SCHOOLBOYS LEARN TO MAKE AIR SHIPS

More than 10,000 amateur aeronauts are hard at work on the problems of the airship. The popularity of the new sport or science has increased late by leaps and bounds. Everywhere new clubs are forming, while those already organized are growing with surprising rapidity.

The plans for the Spring and Summer demonstrations and tournaments are far more ambitious than in previous seasons. Within the last few weeks definite plans have been completed for an international contest between the amateur aeronauts of England and America.

For every professional aeronaut there are hundreds of these new amateurs. The young aviators bring to their work the unbounded enthusiasm and a downright genius for invention. In no pastime was ever conceived for the American boy which made such instant appeal to his love of invention and combination. There are many intelligent observers of the progress in aeronautics who believe that the achievements of this army of youthful inventors are destined to rival, even surpass, the work of the professionals. The boy inventor of to-day is the practical aviator of to-morrow.

One of the veteran clubs in this work is that organized in Public School 55 at Eighty-fifth Street and First Avenue.

The boy inventor is not hindered by patent restrictions of any kind. He is free to copy any model he sees fit, and the cheerfulness of the material brings such experimenting within the reach of all. Every meet or tournament of the boys aviators serves to bring out many new models. A large proportion of these are, of course, fustie, but each serves to bring the youthful inventors a step nearer to the goal. It is reasonable to suppose that the successful airships of the future, for many of them, will have their first flights in these amateur trials.

In the regular tests and tournaments again the rules laid down for the competition are much more strict than in the early days of the sport. The actual distance traversed by the ingenious craft is not alone considered in making the award. If the aeroplane turns over in its flight it is disqualified. If it should touch the ground, however lightly, even though it rise instantly to continue its flight, the official measurement must be taken from this point. The steadiness of the flight also is considered in making the award.

The tournaments are watched by three judges, one at the starting point, another at the landing point, and a third near the point where the air craft will alight. No one is permitted to wind up the airship but the owner, nor, indeed, so much as touch it. While elaborate models are manufactured, chiefly in France and Germany, and the cost is reasonable, a large number of homemade craft to every one of the foreign-built craft in use to-day. And such is the progress among the amateur aviators in America that the homemade ones are actually superior in design, workmanship, and achievement to the foreign models.

The toy aeroplane is probably the cheapest toy in the world, as well as the most fascinating. The materials used in its construction cost but little. Few tools are required in the building. The problem of maintaining stability and the ability to fly may be attacked over and over at trifling expense.

The amateur inventors have long since discovered the best material. The frames of the airships are made preferably of bamboo or reed, while tubules of aluminum are used for bracing. It is possible to buy propellers constructed with just the right pitch, but as a rule the boys prefer to carve these themselves, following the models used by the actual conquerors of the air.

The enthusiasm for aeronautics has added a new and surprising number of unfamiliar words to the vocabulary of the average boy. The mere layman in such matters will hear an almost wholly unfamiliar language spoken in the clubs or tournaments.

The aeronautical publications and reports of the progress of aviation in the daily newspapers have no close readers than the boys inventors. Let a new type of airship appear in Europe to-day, and its merits will be discussed in junior aeronautic clubs from the Atlantic to the Pacific Coast to-morrow, and in a week scores of models duplicating it to the last detail will actually be aloft.

The young aviators are attacking the problem of supplying power for these flights with characteristic energy. The little craft are now driven by the recoil of rubber bands, which are turned upon themselves. This is admitted to be merely a makeshift, however. Experiments have been made in driving the air craft by compressed air. The power being contained in a tube forming the backbone of the craft. Still other attempts have been made to drive the craft by means of a clockwork mechanism.

The application of all these new motive powers is merely in the experimental stage, but no one doubts that the genius of thousands of bright American boys directed toward it will serve to solve the problem.