

LINOLEUM

How To Repair It, Install It, & Clean It

By Leo Blackman and Deborah Dietsch

IF YOU'RE LOOKING for authentic flooring for a turn-of-the-century house, you might still find a roll of linoleum in the attic, a warehouse, or a carpet store basement. Or maybe you'll be lucky enough to come across a roll in an antique store. (I was!) Perhaps you already have an interesting linoleum pattern in place, or just discovered it under more recent flooring.

WHETHER your linoleum is newly installed, or old and in need of sprucing up, don't despair. This article will help you strip and clean linoleum, repair it or patch it, install it, and maintain it.

ALL PROCEDURES outlined in this article will work on both canvas- and asphalt-backed linoleum. Beware that all solvents suggested have a potential to damage linoleum. When applying any solvent be sure to do so selectively--you want to dissolve dirt and finish buildup, not the linoleum itself. Always follow these three rules: (1) Do a test patch in the least conspicuous corner of the floor. (2) Don't allow any solvent (even water) to remain on linoleum for an extended period of time. (3) Work on small areas at a time, rinsing and hand-drying as you go.

Repairing Linoleum

ADHESIVES, OLD WAX, varnish, shellac, and other substances which obscure the surface must be removed before repairs can be made to the linoleum. Water-soluble adhesives will soften when wet, and can then be gently scraped up from the linoleum surface. Again, keep water from standing too long on the linoleum, because the canvas backing will retain water, causing the linoleum fibers and the backing to decay. This is especially true if the resilient surface has been worn or abraded, and the jute fibers are exposed.



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IF YOU FIND WATER won't remove the adhesive, try a stronger solvent. Be careful: While oxidized and compressed oils in the body of plain linoleum are somewhat more stable than printed patterns, both can be damaged by strong alkaline solvents. Automotive asphalt removers will dissolve asphaltic adhesives, and commercial paint strippers will soften vinyl adhesives. Also, dry ice can be used to remove foreign lumps. Wearing thick gloves, place large blocks of dry ice on the floor. After only a few minutes the adhesive, tar, or chewing gum will break off with a little pressure from a thin scraper.

(STORE DRY ICE in a non-metal container, such as a cardboard box, and be sure to ventilate it well.)

WAX IS BEST REMOVED by a commercial wax stripper. The stripper you use must not contain ammonia, which is highly destructive to the linoleum surface. "New Beginnings," manufactured by the Armstrong Co. and recommended by them for stripping wax off linoleum floors, is available at most floor covering stores. If you have a printed pattern, a coat of varnish or shellac was probably applied to seal and preserve it. (As we discussed last month, printed patterns were a surface treatment; the pattern tended to wear off under steady traffic, unlike inlaid linoleum.) Shellac can be dissolved with denatured alcohol. Some varnishes can be removed with turpentine; other varnishes will only come off with commercial paint removers. After stripping, the surface is ready to repaired.

Damaged Areas

CLEAR SHELLAC and varnish are ideal substances for repairing a torn linoleum floor. Coat the ripped edge with either one and squeeze them together. If no material has been lost, the joint should be nearly invisible.

IF A LARGE AREA of the floor has been gouged, chipped, worn through, or otherwise damaged, the restoration process is more complicated. Matching a patterned piece requires considerable skill. Also linseed oil continues to oxidize over time, causing the linoleum to become brittle as it ages; thus, prying up an old piece of flooring can be tricky. If more original material is available from matching linoleum in a hall or closet, a patch can be made. The damaged area should be cut to a regular shape, traced, and the shape cut carefully from the extra material. If extra linoleum flooring is not available, a patching compound can be used.

YOUR FIRST IMPULSE for a linoleum patch might be to create a filler from the original ingredients--cork flour and linseed oil. Pre-polymerized linseed oil (similar to the oxidized substance), or linseed oil plus japan dryer or cobalt, can be purchased in an art supply store. However, powdered cork isn't easy to obtain. And pulverizing a scrap of old linoleum requires industrial grinding tools--certainly not a job for a Cuisinart! This home-brew has another drawback: It would not have the durability of the original, which was subjected to heat and pressure in its original manufacture.

