper. In fact it gives him a complete practical knowledge of the application of many branches of science.

Another one of the important things is that it keeps him in the fresh air and sunshine and gives him plenty of physical activity, which other hobbies do not do. We think every parent will recognize the value of a hobby which absorbs the complete attention and interest of any young man. One of the common phrases expressed by parents is: "I don't know what I am going to do with my boy." Gas model building and flying is the answer to this.

This art is a powerful factor for developing young men into intelligent citizens. The fact that they compete and associate with one another will be a great influence to help them cooperate with their fellow men later in life.

The most important fact of all is the intensity with which this art holds the attention of all participants in it. Gas model builders usually are not "lukewarm" in their interest, but are thoroughly "wrapped up" in it. After all we believe that this fact alone will be the cause of the downfall of anyone who lacks the wisdom to attack gas model activities.

The arguments used against gas model flights are:

1. A menace to personal and private property.

2. A hazard in the home, due to the fact that it is necessary to have gasoline in the house.

3. Gas model builders absolutely disregard laws governing personal rights and property.

4. They are a hazard to planes which may be flying over the spot where gas models are operating.

Let us look at these points and see what their value actually is. In the first place, it is based on the premise that gas model builders build and operate planes promiscuously, without any consideration for people or property and without any supervision or restraint whatsoever by law abiding citizens and those who understand the art thoroughly. Obviously this presumption is untrue and it appears that it is the result of a lack of knowledge of gas models and of the extent to which this activity is carried on.

Let us consider the damage to people and personal property. Up to the present time there have been thousands of flights made and hundreds of contests have been held. At the recent IGMAA Eastern States Contest there was an attendance of over 3,000 people and 800 automobiles. 275 contestants took part. As many as seven or eight planes were in the air at one time and yet at this contest not one person received an injury. One plane did fly into an automobile and cracked one of the windows. However it did not hit with sufficient force, though it was in full flight, to shatter the windows. Obviously people would be hurt if gas models were flown in a crowded city or in a district which was congested and people were unaware of their approach. However gas models are not flown in crowded districts.

One of the things which absolutely discourages the builder from flying in locations of this kind is the fact that their models will be damaged if they hit any object or come in contact with traffic. It is to the advantage of the gas model builders, and they usually follow this course, to fly their models in cleared spaces, such as at open fields or airports at which they have permission from the airport manager to operate their planes. In most cases airport managers have cooperated to the fullest extent and have kept the flying under their careful surveillance. In fact every official of the IGMAA and every member wishes to obey the laws of safety in connection with their flying so as not to bring down the wrath upon their heads, of those who wish to discredit and suppress gas models, or leave any way open in which they may be criticized.

Models flown from airports and open fields as a rule do not fly into crowded cities or districts. Another fact which prevents this is that at contests and in practice flights a limited amount of fuel is used or timers are used which limit the engine run. Ob-

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the number of strands used is about proportional to the weight of the model it is very simple to calculate the number of strands required for the Moffett Contest model, equipped with a 16 inch propeller. The required number of strands will be $(19.8 \times 6/4)$ or about 30 strands of rubber. Due to the fact that the model is a type which is highly streamlined and very efficient aerodynamically much less power will be required to fly it than other models. This is the advantage of a highly efficient plane. It is not unreasonable to assume that the amount of rubber required may be reduced by 20%. Thus six less strands may be used which leaves a total of 24 strands that should be put into the motor.

By means of the same system of calculation you may determine the number of strands required in the 8 ounce Wakefield Contest model using an 18 inch diameter propeller. According to the table about 22 strands will be required to fly a 4 ounce plane using an 18 inch propeller. Thus it is obvious that 44 strands should be used for an 8 ounce model with this size prop. As in the Moffett Contest model this number may be reduced about 20% due to the high efficiency of the plane. Thus instead of 44 strands about 35 strands of $(3/8" \times 1/30")$ rubber may be used.

The exact number of strands to use on your models may be determined by means of a formula which follows. This formula takes into account every important aerodynamic characteristic of the model and therefore it is quite accurate. However if you have a distaste for mathematics or lack a fair amount of patience it is suggested that you use the table previously mentioned as a basis of calculation. The formula is:

$$N = 3.84 \left(\frac{40W}{A} \right) \text{ times}$$

$$\sqrt[3]{\frac{A}{12.5(a)} \left[D(W+0.5) \left(\frac{d^2+w^2}{w^2} \right) 0.8 \right]^2}$$

In the formula: N = the required number of $(3/8" \times 1/30")$ strands; W = the weight of the model in ounces; A = the wing area in sq. in.; D = the propeller diameter; d = the depth and (w) the width of the propeller block from which the propeller is cut by the diagonal method.

