



"Badger."

MILITARY AIRCRAFT 1956

Bombers

MEDIUM AND HEAVY

employment of sandwich-type construction," our report continued, "makes the Victor an exceptionally 'smooth' aircraft. There are many removable panels in the dorsal surface of the fuselage which are no doubt opened to admit the grab of a crane for loading weapons. There is an exceedingly large dielectric area beneath the cockpit floor and a corresponding area in the rear fuselage. Together these presumably serve an advanced radar-bombing system. Stick aerials project from above and below the rear fuselage and a small fixed tailwheel is fitted to act as a bumper. The take-off performance as we saw it last week is nothing short of brilliant, even allowing for the fact that the aircraft was not heavily loaded."

The design-thinking behind the Victor's crescent wing has been expounded in *Flight* on a number of occasions. The outermost panels of the wing have "droop-snoot" leading-edge flaps, each in two sections; the rearward-moving trailing-edge flaps are shaped to the jet-nacelle contours, and there are large hinged air-brake panels on the tail cone to increase drag for deceleration in flight and upon landing. The powered controls have progressive feel simulation.

Internal bomb capacity is obviously very great and additional bombs may be carried in streamlined containers beneath the wings.

Span, 110ft; length, 114ft 11in.

U.S.A.

Boeing B-52A Stratofortress Very few of these early-production B-52s were produced, the model having been quickly superseded by the "B."

Boeing B-52B Stratofortress This model was adaptable for multiple strategic rôles—delivery of conventional and nuclear weapons as well as photographic reconnaissance. Its gross weight was in excess of 350,000 lb, top speed more than 650 m.p.h., and operating height

over 50,000ft. Maximum bomb load was well over 70,000 lb, and provision was made under the wings for external fuel tanks.

Boeing B-52C Stratofortress The "C" variant of the B-52 is built by Boeing at Seattle. Though of similar dimensions to the "A" and "B" (span 185ft and length 156ft), its all-up weight has been increased by some 50,000 lb to more than 400,000 lb, and provision is made for larger drop tanks (probably the largest in the world) than on the B-52B. The B-52C has reconnaissance capability.

Boeing B-52D Stratofortress The current Wichita-built model of the B-52, the "D," like the "C," has a gross weight of over 400,000 lb. Also in common with the "C," it has the larger drop tanks, but resembles the "A" rather than the "C" in being strictly a bomber, i.e., in having no reconnaissance capability. The first B-52D came off the "second source" Wichita line on December 7 last year—four months ahead of schedule. Initial cost is put at about \$10 million, and the overall operating cost of a wing of 30 machines has been estimated as \$39,290,000 annually.

A few weeks ago it was officially declared by the U.S. Secretary of Defense that the present rate of B-52 bombers was six a month. A peak production of 17 a month had been planned, but this had later been increased to 20.

Aerodynamic and constructional features were described at some length in our former review, but it may be recalled here that the powerplant is eight Pratt and Whitney J57 two-spool turbojets, "podded" under the wing, which is swept back at 35 deg. The turbojets can be of the F-19 or F-29 model, delivering up to 12,000 lb thrust for take-off with water injection.

The crew generally numbers six, five in the main nose compartment and one in the tail turret. Three of the forward crew-men have upward-ejection seats and two are ejected downwards. The tail gunner is thought to be jettisoned complete with his turret. The turret itself is of the radar-directed type, housing two or four 20 mm guns with a very large ammunition supply. An optical sight is also fitted. Earlier models had four 0.5in guns.

Accuracy of bomb delivery will be greatly enhanced on the B-52 by the MA-2, or BRANE system, developed by the International Business Machines Corporation. The name of this device signifies Bombing Radar Navigation Equipment. Originally conceived by the Air Research and Development Command at Baltimore, it is intended for

Douglas RB-66B.

