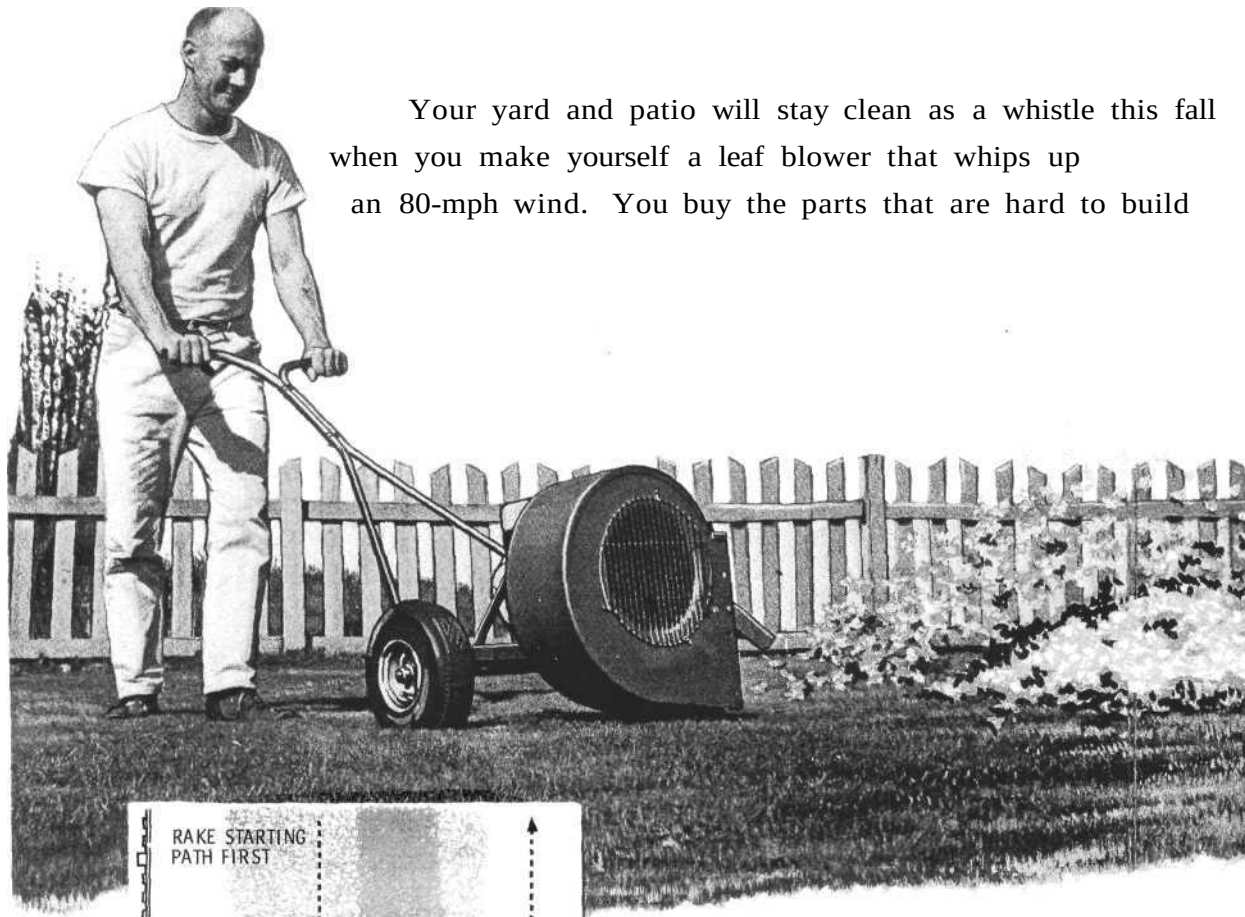
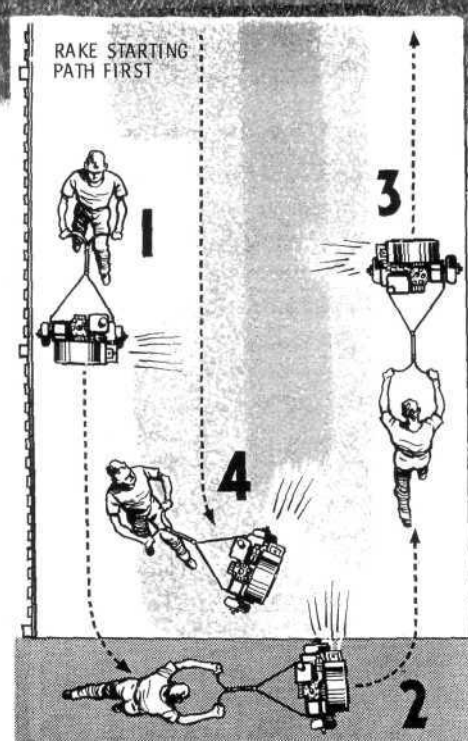
# Windrow those leaves -it beats raking