By substituting the values for the Wakefield Contest model in the formula, and solving it, you will find that it specifies that 55 strands should be used. However the formula as presented gives the required number of strands for models with single surface wings. The formula answer must be multiplied by (0.8) when double-surface wings are used. The formula answer then will be, 44 strands required. This is the answer indicated by the table estimates. A further reduction of 20% for super-efficient models will give the number of strands required as 35.

The model builder may use his judgment as to the exact efficiency of his plane. He knows, however, that the strands required will be between 35 and 44 in number, depending upon how well he has designed and built his plane.

Next month the determination of the correct size of the tail surfaces and other final details of the design of your duration model will be discussed.

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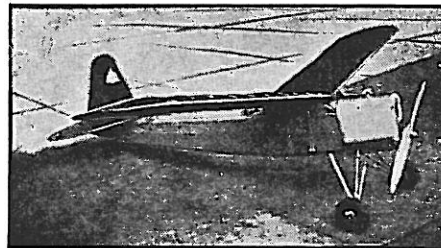
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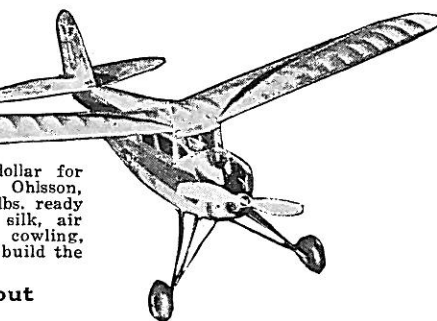
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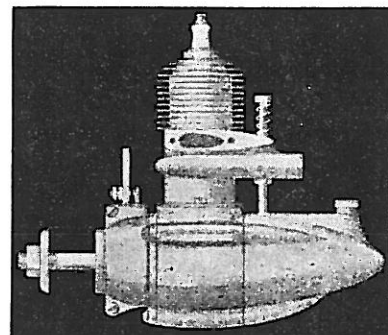
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We Shall Not Scrap Our Gas Jobs!

(Continued from page 7)

viously a young man does not wish to fly his plane out of sight and lose a \$30 to \$100 model. It is to his advantage to restrain the flight of the model to a radius within his eyesight.

As far as any damage being done when striking people, we suggest that anyone who wishes to discourage this sport consider our national baseball game in which a ball may be knocked into the bleachers. Under such circumstances someone might be hit and unless they can catch the missile they probably will be unable to avoid it due to crowded conditions of the bleachers. On the other hand, a model is large enough for anyone to see when it is approaching so that they may avoid being hit by it. The chances of anyone being hurt in this sport is just 1 in 100,000. In fact, we believe that

a baseball game, such as we refer to, is a very much more dangerous operation, and yet baseball games have not lost their popularity nor have they been suppressed.

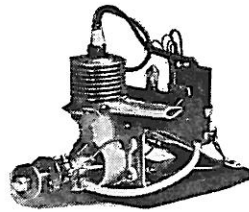
We wish to deny the second accusation, that is that gas must be kept in the house. Gasoline DOES NOT have to be kept in the house while operating gas models, in fact no engine need be run in the house. Gasoline may be kept in the garage or shop outside of the house, just as gas is kept for the automobile in these locations. Whether gasoline is kept in the house is entirely up to the wisdom of the parents of the boys or young men who run their engines. If a parent sees fit to let a young man run his engine with gasoline in the house, or if anyone wishes to do this on his own initiative, it is certainly not any model director's province to say whether he can or cannot do this. In other words, the wisdom of this is entirely up to the parents or to the person operating the engine. At least it is not necessary to do

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this.

One cannot help but laugh at this accusation when they realize that thousands of tons of gasoline parade up and down the streets every day in automobiles. A final measure of this is that up to the present time no serious damage has ever resulted from the use of gasoline under these conditions.

The next consideration is the disregard for laws of personal property by gasoline model fliers. This is obviously untrue, inasmuch as most of the model builders have placed themselves under the guidance and restriction of responsible clubs and associations and are taking every step to not only make this sport popular and beneficial to those who participate, but safe for everyone concerned. If model fliers had a disregard for personal and property laws they would not join those organizations and subject themselves to their restrictions.

