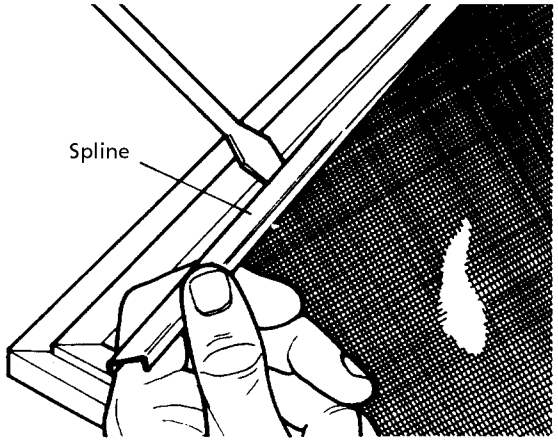
HOW-TO BOOKLET #3085
SCREEN REPAIR

TOOL & MATERIAL CHECKLIST

- ❑ Screening
- ❑ Utility Knife/Extra Blades
- ❑ Tape Measure
- ❑ Screwdriver
- ❑ Screen Spline Roller
- ❑ Spline Materials
- ❑ Hammer
- ❑ Steel Wool

Read This Entire How-To Booklet for Specific Tools and Materials Not Noted in The Basics Listed Above.

Fig. 1



Remove splines from their channels with the tip of a screwdriver. Use new flexible splines; re-use old metal splines if they are not bent.

Although window and door screening materials are manufactured from tough stuff—aluminum, copper, fiberglass—the materials are still subject to damage that must be repaired before you're bugged into taking action. Repairs are fast and easy to make.

Most home center, building material, and hardware stores offer a selection of screening and you almost always can find the two standard screening products: aluminum and fiberglass. Copper screening may be difficult to locate; enameled and/or uncoated galvanized steel screening has disappeared from the marketplace in lieu of aluminum and fiberglass which doesn't rust.

It's a coin-toss as to which screening product is best. Aluminum screening will not rust, but it does corrode. The metal is difficult to tear or rip. Fiberglass won't corrode, but it sags somewhat and it is more prone to rips and tears than metal.

Most screening is attached to screen frames with a metal or plastic-like spline that fits into a dado or groove fashioned into the frame. Some screen frames are wood and the screening is fastened to them with large-headed tacks or staples. The fasteners are covered with strips of molding. Check the type of fastening device your screens have before you go to the store for replacement parts.

SCREEN MAINTENANCE

Regardless of the type of screening, the screens on your home should be removed and cleaned annually. Once-over with sudsy household detergent mixed in warm water and applied with a soft-bristle brush provides enough cleaning action; rinse with spray from a garden hose. Let the screens dry; replace them.

Aluminum screening and frames, as mentioned above, tend to corrode. An annual cleaning with steel wool, lightly rubbed over screen and frame surfaces will remove the corrosion in a jiffy. A coating of household wax on the frames—especially the frames of screens in combination windows and doors (screens and storm windows)—will help prevent the frames from racking and binding in their respective window/door channels.

If you reside in the Sunbelt and own an outdoor swimming pool that is enclosed with fiberglass screening, clean this screen enclosure in the spring and fall months by hosing it from the inside of the enclosure. This way, the dirt, nits and gnats, and so forth are forced "outside" the screening and are not washed down into the area as hosing from the outside would tend to do.

Aluminum screening may be painted with regular screen enamel. Or you can buy trim paint and thin it 25% for a screen coating. The very best way to apply the paint is with a spray gun outfit. The second best way is with a screen painter device sold by most hardware, home center, and building material outlets that inventory painting supplies. The third best way is with a short, stiff-bristled paintbrush.

SMALL SCREEN PATCHES

Small holes in screening are easy to patch. In fact, some retailers sell screen patching kits.

For small holes in metal screening, try reworking the wire along the edge of the hole or tear back into the screening weave by using the tip of a nail, an icepick, or a bradawl, if you own one. If this won't work, you can buy a short length of screening and cut a patch to overlap the hole. Be sure to buy the same type of metal for the patch job: aluminum to aluminum, copper to copper, galvanized steel to galvanized steel. Mixing metals sets up corrosion.