By MANLY BANISTER

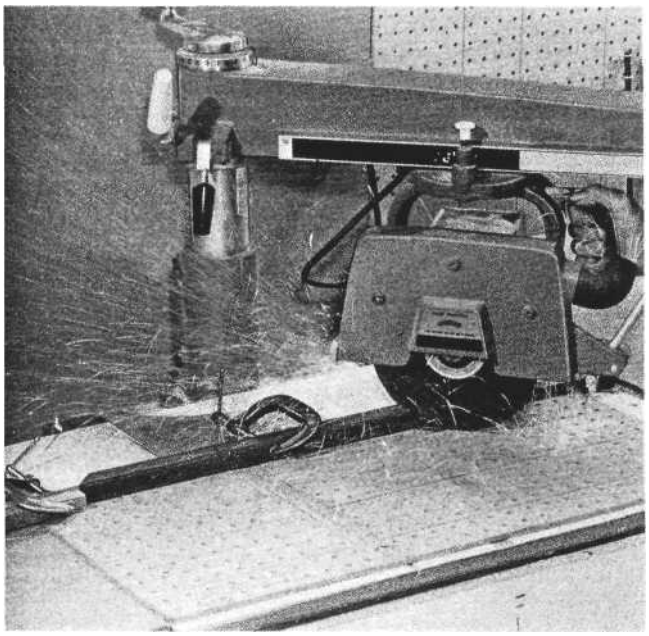
Your yard and patio will stay clean as a whistle this fall when you make yourself a leaf blower that whips up an 80-mph wind. You buy the parts that are hard to build



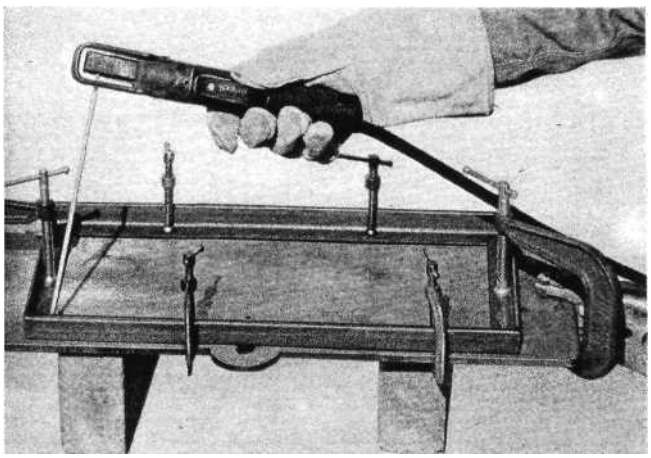



ARE YOU TIRED of being a slave to a rake every autumn? Then leave the rake in the garage and mechanize the job with a leaf blower you can make yourself. Next to having a giant vacuum sweeper, the tornado-on-wheels shown here makes the job of raking your lawn the quickest yet. Pushed like a mower, it sends leaves scurrying into a central pile as you circle the lawn in a spiral pattern. It is three times as fast as picking them up with a lawn sweeper, and if your lawn is a sizable one you can save as much as a day by using the blower instead of a rake.

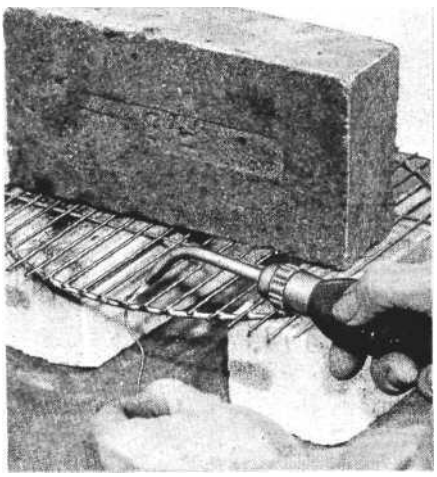
Of course, you still have the job of lugging the leaves away to be burned, but the time it takes to rake the pile onto a tarp is a matter of minutes. And leaf-raking isn't the only job the blower will do. The 80-mph airstream kicked up by the engine will scoot sticks and twigs right along with