A MORE SENSIBLE PATCH can be obtained by mixing sawdust with shellac or varnish to a dense consistency. Pigments can be added to this mixture to simulate the color of plain linoleum. This substance is troweled into the damaged areas and sanded smooth when dry. The surface can then be painted with oils or acrylics to match the adjacent pattern. Two commercially available products might be used in a similar manner. Artist's polymer gesso--a thick blend of paint and plaster--or vinyl spackling compound are both slightly resilient and can be sanded. They will provide a durable smooth-textured base which can be painted over.



Never a complaint about linoleum that's laid like this



Polishing linoleum keeps the colors bright and makes it wear longer

Installing Linoleum

NATURALLY, you won't want to put linoleum over a fine hardwood floor. In many turn-of-the-century houses, though, linoleum or carpeting was meant to be laid directly over a subfloor or an inexpensive wood floor. Let's assume you're going to install some "new" linoleum you've found. Extra care must be taken when installing old linoleum due to its tendency to grow brittle with age. Before unrolling it, make sure sure it is at room temperature or warmer to avoid cracking the surface.

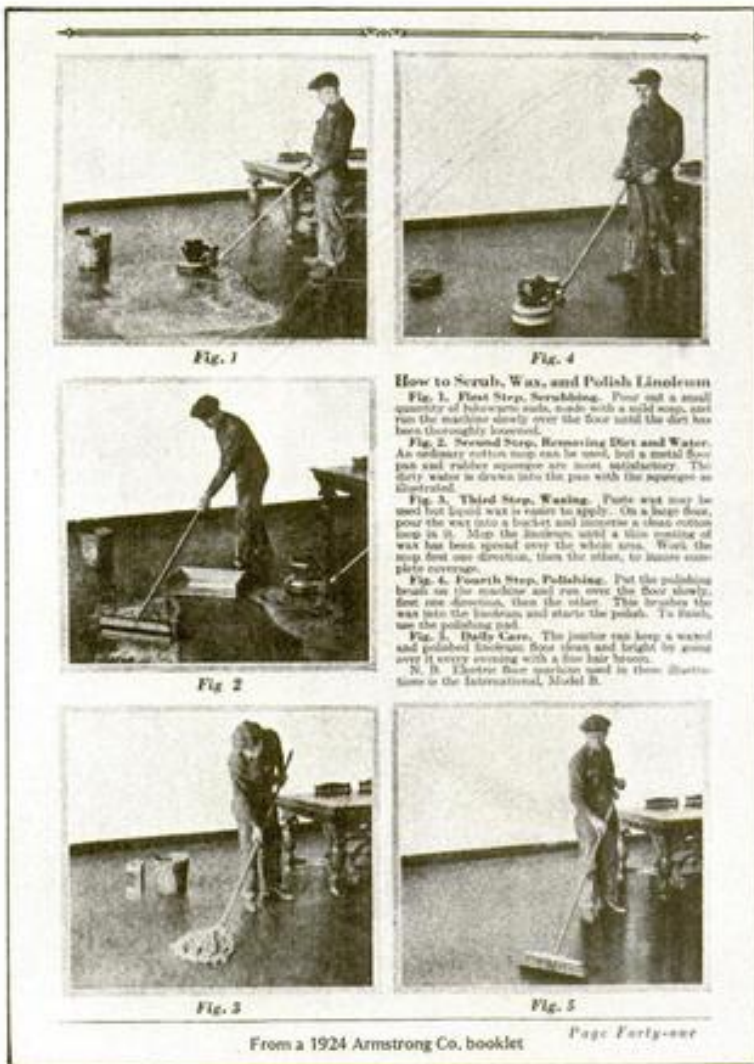
LINOLEUM AND WOOD expand and contract at different rates with changes in temperature and humidity. Therefore, linoleum should not be pasted directly to a wood floor. Turn-of-the-century handbooks recommend laying linoleum in place for two weeks prior to tacking it down. This allows it to stretch, preventing any tendency to buckle or crack. The following procedure, adapted from a 1920s handbook, offers a superior method of laying linoleum.

