

**A WASTE BOX.** This useful article is made of hard wood, on account of the severe tax often put upon a waste holder of any sort. It is sometimes literally kicked around, not from any disorderly impulse, but by accident. It therefore becomes easily marred, and if made of soft wood soon gets to look worn unless great care is exercised. This one is constructed of four uprights or corner pieces, eight cross-pieces or stretchers, and four extra pieces or strips fastened inside at the bottom to help hold that in place. The four sides are filled with panels made of four pieces of heavy cardboard covered outside with burlap glued on, and inside with dull-surfaced paper pasted on. It is finally treated inside with spar varnish, which is waterproof and protects the box against apple cores and other wet refuse, which, by the way, it never ought to contain. You will notice that the uprights are not simple square-sawed pieces, but are cornered on the inside, or rabbeted, as it is termed. This you can do by means of the regular rabbet plane, but this is difficult to handle except by an expert joiner, and it is much easier and just as strong if you use two pieces glued and nailed together. This method is shown in end view in Figs. 4 and 5. Fig. 4 shows the relations of the two parts, Fig. 5 with the parts joined. This rabbeted corner allows for a better mortising of the stretchers to the uprights than a plain corner would. If the upright were a plain square stick, there would not be enough depth to allow of a very long tenon or tongue on the stretchers. Fig. 1 is a top or plan view, Fig. 2 a side view, Fig. 6 shows how the burlap is fitted over the cardboard side panels by a squared lap at the long sides, and a beveled lap at top and bottom;

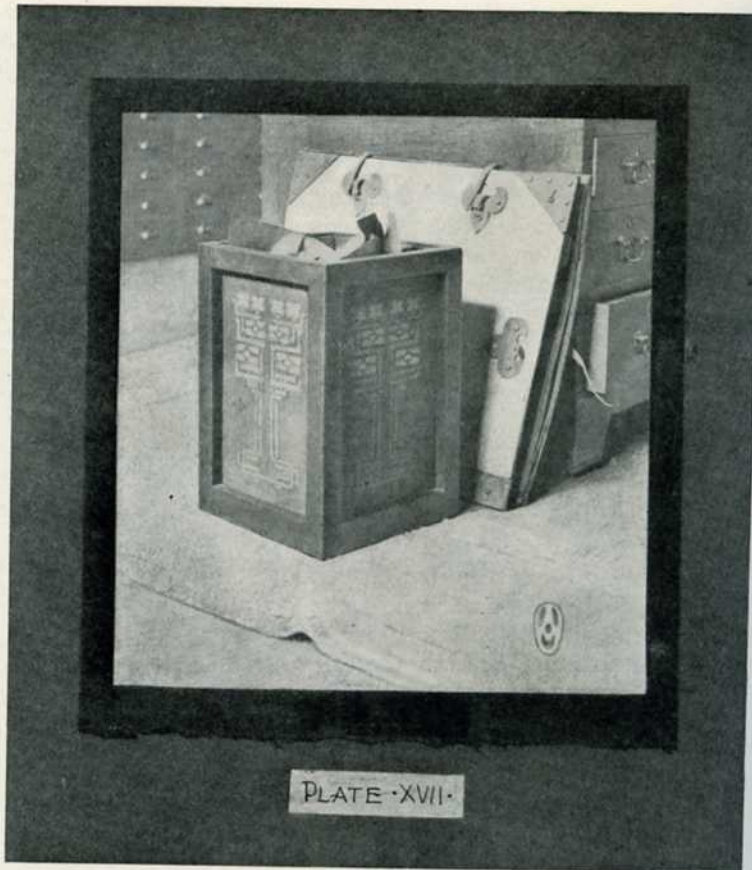
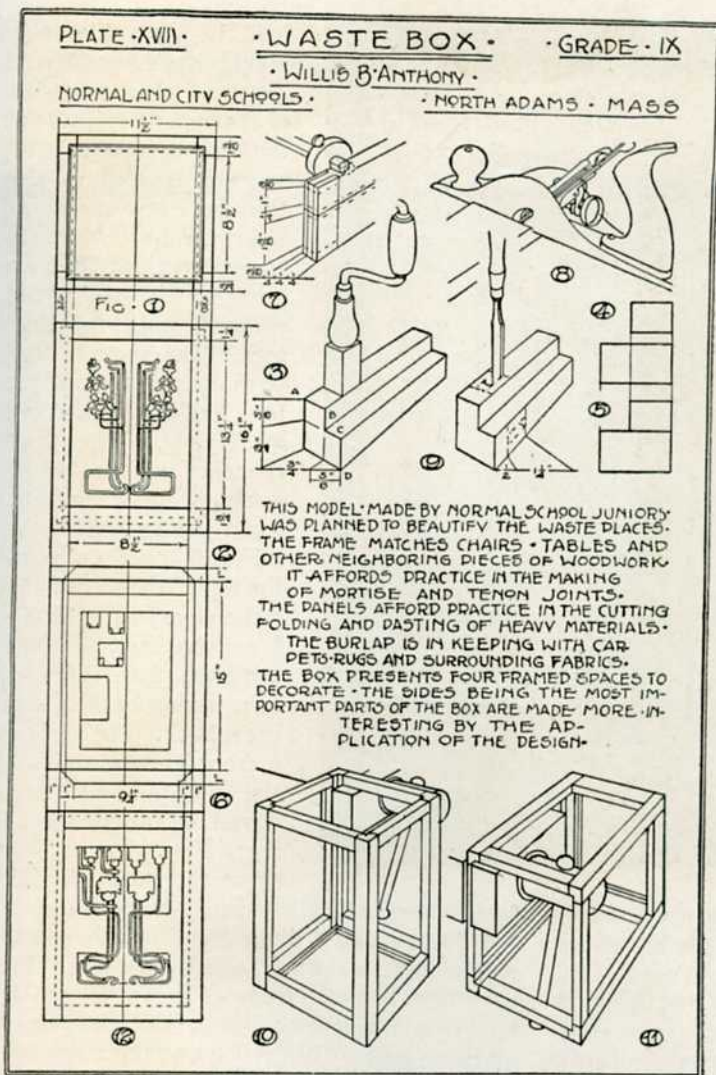