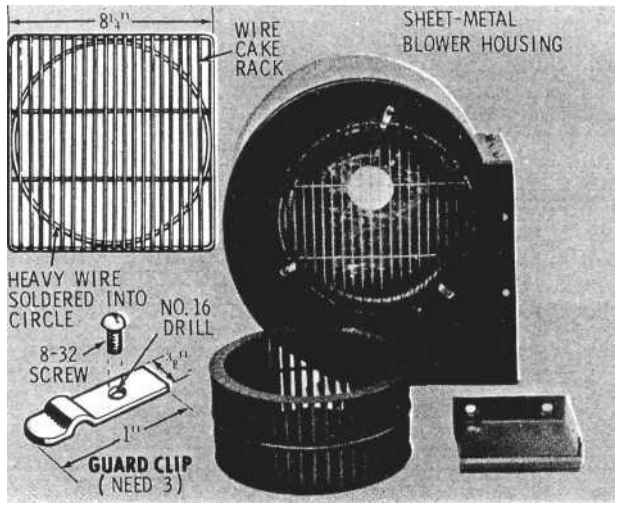
Radial-arm saw simplifies accurate cutting of steel angle. Stop block (left) assures an equal-length pair. Miter is cut in one pass by feeding aluminum-oxide blade slowly to prevent undue heating



Setup for welding outside frame has pieces squared and clamped to steel plate (if no plate is available, use plywood and ground to angle). Weld inside only, leave clamped till welds cool to prevent buckle



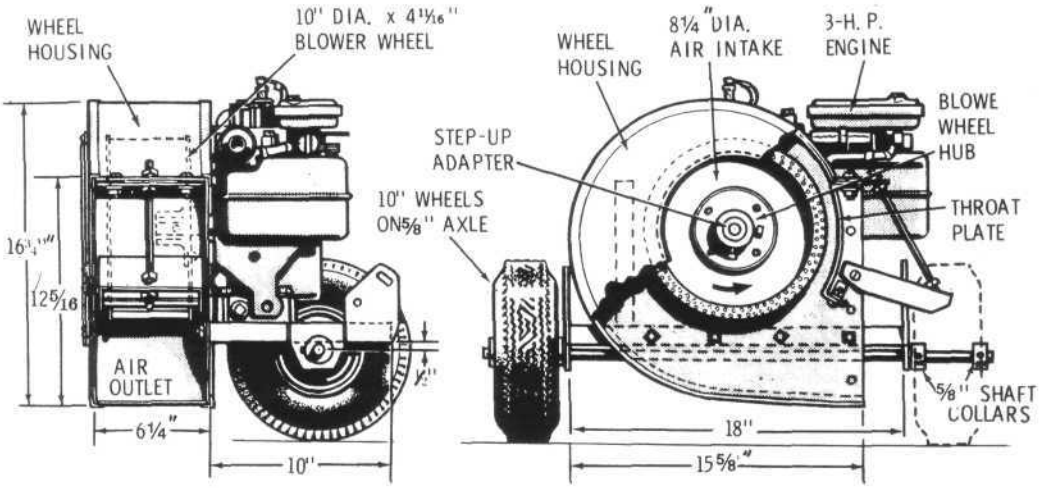
Custom-made grille for air intake is simple matter of silver-soldering wire ring to existing baking rack, trimmed to rough circle. Use blower wheel as form for bending ring. Brick keeps heated wires from lifting. When cool, cut wires flush with ring, grind ends smooth, attach to housing with three clips

