A Radio-Television Plane for the Military

November 1924

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Tomorrow we shall find a new order of things if a war should occur. Pilot-lt•ss Radio-cont rolled planes fitted with “Tt>lt>vision” t>yes will flash hack what they see to headqua rters. By HUGO GERllof American Physical Society

N a recent trip to Washington the writer visited the labora­ tories of C. Francis Jenki ns, the well-known experi menter of international reputation. It was Mr. Jenkins who perfected the shutter that made our present-day motion pictures possi ble. He was paid over $1,000,- 000 for this invention. Of late he has been experimenting with television and has already ob­ tained astonishing results. At the time of the writer’s visit Mr. Jenki ns demonstrated his television machine before a number of Government rep­ resentatives, including the Chief of the Signal Corps. At that time the writer actually saw his own waving hand, projected by radio over a dis­ tance of some thi rty feet, the shadow of the waving hand being transmit­ ted to a screen at that distance. Every motion made by the writer’s hand was faithfully reprod uced on the distant screen. Opaque sub­ stances. such as a cross, knife, pen­ cil. etc.. were also successf ully trans­ mitted and projected by the Jenkins Television machine. It is the writer’s opinion that, within two or three years, it will be possible for a man i n New York to listen over his radio to a ball game 500 miles away and see the players on a screen before him at the same time. Whether it will be the Jenki ns machi ne or some other machine that will achie,·e this result is of little consequence. The main thing is that experimenters all over the world are working frantically on television and sooner or later the problem will be solved. An entirely new age will then be opened up and it is not necessary for the writer to expatiate at length on this phase ; as it has been exploited by him i n his past writ ings and by others for some time. In this article. we shall concern ou rsch·es with the radio-controlled television plane, which will come into being immediately the min ute the television problem is put on a practi­ cal basis. It should not be construed that the radio television plane is merely a monstrous war machine, but it also has its uses during peace time, as will be explained. At the present time it costs great effort, time andi

aviators’ lives in order to train our perf ect flyers. A radio-controlled airplane has al­ ready been demonstrated by the French and American Governments, and it flew for a lengthy period with­ out anyone on board . The entire con­ trol was from the ground while the machine was alof t. The plane arose, cut figure eights, volplaned, ascended,

THE accompa nying article ap1wared in tlw Novem­ ht>r, 1924, issue of THE EX­ PER HIENTER. “‘hile al that t ime the ideas set forth therein n1ight have appeared more or lt>ss fantastic, tllt’y are no longer considered so today. As a n1attt>r of fact, tilt’ radio­ eontrollt•d airplant’ is ’”;th us today. Several of tilt’ lt•ading ovt•rnments have alrt’ady in tlu•ir posst•ssion airplanes that can now fly and stay alof t for any lenth of time, within reason, wit hout a pilot or any human hein on hoard. The tdevision a,lju nct will follow as a mattt>r of course. Most of those who rt•ad this article will livt> to st>t’ a tt’lt•vision-controllt>d airpla ne a rt>ality during the coming yt>ars.

descended and went through all the ordinary evolutions; the control being effected enti rely and solely by radio. The same kind of a machi ne is also bei ng experimented with successfully by our own and several other Govern­ ments, and it may be said therefore

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that the radio-controlled airplane has passed the experimental stages and has become practical and feasible for military use. But the great trouble with radio-con­ trolled airplanes is that the operator must see the plane. If his machi ne were to make a landing at a great distance he might land the airplane on top of a building or in a river, or it might collide with a mountain. A Pilot-less Plane Which “Sees” Imagine now a radio-controlled pi­ lot-less airplane which is also equipped with electrical eyes, which eyes trans­ mit the impulses-or rather what these eyes “see,” by radio-to the dis­ tant-control operator on the ground. Ou r illustration on the opposite page, which shows a war machine, depicts this phase. Here we have a radio­ controlled airplane equipped with a number of lenses which gather in t he light from six different directions, namel)“. north, south, east, west. up and down. The impulses are sent to the operator on the ground, who has in front of him six television screens labeled”North," “South.” “East.” “,” “Up” and “Down.” Each screen corresponds to one of the elec­ t ric eyes attached firmly to the body of the airplane, as shown in the illus­ tration. Let us now see what happens. The airplane is started from the ground and is sent over the enemy territor)·. Duri ng every second of its fight the control operator, although 50, 100 or possibly 500 miles away, will see ex­ actly what goes on around the plane. just the same as if he himself were seated in the cockpit ; with the further advantage that, sitting before a screen. he can scan six directions all at once, which no h uman aviator can do. If, for instance, an enemy air­ plane suddenly comes out of a cloud and starts droppi ng bombs on our machine below, the cor.trol operator sees this enemy machine quicker 500 miles awar, than if an aviator sat in the cockpit one-quarter of a m ile away from or below the enemy bomb­ er. The control operator will send a rad io signal that will immed iately d is­ charge a smoke screen from his radio telel’ision plane. hiding his craf t in smoke. He can also make it turn (Cnntinued on page 75)

rangement can be attached to the plane in such a manner that, when the object to be bombed comes over the cross-wires in the range-finder, the bomb or bom bs are dropped at the exact moment. Suppose that the enemy becomes too strong and that a great number of mach ines attack the rad io-controlled plane and that there is no escape from the enemy. In that case the control operator will simply set the radio television plane on fire, bringing it down in flames! Th us it would be useless to the enemy and no lives will have been risked or taken­ it being cheaper to destroy a mach ine than the valuable life of a highly trained pilot. In the future such radio-controlled television planes may be used not only