

POPULAR FLYING

NOVEMBER, 1933

6^D



THE ARCTIC MAIL

"DEPENDABILITY"—BY AIR COMMODORE SIR CHARLES KINGSFORD SMITH, M.C.

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you free from **HEADACHES**

THE CASE FOR THE

HAVING undergone the most extensive changes in tactics since the World War, attack aviation, that branch of the air forces which devotes its attention almost exclusively to the harassing of ground troops and communications behind the enemy lines, is now being looked upon with reverence by the air powers that be.

Although the Royal Air Force is at times variously engaged with hostile tribesmen in India and Iraq, and the French similarly engaged in Morocco, no specialised types of attack aeroplanes are in use. The standard production type of reconnaissance aeroplane has filled this bill. This has also been true in the case of the U.S. Marines in their campaign in Nicaragua.

These jungle disputes are, moreover, bush warfare, and do not show attack aviation in its true rôle—that of ground straffing of a modern army in the field. For this class of work special types have been developed by the United States, Russia and Holland. Other nations believe that pursuit and two-seater reconnaissance ships should be employed in these tactics.

The rôle of the attack aeroplane is surprise. As practised in the United States, where attack aviation is an integral part of the Army Air Corps, its tremendous striking power is evident. For surprise, concealment is necessary. Hence flying below the tree tops, zooming over the trees, down below them again to ride the carpet, until the target is in view. Then the final pounce of destruction.

For the benefit of the uninitiated, the "Attack" aeroplane is a type which has been specially designed for what, during the War, was known as ground straffing or trench straffing. It ranks in American Aviation with such types as our own Bomber, Interceptor, and the like. The development of this class of aircraft has received little or no attention in this country. We have therefore turned to an American author for first-hand information on the subject, but a further article, by Major Charles Turner, the British Authority on military aviation, will appear next month.—Editor

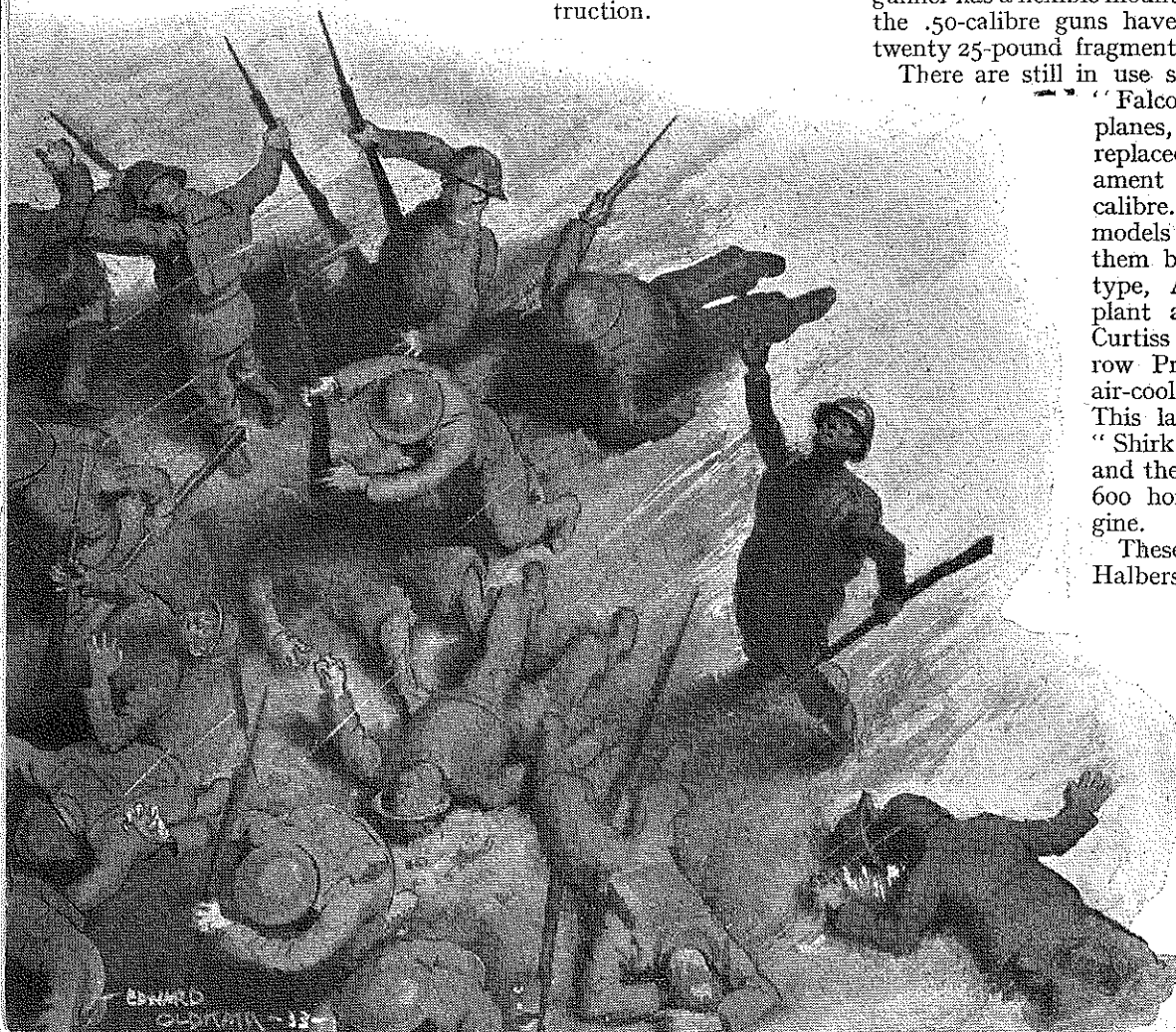
The American attack organisation consists at present of the Third Attack Wing, composed of Wing Headquarters, and consisting of the Third Attack Group, of three squadrons of attack aeroplanes; and the Twentieth Pursuit Group, of three pursuit squadrons. There is also one other attack squadron in the Hawaiian Islands.

