

## the 20-ton hummingbird



**T**HREE facts that I always remember about Thomas Alva Edison, the famous American inventor, is that he invented the gramophone and electric light bulb and had a poor opinion of early aeroplanes. When told of the first flights by the Wright brothers, in 1903, he commented that the aeroplane would be worthless until it could go straight up and down, and hover, like a hummingbird.

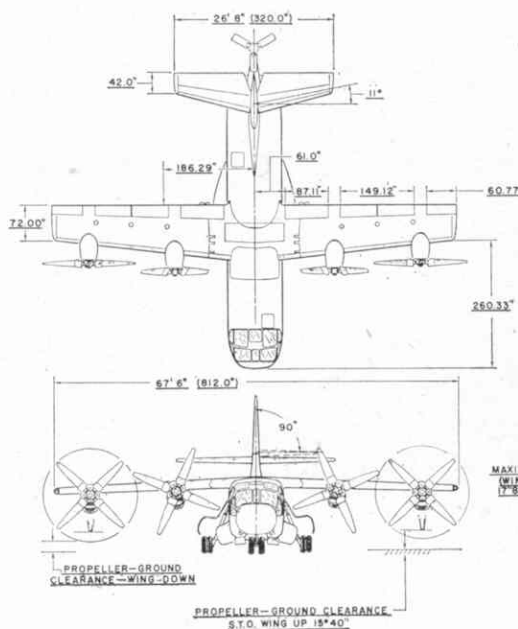
Edison would have been horrified by the sight of the giant jet-liners of today hurtling along two-mile concrete runways. He foresaw that aeroplanes would be much safer, and would be able to go anywhere, only when they could take off and land vertically. It has taken 60 years for most of the world's aircraft designers to realise how right he was and to try and do something about it.

One type of vertical take-off and landing (VTOL) aircraft, the helicopter, has of course been doing useful work for more than 20 years; but this is not enough. Passengers travelling between London and Paris still spend more time on the ground, getting from city centre to airport at each end, than they do in the air. If aircraft were able to 'go straight up and down', it would no longer

be necessary to build airports so far from city centres. Similarly, army commanders would receive much quicker and better support from their air forces if fighter-bombers were able to operate from small fields, jungle clearings or roads in the combat area, instead of from

prepared airfields miles behind the fighting lines.

To their credit, British designers have led the field in putting some sense into aviation, and we now have the Hawker Siddeley Kestrel VTOL strike fighter on order for the R.A.F. But our successive



*Like a vast insect, 20 tons of aeroplane hang motionless in the air*

*This three-view drawing gives a good idea of the machine's proportions. Notice the folding fin*