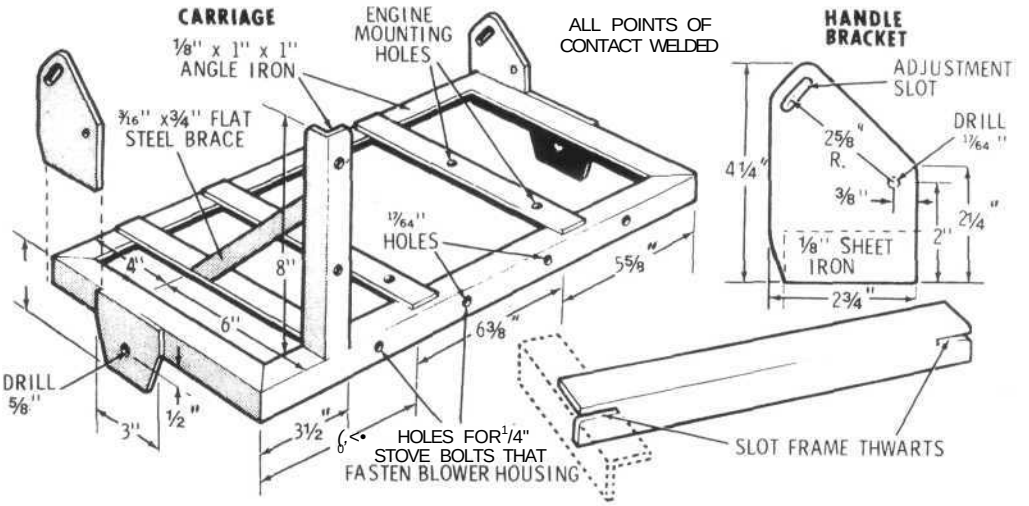


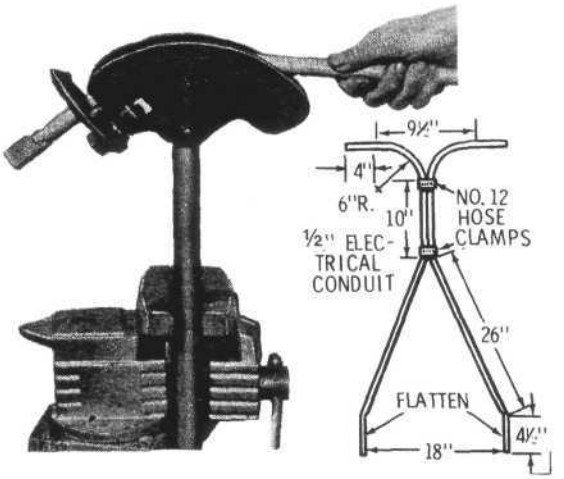

the leaves, and the blower is great, too, for gathering grass clippings after mowing—in case you want to use them for compost. Also, a broom is no match for it in sweeping a drive or patio.

The machine consists of three main parts—the blower and housing assembly, a gasoline engine, and a carriage with a push handle. I bought my fan from a factory specializing in ventilating equipment; you can order an identical unit, complete with housing, through the W. J. Darm Co., 1313 S.E. 12th Ave., Portland, Ore., 97214. This fan is designed to spin clockwise when viewed from the hub-side, so it'll rotate counter-clockwise when seen from the power-takeoff side of the engine, and that's the direction the engine-shaft turns. I find my 3-hp Briggs & Stratton just right for the job. Less horsepower might not rev the fan up enough, and too much could damage the blower blades. I bought the engine from a standard mail-order catalog for $44.

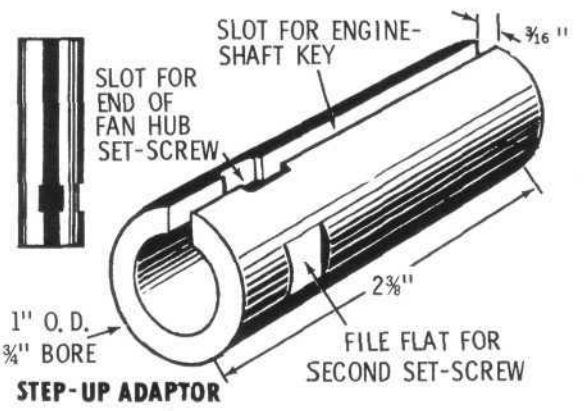
Because of its short shaft, the engine must be set flush with the leading edge of the carriage, and smack against the blower housing. You must make an adapter to mate the 3/4-in. shaft to the 1-in. bore of the fan hub, as shown in the detail. In assembling, be sure that one of the hub set-screws bears directly on the key in the engine

