Handy Man's Workshop

The Editor of Handy Man's Workshop will be glad to receive any hints for this department and pay for them if available.

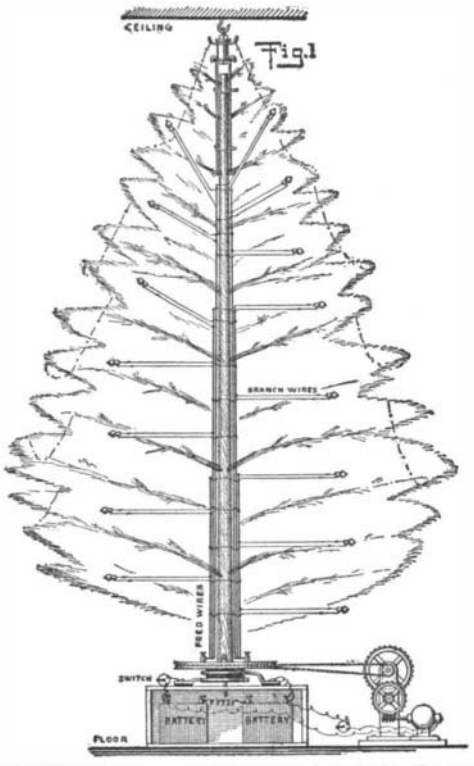
Suggestions for Christmas.

The Christmas Tree.

A REVOLVING CHRISTMAS TREE.

BY J. A. BERGSTROM.

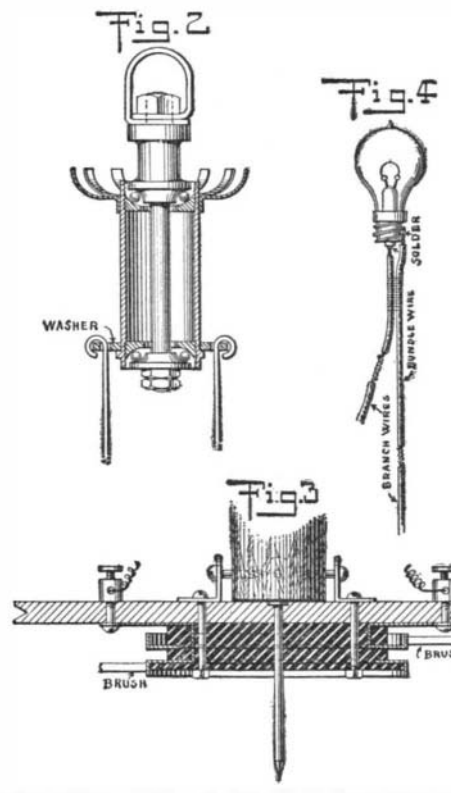
There is nothing more impressive at Christmas time than a revolving Christmas tree, lighted by electric lamps. The following illustrates a simple yet inexpensive way of arranging a revolving Christmas tree, that will not upset and is easy to put up and take down year after year. The initial cost is the only one except the recharging of the batteries every year, which can be done from an ordinary lamp socket, using a number of lamps as a rheostat.



THE MOTOR MECHANISM AND WIRING OF THE REVOLVING TREE.

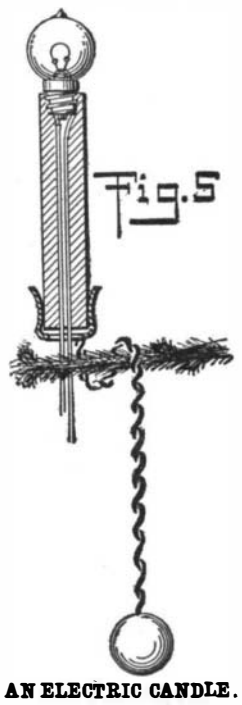
First locate in the ceiling, at the selected place for the tree, a beam or lath, and with the point of a sharp knife cut out a V in the ceiling paper, and bend the point of the paper to one side. Into this exposed part of the ceiling screw a hook about 3/16 inch in diameter. To this the tree is hung as hereinafter described. When the tree is taken down and the hook unscrewed, the V-shaped piece of paper may be pasted back to cover the hole and leave no marks in the ceiling.

The inside or stationary part of an old bicycle pedal is fastened to the above-mentioned hook. To the outer or revolving part are secured two wires about 12 gage and 2 feet long. These wires are securely fastened on opposite sides of the tree, preferably bent under a branch (Fig. 1). A piece of tin may be cut and fastened at the top of the pedal, from which the tinsel and strings of glass balls may be hung.



SOME IMPORTANT DETAILS OF THE REVOLVING TREE.

To the lower part of the tree is secured an arrangement as shown in Fig. 3. This consists of a large grooved pulley about 12 inches in diameter by 7/8 inch thick, made out of ordinary pine board. The groove may be made with the edge of a half-round rasp. To the upper side of this pulley are secured three or more small brackets, which are fastened to the tree with wood screws. On the under side of this pulley are secured and insulated from each other two metal disks or rings, such as brackets for ordinary gas globes, terminating on top of the pulley with binding posts. Into the center is driven a tenpenny wire nail. A small box placed on its side may be put on the floor under the tree with a small hole to receive the nail. This forms a guide for the lower end of the tree. The box may either be nailed or weighted down, so as to keep the tree steady. Fastened on the box and insulated from each other are two copper brushes, one for each ring respectively. A small electric motor, such as is usually sold for $1, is now placed about 18 to 24 inches from the large pulley. As a rule, these motors run too fast for this purpose. A wire may be coiled about the motor shaft and soldered fast to form a worm which may mesh with a train of clock wheels. These can be obtained from any watchmaker. To the shaft of one of these wheels a small pulley is secured about 1 inch in diameter (Fig. 1). Wrap this pulley with cord, and put some rosin on, so as to increase the friction. Now place a small endless cord over the large and small grooved pulleys. The motor should be connected up with a dry-cell battery, and by placing in the circuit a switch or push button, the motor may be started at will.



