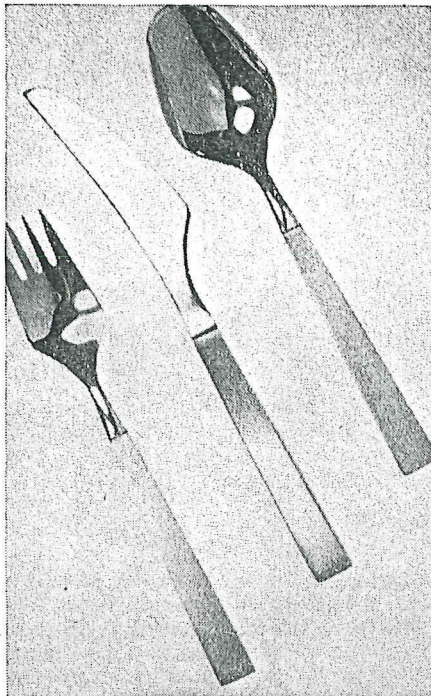


CLEANING AND CARING FOR METALS

by Margot Burbidge



Stainless steel cutlery has satin handles and mirror bright blades, prongs and bowls. Spoon, fork, 6s. 6d. each; knife, 12s. Arthur Price.

LIKE all beautiful things, metals thrive on regular care and attention, and fortunately this is no longer the irksome chore it once was. Today's cleaning and polishing agents are convenient and easy to use, and those that keep silver especially bright for longer periods make the weekly polishing a thing of the past.

In early times and the Middle Ages, brass and copper were polished with fine clay sands suspended either in fats, in the form of paste, or in liquids as in liquid polishes. Paste polishes were used in the 19th century until liquid polish was reintroduced in 1905.

The world's first silver polish was invented over 120 years ago and since then constant research has led to progressively better and easier methods of caring for silver. As well as the liquid, there are now dip and foam polishes and impregnated cloths, all designed with specific uses in mind. Impregnated wadding is another invention of the 20th century, but probably the biggest breakthrough for a long time has occurred within the last five years.

The two reasons for polishing metals are to eradicate scratches to keep the surface smooth, and to remove discolouration by tarnish. The cause of tarnish is a reaction between the metal and the sulphur, which is present in the atmosphere and in certain foodstuffs like eggs and mustard. Tarnishing is more severe in industrial environments and in winter, although the introduction of smokeless zones is reducing the sulphur content in the atmosphere all the time.

Dampness also hastens tarnish and can produce the effect of "mildew" in the form of little black spots on the surface of silver, so it should be kept in a dry place. Salt also corrodes, so all traces of it should be removed from salt cellars, which in any case are lined with glass.

It is the abrasive action of the polish which removes tarnish and the polishing action which causes the healing or "flowing" of the surface metal into the scratches to cover the gaps. The abrasive powder used must have the right balance between fineness and hardness, since the polish must be able to remove tarnish without further scratching the surface.

For hard metals like brass, copper, zinc and pewter, which are mostly used for ornamental purposes, a much more aggressive polishing powder can be used than for the softer metals. Gold, silver and certain alloys of pewter, along with aluminium, chromium and electro-plated nickels, come into the category of softer metals. The powders used in silver polish

are quite different from those used in other metal polishes and are extremely mild in their polishing action, since silver is so soft, and also reasonably valuable.

Dip polishes make use of an acid solution containing a complexing agent which removes silver sulphide, leaving the surface tarnish free. This method does not, however, heal or remove scratches although it is very useful for the daily cleaning of cutlery and for removing heavy tarnishing on spoons and forks due to boiled eggs and certain vegetables.

Although it is obviously important to use the appropriate polish for the metal in question, the form it takes (wadding, polish or foam) is largely a matter of personal preference and it also depends on the article being cleaned. It is best to keep a variety of polishes; liquid or wadding may be best for cleaning ornaments or a tea service, while a dip or foam polish is more convenient and easier to use for cutlery at the sink.

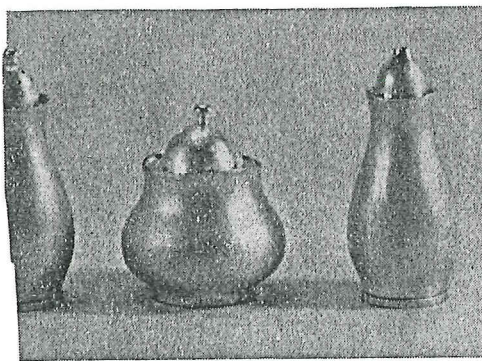
Care should be taken not to spill any of the dip on to a stainless steel sink. Silver should be handled gently when it is being washed up to avoid scratching, and a washing-up liquid is preferable to a powdered detergent.