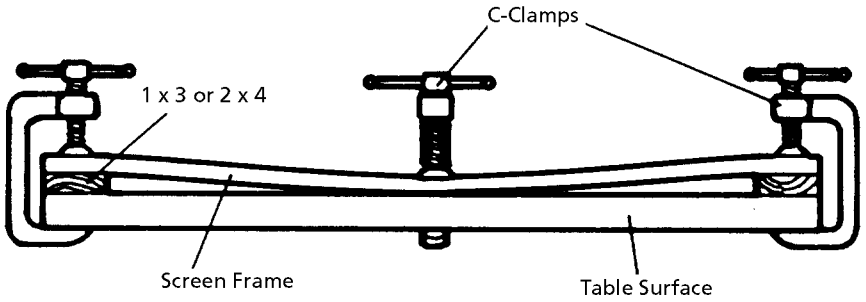
Cut a patch of metal screening to fit over the tear in the screening, plus 2 inches. Unravel the tiny strands of wire along the edge of the patch about 1/2 inch from each of the four sides. When you are finished, the patch will be surrounded by a series of tiny wires. Carefully bend the wires over at right angles to the patch. You may want to use a block of wood for this so the wires are straight and the bends form a sharp, clean line. Take your time; have patience.

Stick each individual wire through a hole in the screening until you've worked entirely around the patch. This, of course, takes lots of patience, so plan to spend the time. When you're finished, press the wires against the screening with a block of wood. The patch will be obvious until the new wire changes color through corrosion.

If the screening is fiberglass, cut a patch to cover the tear in the screening. It should overlap the tear about 1/2 inch on all four sides. With an upholstery needle and heavy thread, sew the patch to the screening, using the holes in the screening to guide the needle or thread.

Another way to patch fiberglass screening is with a "hot patch." Cut a patch to cover the tear in the screening plus a 1/2- to 1-inch overlap. Have a helper hold a board directly in back of the patching area while you apply the patch to the hole, cover the patching material with a cotton cloth, and press the cloth and patch with a hot iron. The heat will "fuse" the patch to the screening and the patch will blend in with the rest of the screening. If the screen can be removed and set on a flat surface, a helper isn't necessary. Just lay the screening over a board, and press on the patch, following the procedures above.

Fig. 2



Get more tension on the screening by using this clamping device. Put 1X3s or 2X4s under the ends of the screen frame. Then clamp the unit to the table. You do not have to use clamps here; clamps do help stabilize, however. Then add the tension with another clamp in the center of the frame. Don't use a lot of clamping pressure—just enough to make the screening taut. Fasten the screening at both ends, then release the clamps.

Screen patches are strictly a stop-gap measure. Any damaged screening ought to be replaced—especially if it is rusting metal.

REPLACING SCREENING

To replace whole screen panels, first measure the frames of the screens to determine the width and the length of the screening material needed. The screening should overlap the frames about 1 inch to accommodate nails, staples, or splines.

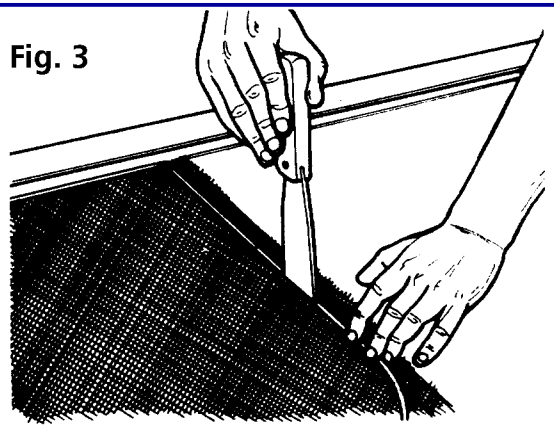
Wood Frames. Remove the screen molding around the wire and frame with a chisel or putty knife. Be careful not to split or break the molding so you can use it again. Pull any nails with pliers from the back side of the molding to help prevent splitting. The heads of nails come through it.

Remove the old screening, prying up the staples or nails with the tip of a putty knife or claws of a hammer. Pliers sometimes work best.

Cut the new screening to fit, using the edge of the screen frame as a straightedge to guide the knife. You also can use the old screening as a template.

With a staple gun, or hammer and tacks, fasten the screening to one end of the screen frame. Then lay the frame on a flat table surface.

Fig. 3



Flexible splines can be re-inserted in the frame channels with the tip of a putty knife, although it is recommended that you use a low-cost spline roller.

