

THREE USEFUL LEVELS.

FIG. 700 represents a drain level. It is very handy for leveling a lawn, etc. It can be made as true as any spirit level that you buy at stores; it costs less, and is much handier in many ways. A is a board 10 feet long, 8 inches wide, and 1 inch thick: plane it nice and level, then take four strips 3 inches wide half an inch thick, and 6 feet in length, saw these strips at both ends like *b b*;

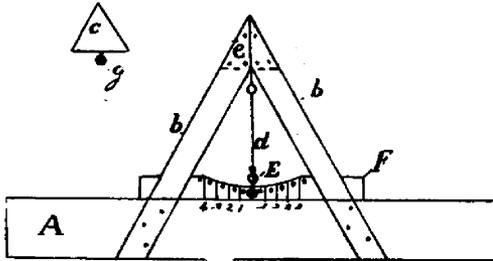


FIG. 700.

nail two of these on one side of board A, like the three small dots, about 18 inches from centre board A, and nail other two on the other side of board A; then place the triangle piece, like C, between the four upper ends, indicated by a dotted line; then nail firmly. G indicates an eye fastened under C in centre to tie the line d; F is a piece of board 1 inch thick, 5 inches wide, and long

enough to fit between the four strips like cut shows. Fasten one end of your line in the eye, tie a pencil on other end and mark your piece F all along, which will make a curved mark. Saw in this mark, then tie your plumb bob so it will almost touch all along the surface of this hollow, and make an O; this will indicate true level. Then raise one end of board A and place a piece of board 1 inch under it, where the plumb *bb* shifts, to make another mark; add one more inch, make another mark, and so on to the end. Then mark the other side of centre just the same; between each of these marks, make a similar mark to indicate half inches.

Fig. 701 represents an upright level, very handy in building sheds, or planting, tree, fence-posts, etc. You may have them to lean as you like or be perfectly straight. A is a piece of board 1 inch thick, 15½ inches long, 4½ inches wide; after being cut as illustration shows it will be 4½ inches at one end and 2½ inches at the other end; B is a plumb bob, c is a line, d is a piece of wood 1 inch square, 5 inches long, nailed on one end of a piece of board F 3 feet, 2½ inches long, 1 inch thick, and 3 inches wide; E is a hole 4 inches long, 1½ inches across, to enable you to place your four fingers through and have a good hold of it; g is a small hole ½ an inch from end of d; place your line through it and make a knot, so your plumb bob will almost touch all along the upper edge A, which is marked with long marks representing inches; small ones or dots for ½ inches. If the small hole g is 1½ inches from F, make the mark O on board A, 1½ inches from

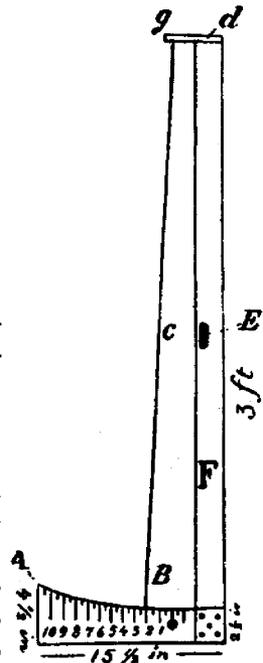


FIG. 701.