In recent years the greatest advance towards easier ways of caring for silver has been the introduction of a polish which not only gives a more brilliant finish, but prevents tarnish forming for a considerable time too. As well as cutting down on the number of times silver needs be polished, this polish also prolongs the life of silver and plate by protecting it from the corrosive effect of frequent tarnishing.

A special ingredient in the polish combines with the surface of the metal to form an insoluble, invisible film which protects the article from tarnish. This kind of product was originally introduced in liquid polish only, but it is now made as a foam (good for cutlery), and cloths impregnated with it are useful for drying up silver to give it both a brilliant finish and protection from tarnish.

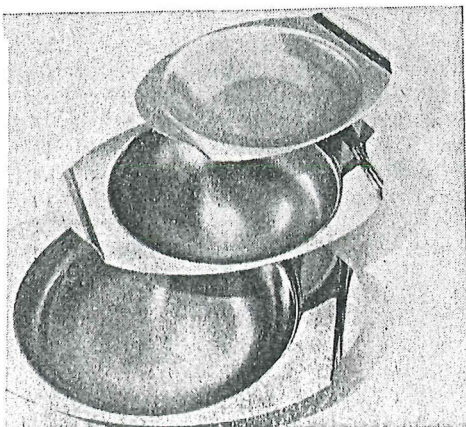
DEPENDING on the environment, silver will stay bright for a much longer time than when conventional polish is used, and it means that it can in fact be put on display and enjoyed rather than hidden away in a cupboard, in sealed bags to prevent it tarnishing too quickly, and brought out only on special occasions.

Because the silver will be protected from tarnish for some time, it is well worth rubbing this polish up really well



Above: an attractively designed three piece condiment set in silver plate has simple lines and is also easy to clean. £8 16s. Elkington.

Below: three matching bonbon dishes in 18/8 stainless steel with raised handles need no polishing. From £1 1s. 6d. to £1 12s. 6d. Taw.



to maintain the maximum brilliance, and an occasional rub over with a cloth impregnated with the same polish will prolong its life, although it can safely be left without further attention for weeks on end. When it is applied, the polish should cover every part of the article so that the entire surface is protected.

When dealing with heavily patterned or chased articles, it is sometimes easier to apply the polish with a soft brush, and then rub it up with a clean duster. Gloves will protect the hands and avoid the danger of scratching the silver. Rubber ones can be used when applying the polish, and cotton ones save finger-marks on the metal when it is being rubbed up.

Impregnated cloths remain effective as long as they are not washed and, as is the case with all other dusters and things used for metal cleaning, they should be kept free from dust and grit. Wrapping in polythene bags is an effective method, and certain polishes come with sponges and applicators built into the container, which is very handy.

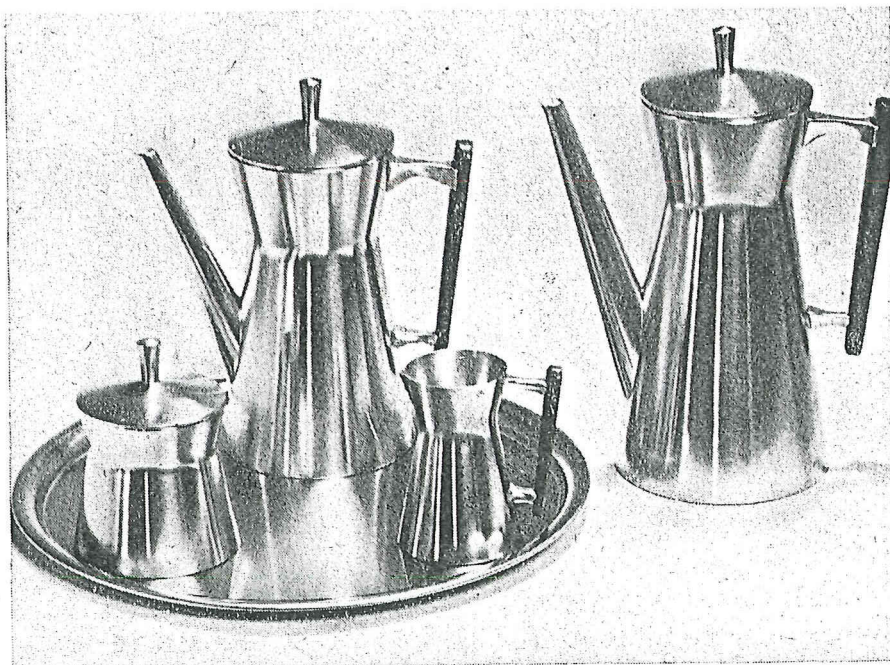
Polishes with tarnish preventing properties do exist for brass and copper, although they are not as effective as those designed for silver. There are various technical reasons for this although research is continuing to find a compound which will attach itself more firmly to the brass or copper surface.