AFTER A WOOD FLOOR has been carefully leveled and the cracks filled, it should be sanded and cleaned. Strips of unsaturated deadening felt are then cut to fit the floor. A thorough coating of paste or vinyl flooring adhesive is applied to the floor with a paste spreader. As rapidly as the floor is pasted, the felt strips are fitted into position--butted crosswise to the floorboards. A heavy iron roller is then used to eliminate air pockets and aid adhesion. The linoleum should then be fitted to the floor, leaving a 1/2-inch expansion gap between the linoleum and the wall. (The gap will be hidden by the baseboard.) Next, an area (on the felt) 4 to 6 inches wide around the baseboard and on each side of the linoleum seam should be marked using chalk. This area should be left unpasted; paste is then spread on the rest of the felt in the same manner that



it was applied to the wood floor. The linoleum strips are then fitted into place, each strip overlapping the preceding one by 1/2 to 3/4 inch. Patterns for figured linoleum should be matched and the edges butted. After being rolled to ensure adhesion between the felt and the linoleum, the overlapping edges of the linoleum are cut away with a sharp knife. These unpasted edges are lifted up, sealed with a waterproof cement, and rolled flat.

IF YOU HAVE PRINTED linoleum, you may want to give it a clear, non-yellowing protective coating instead of linseed oil. Shellac, followed by wax, is renewable but brittle. Oil varnishes may be your best bet. Some product experts suggest that exterior clear wood finishes--such as "Clear Wood Finish" (CWF) by Sherwin-Williams--can be used on linoleum without the disadvantages of linseed oil. But **NO ONE** recommends polyurethane varnishes because they may not bond to the linoleum, they yellow, and they are unstrippable.



Maintenance

NOW ALL YOU have to do is maintain your revived linoleum floor. Surface dirt on linoleum can be effectively cleaned with vacuum or mop. It should be washed using lukewarm water and a mild detergent, such as Ivory Snow, followed by a barely-damp mopping with clean water. The floor should be cleaned in small areas and dried thoroughly. Scrubbing it with harsh soaps, ammonia, or alkaline cleaning agents such as sodium bicarbonate (soda) or sodium borate (borax), should be avoided because these products oxidize the oil in the linoleum, causing it to deteriorate. Waxing and polishing a linoleum floor will not only give it a longer life, but will reduce the amount of daily cleaning necessary to maintain its glossy appearance. A non-skid paste wax is recommended; follow the label directions when applying it to the linoleum. A word of caution--the wax should be applied sparingly in a thin and even coating. Excess wax will collect dirt and darken the color of linoleum.



DON'T THROW IT AWAY

Although no one would have believed it ten years ago, linoleum floor covering will soon be a subject for study by decorative-arts historians. In expectation of this, we contacted Armstrong Company's Research Department, as well as several museums. But it seems no official archive is ready to commit itself to linoleum acquisition and storage.

In the meantime, the author of this and last month's articles requested that documentary samples of linoleum be sent to him. Mr. Blackman is probably more knowledgeable and enthusiastic about linoleum than any other expert, so we agreed. Readers who *do* decide to remove linoleum are asked to send a one-foot square section, and information about its age, etc., to Leo Blackman, c/o The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217. He will document and store his growing collection until a museum is ready to acquire it.

Cleaning Linoleum

ONCE YOU HAVE REPAIRED your old linoleum, the Armstrong Research Department suggests the following method of restoring and reviving your "historic" flooring. (Many of the following procedures can be used on "new" linoleum and any dull, dingy linoleum you already have in place.) After all surface coatings have been removed from the linoleum, coat a rag with boiled linseed oil, and apply it lightly to the floor. If the linseed oil is warmed slightly it will penetrate better and take less time to dry. The linseed oil will be sticky for quite a few hours while it dries, so the area will have to remain free of traffic during that time.