While the attack squadrons are busily engaged in the neutralisation of hostile ground establishments, the pursuit squadrons of the Wing are riding overhead to prevent interference from defending aircraft.

The latest American attack aeroplane is the Curtiss A-8, or "Shirk," which is powered with the Curtiss "Conqueror" 600 horse-power engine. Its speed in level flight is in excess of two hundred miles per hour. It is a low-wing monoplane. Besides the two machine guns in the "pants," or "spats," two are mounted in the leading edge of the wings, while two additional guns are placed in the engine cowlings, synchronised to fire through the propeller arc. In addition, the rear gunner has a flexible mount of twin guns. On this model the .50-calibre guns have proved successful. Ten to twenty 25-pound fragmentation bombs are also carried.

There are still in use several of the Curtiss A-3 or "Falcon" ships. These are biplanes, and are gradually being replaced. Although the same armament is carried, it is of the .30-calibre. Several new experimental models have been furnished, among them being the Lockheed all-metal type, A-9, with the same power plant as the "Shirk"; and the Curtiss A-10, with the new double-row Pratt & Whitney "Hornet" air-cooled engine of 700 horse-power. This latter ship is similar to the "Shirk," except for the power plant; and the Consolidated A-11, with the 600 horse-power "Conqueror" engine.

These ships are a far cry from the Halberstadt and Hanoveraner C.L.'s and the Junkers J-1, of the 1917 and 1918 period, which were ordinary reconnaissance craft, except for some armour plating over the vital parts to protect personnel and the power plant.