Slip a length of 1X3 or 2X4 under both ends of the frame. Then clamp the center of the frame to the table with a C-clamp. If you have several clamps, clamp the ends of the frame, wood blocking, and table edge. This provides extra stability. The clamp in the center of the frame will produce tension in the frame. Don't screw down too much on the clamps. Just a little tension is all that's needed (**Fig. 2**).

Now fasten the other end of the screening to the frame. Remove the clamps. When the clamps are removed, the frame will spring flat again, stretching the screening tight. Finish fastening the screening to the frame, and nail on the molding to complete the project. Spot paint any new nailheads to deter rust.

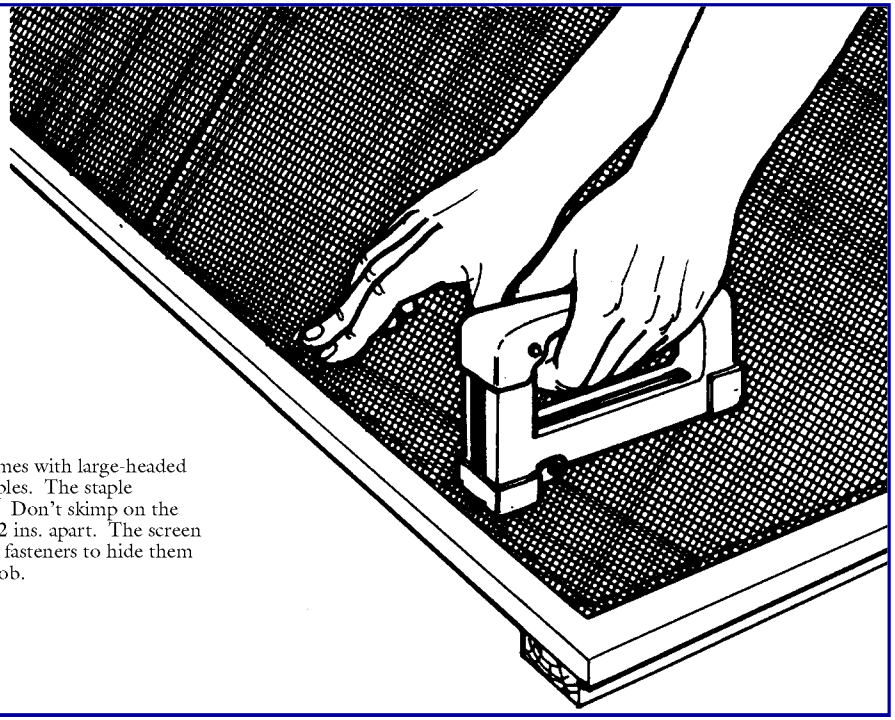
Metal Frames. Screening is held to metal frames with plastic or metal splines that fit into grooves (dados) in the frames.

To remove the damaged screening, find the end of the spline—usually at a corner or near one—and flick an end out of the groove with the corner of a putty knife, tip of a nail, icepick, pocketknife. Then remove the entire spline from the groove by lifting it up and out. Flexible plastic splines sort of "unravel" out of the channel; metal splines may take some prying and coaxing. Go easy with metal; you will use them once again, so don't bend or kink them (**Fig. 1**).

Once the splines are removed, the screening can be pulled off the frame.

Lay the new screening over the frame. Then, with a spline roller (with flexible spline) press the screening/spline into the groove along one short side of the frame. Do the same thing along the other short side of the frame (**Fig. 3**).

Fig. 4



Attach screening to wooden frames with large-headed nails (such as roofing nails) or staples. The staple method is faster and more secure. Don't skimp on the fasteners. Space them every 1 or 2 ins. apart. The screen molding is then attached over the fasteners to hide them and make a professional-looking job.

Insert and roll the spline into the channel along one long side of the frame. Then lightly stretch the screening across the frame and roll in the spline along the other side of the frame. Chances are that the frame will bow slightly under stretching pressure. If so, cut and fit a length of 1X2 to go between the top and bottom inside edges of the frame. Wedge the 1X2 between these members. Now, when you stretch the screening, the 1X2 will act as a brace and prevent the frame from bowing.

Metal splines are inserted with your fingers and then tapped into position with a hammer. Use a small block of wood between the hammer and the spline as a buffer block so you don't damage the spline (**Fig. 5**). Work along the short sides of the frame first and then the long sides, following the same procedures as detailed above. Before inserting these splines double-check to be sure that the splines are not bent or otherwise damaged along the edges. A sharp edge, for example, could rip the screening as the spline is tapped into position.