If brass or copper articles are very heavily tarnished, they should first be cleaned with a conventional polish, then the anti-tarnish polish can be used. This is because the latter contains a less aggressive polishing powder, and so it will not remove the original heavy tarnish as effectively as the normal polish.

ANOTHER way to preventing tarnish is to use a lacquer as a physical barrier against the atmosphere. This, however, has many disadvantages, the main one being that it spoils the appearance of the metal. Another is that if a pinhole or scratch appears on the lacquer, the underlying metal surface tarnishes quickly and stripping off the lacquer can be a difficult operation. Acetone may remove old cellulose lacquers but the new synthetics such as polyurethane or acrylates are particularly stubborn.

For the most satisfactory results, lacquering should be done professionally, but even this may not be effective for long unless a thin coat was carefully applied.

The patina of old silver and gleaming copper and brass bring warmth and brightness to enhance our homes, but practical considerations are still important. This is probably one of the main reasons for the ever increasing popularity of stainless steel. As well as being competitively priced, it needs little maintenance apart from washing in soap or liquid detergent and water followed by drying and polishing with a soft cloth.



Pewter tea or coffee set from Holland made in a modern shape. Coffee pot, £8 19s. 6d.; teapot, £8 3s.; sugar basin, £3 7s.; cream jug, £2 15s. 6d.; tray, 2 sizes, from £2 5s. 6d. George Wostenholm.

The only important warnings to remember in cleaning stainless steel are: strong bleaches should never be used for they are not necessary and can start surface pitting; steel wool should never be used because particles of the steel can become embedded in the surface and produce spots of rust. Apart from these points, ordinary care and thoroughness is all that is needed.

Obviously one does not use abrasives on mirror finish articles, though if there is a persistent mark, one of the softer paste cleaners may be used. With satin finish, plastic scouring pads are suitable and to keep the best possible appearance it is advisable that any hard rubbing should be in the direction of the grain.

Any of the liquid detergents are suitable, though if washing-up powder containing chlorine is used, care should be taken not to leave the article in contact with it for long periods and to employ more than usual care in rinsing.

The more frequent "stain" which appears on stainless steel is not really a stain at all. In hard water areas it is sometimes found that the chalk in the water will leave quite persistent marks on the surface if water is allowed to evaporate. This can become particularly noticeable on working surfaces. To prevent it, the article should be washed in the ordinary way with soap and water and then rubbed over with a dry cloth. If marks are particularly obstinate they can be removed by lightly applying a smooth paste cleaner.

Some polishes are specially designed for stainless steel, and their occasional use will ensure that it remains in good condition. Stainless steel has either a satin or a mirror finish, and some of the latest cutlery combines the two. A special paste polish incorporates two pads, one with an open texture for the satin finish, and a smoother one for the mirror finish. It is important to use the correct one,

and again the coarser pad for the satin finish should follow the direction the grain of the metal.

Since metals all have different characteristics, there is no such thing as a universal metal polish, although the nearest to it is a multi-polishing paste which can be used for all the common household metals including brass, copper, chromium, bronze, nickel and aluminium. The easiest way to apply it is on a soft paper tissue which can be thrown away after use, and when it is dry, the polish can be buffed up with a soft cloth.

Copper is increasingly used in the kitchen, and there is a special cleaner for use at the sink which removes the severe discolouration that occurs when copper saucepans are put on the heat. It contains a weak acid which quickly dissolves the dark layer of oxide or sulphide scale on the copper, and the utensils should be well washed after application to remove any traces of acid which may remain. A quick rub with a metal polish will then restore the full lustre of the metal.

Brass or chromium taps should always be dried if they become wet, and tarnish on brass taps should be removed with polish as soon as it appears because if it is allowed to build up it is much more difficult to remove. An occasional light wax polish helps to make plated surfaces water repellent.

The knowledge that good silver and other metals are now regarded as investments which appreciate in value all the time is an added incentive to enjoy them and maintain them well. In this technological age when increasing use is being made of plastics and man-made materials, the glow of living metal comes as a welcome contrast to the synthetic, but we can all benefit from the large contribution modern science has made towards lessening the time and effort needed to keep our more valuable possessions looking their best.