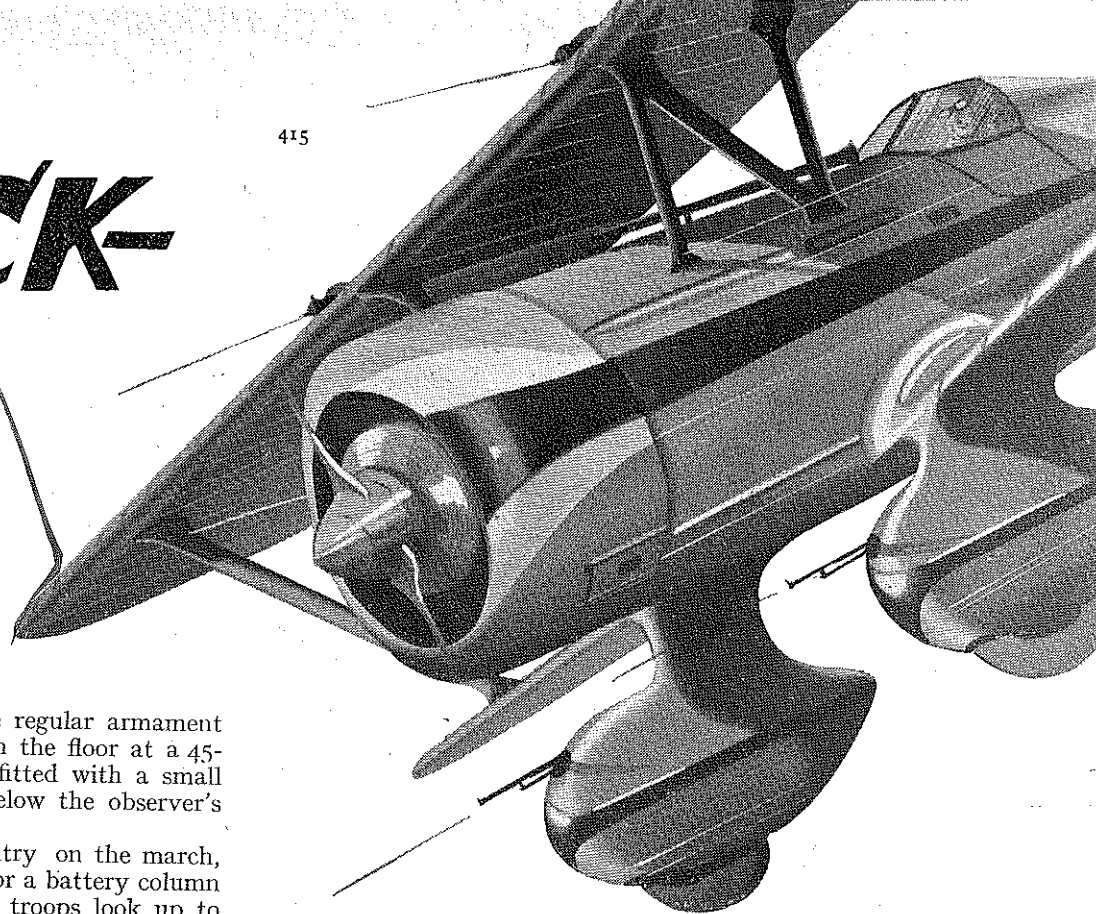


ATTACK- SHIP

By

ALFRED CELLIER

*The American Authority
on Military
Aviation*



Besides two additional guns to the regular armament which were pointed forward through the floor at a 45-degree angle, the C.L.'s were also fitted with a small rack on the side of the fuselage below the observer's cockpit for grenades.

Visualise now a regiment of infantry on the march, replacements going up to the front, or a battery column on the road. This is 1933. These troops look up to see a "dog fight" in progress. The march continues forward, for they are badly needed up front, and who knows on just what part of the front attack aviation is located? There has been none in this sector so far. But this is the pursuit aviation attached to the attack wing.

Suddenly the air is alive with planes. In the confusion the air is filled with shouts of alarm, while machine guns are being set up and swung out from mounts on vehicles; a twenty-eight ship formation has zoomed the trees.

Operating in elements of three, this war-strength squadron has a fire power of 28,000 rounds from the forward guns alone, besides the 140 bombs carried. At over two hundred miles an hour, things are happening so fast that defensive measures are futile. Only a quarter of a minute has elapsed. Some ships have been lost, but that was to have been expected, and was well worth the advantage gained. The attack formation now swings back to complete its work of destruction of a now demoralised regiment, which is only too satisfied to take to its heels, if that is possible.

Or it may be night. Since the latter part of the World War, attack aviation has made these movements in the dark necessary. Darkness, however, is no restriction to the employment of attack aviation. Two or three ships equipped with parachute flares precede the squadron, and, except for the whole scene re-enacted, the light from the flares only adds to the derangement of aim and the general confusion.