FRAME MAINTENANCE

Other than an annual washing and polishing and waxing, metal screen frames need little maintenance. Wooden frames, however, often need to be painted, planed to fit openings, reinforced, or even replaced with new components or brand new frames. This is easy to do, inexpensive, and fast.

Paint. Plan on painting screen frames every time you paint the house—5 to 8 years. Trim paint is recommended for the frames because trim paint usually is semi-glossy and dirt and grime can be cleaned more easily from it than house body (structure) paint. You can, of course, use body paint, if special color matching is necessary.

Paint all of the frame—outside, inside, and the edges. The paint not only helps prevent wood rot but also warping of the screen frames.

Reinforcement. Over a period of time, expect the wood joints in the frames to loosen or even break apart. This is normal. You can add reinforcement to these joints with metal mending plates for sale at most home center, building material, and hardware stores. There is a large variety of sizes; prices are not prohibitive (**Fig. 7**).

Mending plates go across the bad joints and are fastened to the frame with screws. The angle plates are attached to the inside or outside edges of the frame—also with screws. Pre-drill pilot holes for the screws to prevent splitting the screen frame.

Replacement. If the frame has completely rotted out, it is easy to fabricate a new frame from top grade 1X2s or 1X3s.

You can miter the frame joints and pin them together with nails or corrugated fasteners. Or, you can butt-join the pieces together, also with nails and corrugated fasteners and metal angle plates screwed to the inside and/or outside of the frame. If you have the equipment, we'd recommend doweling the joints (butt) with two dowels per joint.

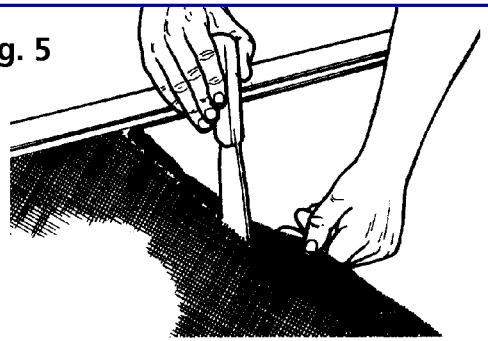
The screen is attached to the frame with staples or large-headed tacks and a piece of screen molding is then fastened over the screen fasteners. However, before the screen is attached, give the frames a prime and two top coats of paint to deter rot (**Fig. 4**).

MAKING METAL FRAMES

Metal screen frames can be fabricated from do-it-yourself aluminum components made especially for screening. The components are pre-grooved to accept metal or plastic-type spline materials. The corners go together in miter joints, and there are 90-degree connectors that fit into the hollow aluminum components to joint the pieces.

You also can buy stock screen sizes with metal frames and some brand-name window and door manufacturers offer tailor-made screens (and storm windows) to fit their products. Or, you can contact a metal fabricator to custom fit screens and storms to your home.

Fig. 5



Pre-form wire screening into spline channels with a putty knife, as illustrated. Then insert the spline and tap it in place with a hammer/block.

Fig. 6

C-clamps positioned as shown can be used to tension wire on metal frames also. But be very careful not to "over-tension;" metal bends.

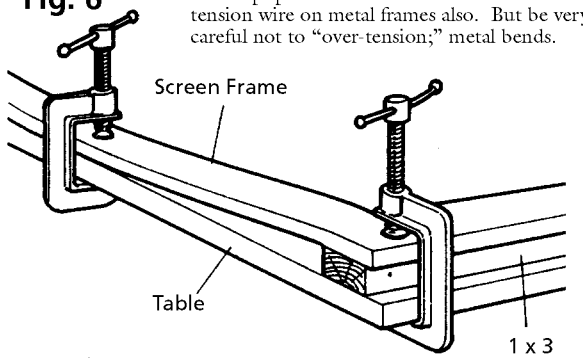
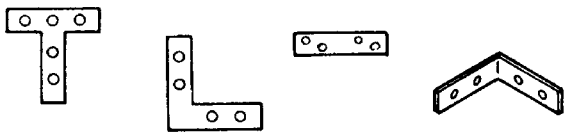


Fig. 7



Metal mending plates come in a variety of shapes and sizes. This assortment can be used to reinforce wooden screen frames—and metal frames also, if the frames are wide enough to accept the mending plates. The T-shaped plates are ideally suited to rejoin cross frames at the center of the screen frame. Pre-drill for screws.