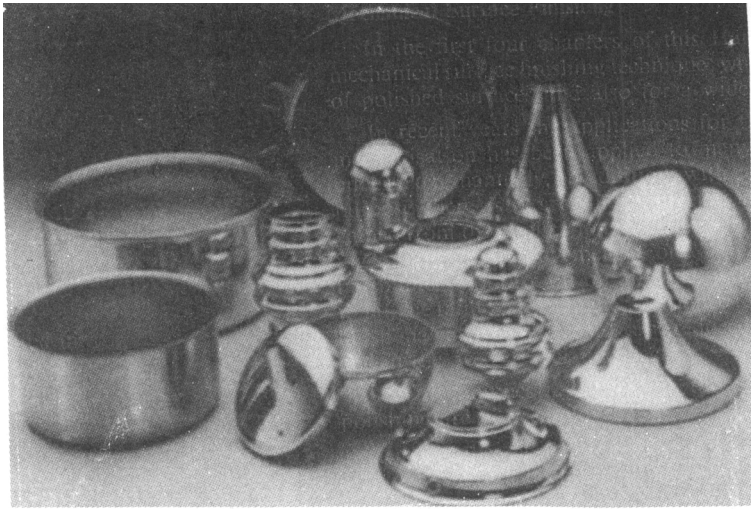
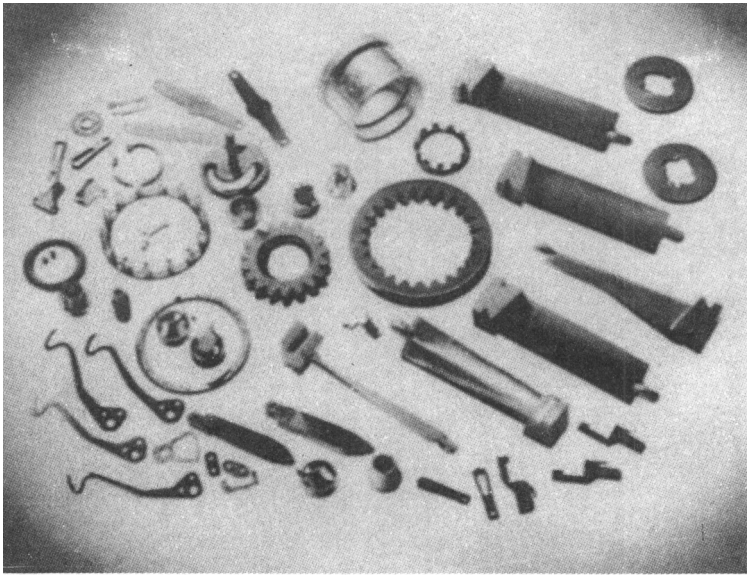


Articles after polishing.

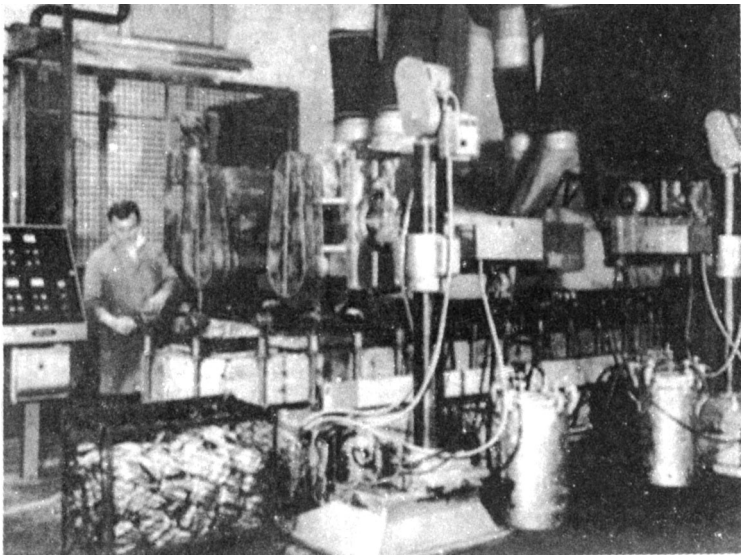
Components after deburring and surface refinement.



Rectangular Conveyor Machines—Uniflex

With the *Uniflex* automatic polishing machine the components to be polished are carried on a rectangular conveyor. The use of a rectangular track for the conveyor enables the components to be carried in a straight line past the polishing heads and this permits extremely wide mops to be employed. With a fixed head, a mop surface of up to 2135 mm (84 in) in length can be provided.

The conveyor consists of an endless train of separate carriages on which are mounted the jigs carrying the components to be polished. Where required, the component fixtures may be arranged to rotate or oscillate, while the conveyor is moving continuously. The conveyor is built in sectional form and can be extended or reduced in size as may be required.



A Canning 'C' type Uniflex automatic polishing machine with a 30 carriage conveyor and four pedestal mounted heads shown polishing wing mirror backs.

The polishing heads are carried from a tubular framework alternatively supported on separate floor mounted columns and thus can be easily repositioned where necessary.

To maintain a constant mop pressure and to take up mop wear, an electro-mechanical system is employed. This takes the form of a motorised control on the mop head by which the mop is raised or lowered.