Only too well will some of the veterans of the Somme recall the disastrous attack by a staff of twenty-four Halberstadts, which caught an advancing British division crowding two bridges, at Brie and St. Christ, while they were engaged in covering the withdrawal of their own troops from the town of Peronne. The entire division was demoralised. Infantry was paralysed.

Wrecked artillery and transport scattered on the roads only added to the confusion. Amid the tangle the German forces were able to find time to consolidate their new position.

The Imperial German Air Force was well aware of the employment of this specialised branch of aviation, and was the only nation at war which had designated types of ground strafing aeroplanes. Again, those veterans of the Fifth British Army will remember on March 21-23, 1918, at which time German pursuit dominated the air, when over 300 C.L.'s were used against the troops at the towns of Peronne, Guisard, Noyon, Chauny and Ham. The Fifth Army crumpled under the blow. The situation was relieved on March 24th, only by the Royal Air Force receiving reinforcements from other sectors.

In an effort to neutralise German air forces, it became in 1918 an absolute necessity to attack them on their aerodromes. The Bristol Fighters were consequently utilised in this campaign against aerodromes. Protected by one or two pursuit squadrons, thirty or forty Bristols would go over and proceed to shoot up the ships on the tarmac and in the hangars. By the time they had finished, several aeroplanes would have been written off, two or three hangars burning and the field well pock-marked by bombs. Usually the dose was repeated the same day just as things were being straightened out.

Again, on September 12th, 1918, on the American front, it was found necessary to employ the entire Third Pursuit Group as low-flying attack. Consequently the four squadrons of this group, until the Armistice, were employed at an altitude of only fifty metres, bombing everything worth bombing and machine-gunning all troops in the rear areas.

The lack of specialised attack aviation on the part of the Allies often caused these units to be caught

unawares, or required supporting pursuit from other sectors for protection. The absence of this type may be due to the policy of providing a preponderance of pursuit and bombardment at this time, but it is believed that, if the war had continued in 1919 attack squadrons would have constituted part of the air forces.

Until such time as armies again take the field, the operations of attack aviation may only be gleaned from their part in manoeuvres and in bush warfare. An interesting situation developed, for the student of this mode of warfare, when a unit of observation planes of the U.S. Marines raised a siege of a beleaguered garrison. It is believed that this is the first instance of aeroplanes raising a siege.

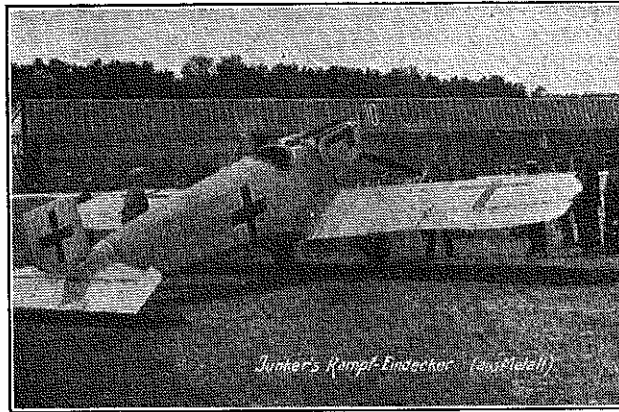
During the operations in Nicaragua the garrison at Ocotal, comprising thirty-eight Marines and forty-nine Guardia Nacional, were attacked one night by a group of bandits estimated later at about six hundred.

The fight went on throughout the night, and early next morning a two-plane patrol arrived on their daily liaison mission. Discovering the desperate situation, one plane returned to Managua to report, while the other ship stood by and attacked with bombs and both fixed and flexible guns until its ammunition was expended. It, too, then returned to Managua, a hundred miles distant.

Meanwhile, five planes, fully manned and equipped, had responded, and by mid-day the bandit forces were completely dispersed and demoralised. A curious incident of the affair developed, as it was found out that the bandits had been informed that bombs did not explode if dropped in water, so when the aerial gunnery and bombs began to get too hot for them, they took to the river, only to prove a better target than they presented at first. However, it is not expected that such would be the case with intelligent and disciplined troops.

