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## **Hattie Meyers Junkin Papers - Correspondence--general**

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This method has produced good pilots, but it is painfully slow and has discouraged many. Only a very small fraction of the time on the field is actually spent in gliding. Most of the boys and girls (from sixteen to sixty) who take up this wonderful sport in this country must necessarily indulge in it in their leisure hours. If they adopt the German method, it will be several months for most of them before they have the true feel of the air.

The American glider design, which was largely developed in the laboratories of the University of Michigan, is a far more efficient type of aircraft which permits a new technique of student instruction. It is designed as a rigid unit to withstand stresses in all directions without the use of wires that can loosen and get out of rig. Bracing is done by four streaming steel tube struts, and it can be assembled and ready to fly in about one-fourth the time required for the German type ships. It is so designed as to be always in rig, and great care has been taken to make the hooking up of the controls fool-proof. Unfortunate accidents have occurred as a result of glider pilots crossing some of the multiplicity of cables on "Zoeglings" in assembling them.

The Franklin design when on the ground rests on another American development, the Airwheel, which absorbs the shock of hard landings and uneven ground.

About two hundred feet of quarter inch Manila rope is fastened to a hook in the nose of the glider and the other end to an automobile. The beginner is seated in a comfortable deck chair type seat in a cockpit, which gives him a feeling of security and intimacy with the ship. Perching the student out in the open, as is the practice in European training ships, creates a tendency to balance it with the body and prevents bodily relaxation and mental concentration. One of the first rules of flying is "relax."

The instructor, who drives the car, slowly tows the ship across the field at a speed of twelve to fifteen miles per hour (air speed), constantly watching the novice for mistakes. Since the ship is supported on the ground by a central pivotal point, the wheel, it can lean in all directions, and the student learns from the first the use of the ailerons, elevator, and rudder, and how to co-ordinate them. The inevitable mistakes of the novice handling a strange machine are easily corrected by himself because of the constant speed and the resulting constant air flow over the control surfaces. Even in such a trip across a small pasture he has time to react to the new condition and profit by his harmless mistakes. Neither himself nor the ship is at all likely to be hurt at such slow speed, and he does not leave the ground. After a half dozen such trips, which are made in rapid succession, he has thoroughly familiarized himself with the controls. He has learned to fly the ship in straight level flight on the ground. There is no necessity of relying upon the opinion of the instructor as to whether the student can properly co-ordinate his movements. He has demonstrated this, and the element of guess-work has been eliminated. He is then told to nose the ship up a little, the speed of the car is increased slightly and he ascends to an altitude of three or four feet. At this height he is towed across the field. He is up in the air and flying, but at a perfectly safe altitude and speed, is free to cut loose from the rope with his safety release whenever he wishes. He has had one of the biggest thrills of his life. It is then only a matter of more trips across the field with slowly increased

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