With the *Uniflex*, large diameter slow-speed mops are employed to enable the mush polishing technique as described overleaf to be employed. A large loading and unloading area is provided, the conveyor height makes for convenient operation and the operator is completely clear of the polishing heads. The unit construction of the conveyor permits its extension or contraction as may be required by varying the number of carriages employed.

SINGLE STATION AUTOMATIC EQUIPMENT

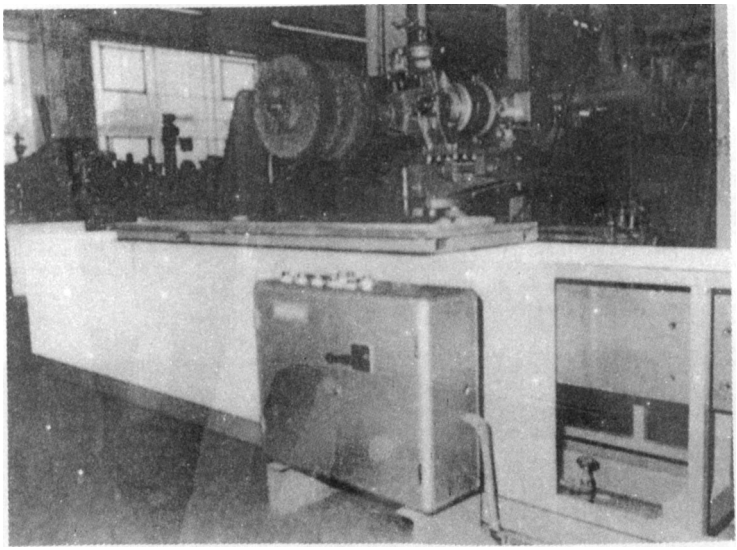
With equipment of this type the article or articles to be polished are loaded on to the machine and a single polishing operation is then automatically applied.

These machines, which are also known as semi-automatic polishing machines or attachments, are extremely effective for use where the quantities involved are too large to be handled quickly or economically by manual methods and yet too small or varied to justify employment of multi-station fully automatic equipment.

Equipment coming under this heading includes reciprocating table polishing machines, irregular shape polishing machines, centreless polishing machines and also polishing attachments for use with standard polishing motors.

Reciprocating Table Polishing Machine

For the polishing and abrasive finishing of components such as shop window fittings and aluminium extrusions, a reciprocating table polishing machine may be used. This machine enables work up to 7.3 m (24 ft) long to be processed. The articles to be polished are carried on suitable fixtures fixed to the table, which is traversed beneath one or more 'follower' type polishing heads.



Reciprocating table polishing machine.

An alternative version of this machine may be used to polish relatively small batches of articles, such as mirror backs and door handles. These are mounted on multiple fixtures carried on the reciprocating table. Work rotation can be provided and the use of 'mush' polishing techniques enables contoured surfaces to be polished in a single operation.

Where two polishing heads are employed these can be arranged to rotate in contra-directions.

ANCILLARY EQUIPMENT

Application of Polishing Composition

For manual polishing, bar composition is traditionally employed and the operator applies the material as required to produce the necessary polishing effect. On automatic and semi-automatic machines it is now usual to employ liquid compositions.

Liquid Polishing Composition

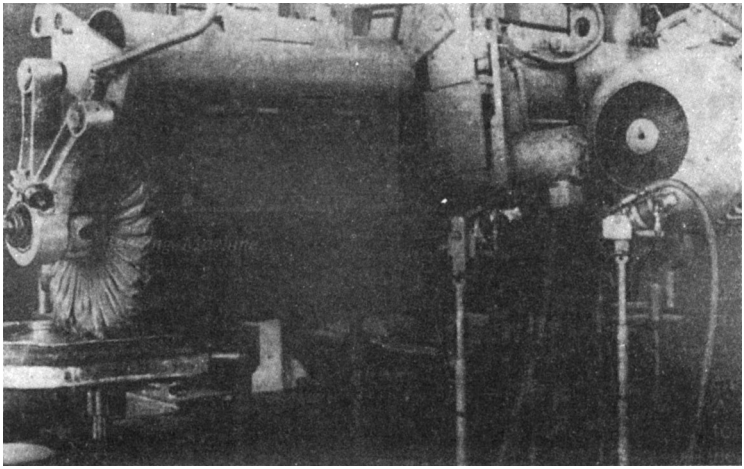
In recent years there has been considerable development in the use of liquid polishing composition and the traditional air operated spray guns are now being superseded by high pressure systems, e.g. airless and high velocity spray guns.

In the air operated spray gun the liquid is atomised in a stream of air and blown onto the mop face, whilst in airless spraying systems, the composition under very high pressure is injected on to the mop face at high speed. With both systems, infinitely variable timers or foot valves are utilised to control composition application.

The spraying of polishing composition in liquid form has a number of advantages when applied to automatic polishing equipment. Its use enables wide mops to be coated effectively and also permits the polishing heads to be placed in the most effective position without the necessity for provision being made for ease of loading of composition bars. The use of liquid compositions also permits the polishing equipment to be operated continuously and avoids the 'down time' which results from the use of solid composition when bars have to be changed.

High Velocity Spray Gun

This gun provides a spray pattern similar to airless spray systems but it can be installed into a low pressure system.



High Velocity Spray Guns in use on the Uniflex automatic polishing machine.