The employment of attack aviation will take place against troops on the march, anti-aircraft units, destruction of communication lines and aerodromes, the covering of a retirement of friendly forces, and in making a rout out of a retreat of an opposing army. It will take the place of the pursuit aeroplane in the destruction of some machine-gun nest which is holding up an advance,

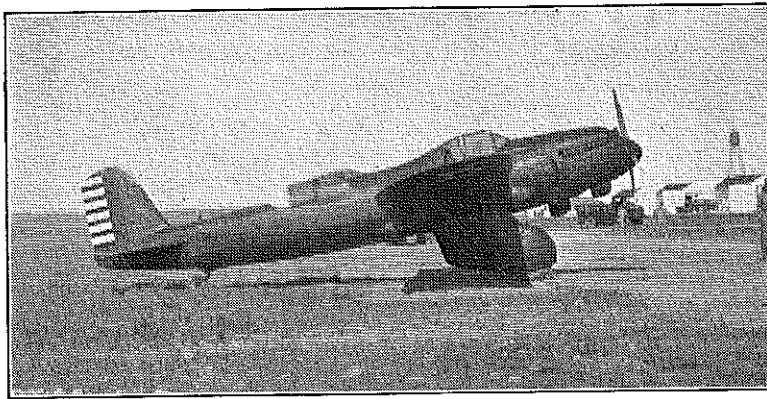
as so often happened in the past. Its operation against observation balloons will remain to be seen. At present this has been left to pursuit, and nothing to date has been tried of the attack plane zooming up for the *coup de grâce*. A few such attacks by pursuit were successful in the late war, but it is looked upon for attack aviation to take this over in the future.



An early experimental "Attack-ship"; the Junkers all-metal monoplane; the performance was disappointing.

an extent that any such body of disciplined troops are turned into a fleeing mob.

When attack aviation is supporting the infantry, it precedes and accompanies the troops in their advance, increasing fire power at any section of the line. It



The Curtiss A.8 attack monoplane (600 h.p. Preston-cooled Curtiss "Conqueror" engine). This type is in service with the 3rd Attack Group U.S. Army Air Corps.

loss of a regiment of artillery at a critical time, the destruction of an ammunition or supply train, or the jamming of a cross-road, may mean the loss of an army corps.

Visualisation of the employment of attack aviation by the Turkish forces at the Dardanelles, when the Anzacs were landing on the beach from small boats and lighters, might have made a much shorter campaign of it, had aviation been further advanced at that time, unless a stronger air force had been present.

Defence of the Hawaiian Islands presents an interesting study of this sort. The one attack squadron, which augments the other units stationed there, will un-

(Continued on page 454.)

In order to operate efficiently, attack aviation must occupy aerodromes close to the front, and must be held continually on the alert, that they may take off on a moment's notice. As a rule, all troop movements within the combat zone will be made at night. However, exceptions will be made, and opportunities will exist for the employment of attack planes during daylight as well.

The power of attack aviation lies in its moral effect. Its attacks disrupt enemy troops and break down the morale to such an extent that any such body of disciplined troops are turned into a fleeing mob. When attack aviation is supporting the infantry, it precedes and accompanies the troops in their advance, increasing fire power at any section of the line. It attacks machine-gun emplacements, artillery positions, and enemy reserves coming up to the front lines, and also lays smoke screens when necessary.

The concealment offered by terrain features leaves lots to the imagination, but it is a definite fact that attack aviation is here to stay. It will be woe to the Brass Hats who fail to make allowances for its operation. The

CASE FOR THE ATTACK SHIP—(Contd. from p. 416).

doubtedly be reinforced during the next year. Any invasion of the Hawaiian Islands would require landing from small boats, which would promptly be met by attack aviation. It may be assumed in such a situation that the defending pursuit and bombardment would in the meantime have their hands full neutralising the attacking air forces.