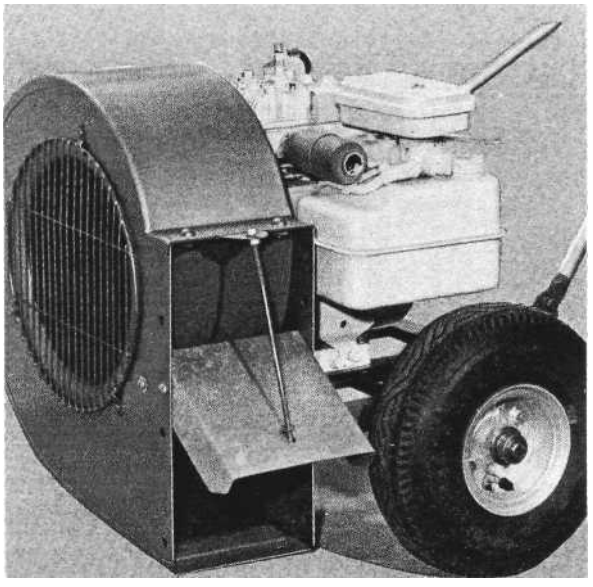


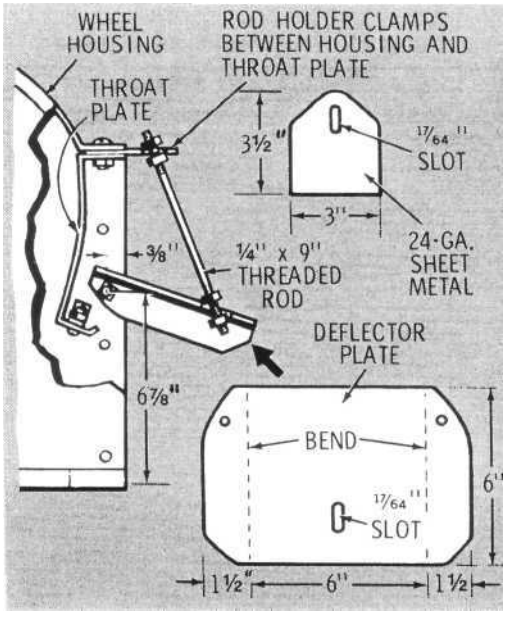




Slot adapter with two passes on metal-cutting bandsaw; hold the blank vertical in drill-press vise. Adapter mates 3/4-in. engine shaft and 1-in. fan hub





Deflector is hung from retainer plate cut from sheet metal and driven between housing and throat plate. Rod has two nuts clamped against slot at each end




Arrangement of nuts on threaded adjusting rod permits a wide range of airstream control. When adjustment is best for job at hand, nuts are turned up tight

shaft, and not on the adapter. You'll have to drill the slot wider to pass this setscrew; you can locate this accurately by trying the fan on the shaft with the setscrew removed so you can mark through its hole. The fan is correctly adjusted on the shaft when the adapter is slipped on as far as it will go and the outboard end of the fan hub is flush with the end of the adapter.

I made the push handle from a 10-ft. length of 1/2-in. conduit. After cutting it into two 5-ft. pieces, I hammered a wooden plug into one end of each length, filled both with dry sand, then plugged the open ends. At a point 4 in. from one end I bent each length at right angles with the aid of a conduit bender. Next, using a carpenter's square and chalk, I drew on the shop floor the shape of the lower part of the handle. Then, carefully lining up the second bend with the first, I bent it as far as I thought necessary and compared the bend with the pattern drawn on the floor. Any overbending is easy to correct by simply reversing the work in the bender. Bend the second length to match.

I sawed off both tubes at a point 31 in. from the second bend, then flattened the final 4-1/2 in., first by a series of squeezes in the vise, followed by hammering on a steel plate. The flattened ends were finally bent around into position by clamping them in the vise and applying leverage to the remainder of the now-empty conduit.

I joined the two tubes with stainless-steel hose clamps (the kind that work with a wormgear and screwdriver) by placing them flat on the floor. They were then marked and drilled for V4-in. stud bolts for attaching to the carriage bosses.

A safety grille for the fan blade is a must. The fan sucks air with terrific force and the grille keeps out foreign objects which might damage the fan, as well as hands, small dogs, etc.

The airstream deflector directs the gale parallel to the ground with little force being felt at ground level within several feet of the outlet. Everything beyond that point, however, can be felt in the next county. The main purpose of the deflector is to keep the force of the air within bounds. When directed downward, the airstream strikes the ground full force, close to the outlet and becomes fan shape like a bamboo rake. The main force of the airstream is thus kept within a distance of about 6 ft. so that it will blow the leaves into a pile but without blowing the pile itself into the neighbor's yard.

I used 10-in. pneumatic wheels for easy wheeling over rough ground and curbs. If you use smaller wheels, remember to change the height of the axle hanger so that the lower edge of the blower housing rides about 2 in. above the ground when the carriage is level.