Fig. 12 shows the completed decoration as related to the center line, Figs. 10 and 11 show the frame in position for final planing. Fig. 7 shows how to use the gauge in marking off the tenons for the mortises, before the wide and narrow stretchers (upper and lower) have been ripsawed apart. Fig. 8 shows a Sheldon rabbet plane smoothing off one of the tenons. Fig. 3 shows the boring of a hole to start a mortise with a hollow block of given length strung upon the bit, so the hole will be bored only to a certain depth. Fig. 9 shows a section (one end) of the upright with the chisel held to start the mortise. The two parts of each upright should be glued, clamped, and then nailed to insure a perfect joint. A hint as to making a mortise may well be given here; for a mortise in wood work what your joints are to you. Without mortises, few pieces of joinery would hold together and stand any strain.



Following the figured dimensions shown in the diagrams and drawings, you will find the upper mortise to be  $1\frac{3}{4}$ " long by  $\frac{1}{4}$ " wide. For this it is well to use wholly the  $\frac{1}{4}$ " chisel. After boring the hole to start the opening, work back from the hole towards each end of the mortise lines, and in so doing your chisel, held crosswise of the narrow opening, trims its own way, so that the long sides ought to require no smoothing afterwards. If you try to trim them, you are sure to enlarge the hole so that the joint will look bad. In chiseling out this or any mortise, first bore a hole in the center and work

the chips towards it. Never pry against the end of the mortise. Urge or draw the chip towards the hole. Slant the chisel over the mortise somewhat, in making the deeper cuttings, so that you will make it a little wider — a very little only — at bottom than at top. This will give room for the better fitting in of the tenon. When there is danger of the too-large tenon cracking the edges of the mortise, pare it slightly. Saw the tenon  $\frac{1}{8}$ " shorter than the depth of the mortise. Number each mortise and its tenon in a work like this, where there are several alike. Probably no joiner ever made them just alike. Test the joints with the try-square. If the uprights are not perfectly square with the stretchers, then the distance between the shoulders of the stretchers or the distance between the mortises are not exactly alike. The mistakes must be found and corrected. Put the joints together with glue. Pin them also with shingle nails, sheared to a pointed length  $\frac{1}{8}$ " less than the wood they are to enter. Drive from the inside. In finish-planing the tops of the uprights, rotate the plane with a scouring motion, so as not to chip or split them. Round the edges with sand-

paper and the long edges with the plane. The bottom board rests down on the supporting strips, and should be nailed slantingly through into the lower stretchers. The decoration is done in oil colors on the burlap. It may be stenciled. The inside of the panels should be stained before varnishing. Fasten in the panels with copper tacks, six at top, three at bottom, and two on each side, but not until the decorations are thoroughly dry. Place soft pads under the frame, to prevent scratching its finish. Partially remove the stain from the tack heads, letting the color of the copper shine through.