Defensive measures against low-flying attack will no doubt tax the high command of an opposing force. Special-type pursuit aeroplanes have been tried out to find methods to combat it. These necessarily have been of the diving pursuit or "hunter" type. The interceptor type, which gains its name from its ability to climb quickly to high altitudes to intercept other formations, would be of little value in this case.

Most Governments are providing trucks and other moving vehicles with mounts for light machine guns, which may quickly be swung into place, while infantry regiments now have their machine-gun equipment already pointed skyward, instead of being secured in their carts, as in the past.

Rear areas and concentration camps will more than ever be in need of anti-aircraft equipment, for with the cruising radius of to-day there will be no telling where or when attack aviation may strike. As the war birds of yesterday spoke of the various circuses, the infantryman of to-morrow will, in all probability, have his own painted circuses to regard, and will doubtless have little interest in other aircraft markings, unless it may be the insignia of his defending pursuit.

THE AVIATION BOOKSHELF

"Model Aeroplanes Simply Explained," by M. R. Knight. Percival Marshall, price 1s.

In a comparatively small space, Mr. Knight has managed to cover considerable ground, for he not only gives details of the construction of each component of a model aircraft, but he also gives full particulars for making an actual model—the "Avis" low wing monoplane.

But perhaps the most fascinating thing about the book is that it is an introduction to the mechanics of the model aeroplane. When you have read "Model Aeroplanes Simply Explained," you will have at your command sufficient knowledge to begin designing a model of your own.

It is interesting to see that Captain Geoffrey R. de Havilland has written the foreword, and his last sentence is especially noteworthy. Captain de Havilland writes:—

"This book is concerned chiefly with the design and building of models, but those who read it carefully will also gain knowledge of the simple principles of flying generally."

Publications Received.

"An Airman Marches," by H. H. Balfour. Hutchinson, price 18s.

"The Amateur Pilot," by The Earl of Cardigan. Putnam, price 7s. 6d.

"Capt. Albert Ball, V.C., D.S.O.," by R. H. Kiernan. John Hamilton, price 8s. 6d.

"Conquering the Air," by Archibald Williams. Nelson, price 3s. 6d.

"Compression Ignition Engines." Temple Press, price 2s. 6d.

"Silhouettes of R.A.F. Aircraft." Air Ministry, price 1s. 3d.

"Report of the Aeronautical Research Committee," H.M. Stationery Office, price 2s.

"The Spyflyers," by W. E. Johns. John Hamilton, price 3s. 6d.

"The Hornet's Nest," by J. Railton Holden. John Hamilton, price 3s. 6d.

ZEPP STRAFFERS—(Continued from page 419).

damage mostly of non-military nature, may now be regarded in something of the light of a fiasco. Nevertheless, we rose then as we do in all eventualities to the occasion adding on Home Defence Service further laurels to that Service which has for its motto: *Per Ardua Ad Astra*.

By a coincidence almost, the Graf Zeppelin, whose exploits have now made German airships famous, last year, on its way to Hanworth, flew peacefully over the very ground traversed by the redoubtable Mathy and many of his captains.



A Lucky Shot!

The last moments of the L.31, shot down on the night of October 1st, 1916. Photo sent by Mr. F. Sanders, Chatham.

BEAUTY AND THE BEAST—(Concluded).

The amphibian glided in, and without waiting to finish its run taxied swiftly towards them.

"Come on!" yelled the pilot from the cockpit.

They needed no second invitation. Plunging into the water they reached the machine in a few strokes and hauled themselves aboard. The engine roared as the pilot opened the throttle and they soared upwards into the blue.

* * * * *

"That's a nice little lot," observed Sandy a few days later as they sat around a table in his bungalow. The objects of their attention lay on a small piece of cloth; they were pearls. Seven fine pearls and a number of smaller ones, known as seed pearls. "Just think what that lagoon must be worth," he mused. "What a pity I couldn't hit that devil, but I didn't, and there it is. I damaged it all right, but it managed to get back into its hole. It may be dead now, but I'm dashed if I feel like risking it. Tauri wouldn't dive there again, anyway," he added.

"And I wouldn't land there again," observed Algy emphatically. "It was a bit of luck you had those few sticks of dynamite, or I don't like to think where I should have been by now!" he concluded soberly.