The next point is that they are a hazard to planes approaching or flying over airports where gas models may be operated. Provided that gas models were operated and in the air under these conditions, the one particular point in space at which a large plane may be located in space is so infinitesimal compared to the volume of air or space in which it may be flying that it is one chance in a million that a gas model would strike it, even if several were in the air at once. Considering them as a hazard to large planes also assumes that the pilot would be absolutely unaware of the model's existence and approach. Usu-

ally or a gas model so that he could avoid it. No gas model flies as fast as a big plane, therefore, it could not approach a large plane from the rear. It would therefore have to approach from the front and in full view of the pilot.

If we go on this same basis and carry matters far enough we should ban all birds from flying, inasmuch as birds are a hazard to large planes when they strike the propellers. However, restrictions have been placed on the flights of gas models so that they do not interfere with the flying of large planes, taking off from an airport, approaching it or flying over it.

Obviously a person who was determined to see the danger in such a procedure would have to use a magnifying glass. The whole argument is based on the fact that there is danger in this sport to those who participate in it and to anyone or anything which may be struck by a gas model. If there is a danger in this it is so infinitesimal when there is any supervision whatsoever concerning the flights of gas models that it is ridiculous to consider it seriously. After all, it is a question of the degree of danger involved. Model airplane building as a whole will suffer at the hands of those who attack it in part.

Upon reading this editorial will you not please write your comments to the head office of the International Gas Model Airplane Association, 551 Fifth Avenue, New York City, and donate any "ammunition" in the line of suggestions which may be used to fight the unwarranted restraint of gas

help the cause but will benefit you and every other gas model builder in the country.

CHARLES H. GRANT,
I.G.M.A.A. Director.

Gas Lines

(Continued from page 20)

In the afternoon the Limited Fuel Event took place. 1/8 ounce of gas per pound of weight of the model was allowed. This ran off smoothly except for the fact that as many as ten models flew out of sight. This would indicate that 1/8 oz. of fuel per pound of weight is entirely too much fuel to use at contests. There are several young men who have talked against using a small amount of fuel. We call their attention to the results of this event so that they may change their ideas and not promote a cause which is going to be expensive as well as harmful to gas model fliers.

This event was won by Franklin Kral with a time of 20 minutes, 46 seconds, who received the S. S. Kresge perpetual trophy. This trophy was donated by the S. S. Kresge Company and was a beautiful gold-bronze cup of large size. This cup will be given every year to the winner of this event at a contest sponsored by the Kresge Company. Model contestants owe their appreciation to Messrs. Charles Hart, John Bartholomew and Benjamin Shereshaw for contributions made by this concern. Second prize was won by Ben Haydon of 130 Robeson Street, Reading, Pa., with a time of 20 minutes. He received a Baby Cyclone engine and propeller given through the courtesy of Aircraft Industries. Major C. C. Mosley was directly responsible for this contribution. Third place went to Maxwell Bassett of 11th Street & 66 Avenue, Philadelphia, Pa., with a time of 19 minutes, 3 1/2 seconds. He won a \$10 voucher donated by the Berkeley Model Supplies company. Fourth prize, a Scientific gas model kit of the "Miss Philadelphia," Maxwell Bassett's record plane, was awarded to Frank Ehling, for a flight of 18 minutes, 33 1/2 seconds. This prize was donated by the Scientific Model Airplane Company. Fifth through ninth places were awarded to:

Albert Mall of 290 Summitt Avenue, Jersey City, N.J., with a time of 13 minutes, 56 seconds; Martin Nemerofsky, 4920 North Franklin Street, Philadelphia, Pa., with a flight of 10 minutes, 31 1/2 seconds; Warren Leff, 27 Herrick Drive, Lawrence, N.Y., with a flight of 10 minutes, 58 seconds; Kurt Claus, 622 West 136 Street, New York City, with a flight of 12 minutes, 5 1/2 seconds; Richard Bloom, 658 Penn Street, Reading, Pa., with a time of 7 minutes, 56 1/2 seconds. They won subscriptions to MODEL AIRPLANE NEWS and gold medals respectively.

Readers will note with interest that the first four places were won with times of over 18 1/2 minutes; the longest being 20 minutes, 46 seconds. Difficulty was experienced in keeping the models in sight as a brisk breeze carried them far from the field. Though several models were lost a number have been found since. One was Frank Ehling's model, which was found on Staten Island, several miles from the field. It is getting to be a regular thing