Prosthetic Centre as Manager where, in 1949, the importance of research was more adequately recognized by the installation of a research unit staffed by engineers and technicians. The work of the Associate Committee on Artificial Limbs (NCR-Canada) passed to this Unit and the Committee disbanded in 1951.

The utilization of many new materials that became available during and after the War paved the way for various developments and, to some extent, altered manufacturing and fitting techniques. Low-pressure laminates, using fabrics of stockinette, canvas, fibreglas, dacron or nylon together with synthetic resin, and applied with a moulding technique, produced appliance 'shells' having strength, comparative lightness, moisture resistance, permanent basic colouring, and economy of processing. In the manufacture of artificial arms, plastics displaced leather and steel construction almost entirely and to a lesser extent in artificial legs. Plastic artificial eyes similarly replaced glass eyes, as they are impervious to socket acids, easily modified for fitting, and much more durable. Polyvinyl chloride plastics were used to produce natural-appearing facial restorations, including ears and noses, and also cosmetic gloves for artificial hands. Stainless steel and lightweight steel alloys added strength and reduced weight in limb and brace components.

In 1949, the research unit initiated a particular effort to improve the fitting of hip disarticulation amputations, eventually producing a prosthesis based on a new approach to an old problem. This development, embracing a form-fitting, partly-flexible plastic girdle and new alignment principles, eliminated shoulder suspension, provided more comfort and improved walking ability. It created considerable international interest and is now known as the Canadian Hip Disarticulation Prosthesis. Another notable development was the plastic prosthesis for the Syme's (ankle) amputation which incorporated a jointless neoprene rubber foot constructed on an inner 'keel', thereby eliminating a mechanical ankle joint. The new prosthesis also gained international recognition as a Canadian achievement.

Other successful projects included the reactivation of suction socket fittings for above-knee amputations in lieu of shoulder harness or pelvic belt suspension, a prosthesis for wrist-level amputation to preserve natural wrist turning motion, use of laminated plastic as a covering and repair material in lieu of rawhide, stainless steel and aluminum hooks for arms instead of plated steel. Kroy-treated wool and rayon-wool stump socks were added to the all-wool line. A universal ankle brace and a drop-foot lifter with single medial support, both light and inconspicuous, were also developed as well as a plastic mechanical hand with 'positive' grip and cosmetic glove for natural appearance.

Extension of the plastic shank and jointless neoprene rubber foot components to leg prostheses other than the Syme's is now on field test, together with two developments under the United States program—the new hydraulically controlled prosthesis for above-knee amputations and the patellar tendon bearing prosthesis for below-knee amputations, both of which show great promise for early adoption. The newly developed 'quadrilateral' socket for above-knee amputations is being issued upon prescription.

In the field of prosthetic research, the Department maintains close touch with research groups elsewhere, particularly the Committee on Prosthetic Research and Development NRC-NAS (U.S.A.), and the Standing Advisory Committee on Artificial Limbs, BMP and NI (England). A Prosthetic Services Advisory Committee, on which disabled veterans are represented, meets periodically under the chairmanship of the Director General of Treatment Services (DVA) to consider new scientific developments and to review methods and policies.

During the year 1960, approximately 157,000 basic appliances, accessories and repairs were supplied to 80,000 patients.