AN ELECTRIC CANDLE.

The tree is now ready to revolve, and should make five to seven revolutions per minute. The batteries may either be kept in the box under the tree or in the cellar, where they will be out of the way. Two small holes may be drilled in the floor, about 2 inches apart. A pointed copper wire about 8 gage may be pushed through the rug or carpet into these holes and connections made to these wires with the batteries in the cellar and to the brushes on the top of the box, and by putting a switch in the circuit the current may be turned on or off.

From the binding posts on top of the large pulley, the feed wires are run on opposite sides of the trunk of the tree to their respective lamps; ordinary bell wire will answer the purpose. I have found it best to run several of these feed wires, and to put about five lamps on each set. This gives far better and more uniform distribution of the electricity to the lamps than when large wires are used, as the top lamps get very little or no current. The lamps used in series from the ordinary current are by far too bright, as it simply puts the tree in the "shade." A soft light is the more desirable, and the tree may be decorated to a better advantage with battery lamps, as no unsightly sockets or heavy cords are used, and there is no danger of fire. The wires are soldered on the lamps, as shown in Fig. 4, and may be placed in the hands of the images used in decoration of the tree. The lamps may also be inclosed in small Japanese lanterns, which will greatly add to the beauty of the tree.

Another pretty effect may be obtained by using an ordinary tree candle with its usual holder hung on a bough. To do this, remove the wick by boring a small hole in the center of the candle, into which insert the wires, already soldered onto the lamp, letting the lamp rest on the top of the candle (Fig. 5). Of course, the more lamps used, the prettier the effect. A 7-foot tree will require from 25 to 35 lamps.

The connection between the lamp and the feed wires may be done by twisting the ends together. Care should be taken that the ends of the opposite wires do not touch each other, and that no tinsel comes in contact with them. Run the branch wires on top of the branches. A diagram of the wiring is shown in Fig. 1.

When all the lights are turned on, start up the motor and see that everything is all right and that all the lamps are burning bright before decorating the tree. Then the lamps may be moved to suit the ornaments.

The box under the tree as well as the motor may now be covered up with cotton batting and small twigs cut from the lower branches of the tree.

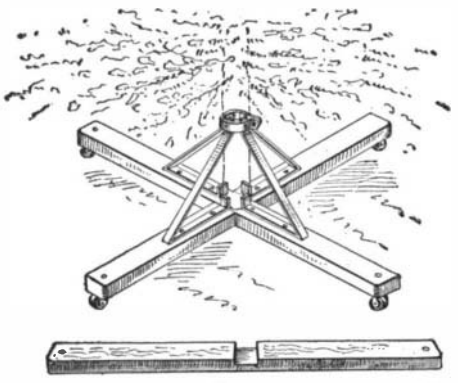
Instead of placing the tree in front of a window, it may be placed in the center of a dining-room table. The table may be opened about six inches to let the trunk of the tree pass through. Some of the lower branches will have to be cut off. The chandelier may be removed and a small hook screwed on the gas pipe, from which the tree may be suspended. To close the opening in the table, two tablecloths must be used, and a few twigs may be placed where the cloths meet.

A double floor switch may be employed, to one side of which the wires from the motor and to the other the wires to the lights may be connected. By manipulating the switch with the foot, the motor may be started or the lights turned on independently of each other.

ROLLER MOUNTING FOR THE CHRISTMAS TREE.

BY GEORGE W. NAYLOR.

Christmas trees are usually placed in a corner of the room, and this is often the cause of an upset when decorating parts that are adjacent to the walls and difficult of access. It has been the writer's practice to mount the tree on castors, so that it can be trimmed and lighted in the center of the room away from curtains and draperies and, when ready, moved into the corner or any other desirable location. The tree stand is broad, and the castors cause it to slide across the floor rather than upset, when the branches are bent in reaching the presents or decorations.



ROLLER MOUNTING FOR THE CHRISTMAS TREE.

The stand consists of two 3-foot lengths of 2 x 3-inch scantling, halved and joined together at their centers. An ordinary castor is fitted to each arm of the stand. The tree is mounted in a holder of strap iron consisting of a ring to which four arms are riveted or secured with stove bolts, as shown in the sketch.

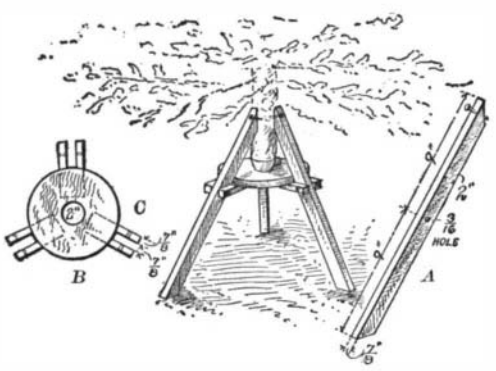
FOLDING TREE STAND.

BY A. V. SEARING, JR.

The accompanying cut shows a simple way to make a support for a Christmas tree. The material should be of hard or tough wood that will not split easily.

Make three pieces like *A*, of 7/8 x 2-inch strip, also three pieces like *C*, of 7/8 x 2 5/8-inch strip, and one piece like *B*; for this the bottom of a peach basket will do very well. In the center of the disk *B* bore a 2-inch hole to receive the sharpened base of the tree. Fasten the *C* pieces to the underside of the disk *B* with screws. Bore holes in the arms of each *C* piece to just receive a 3-inch wire nail. In the top of each leg, *A*, as shown, insert a small nail or screw to form a point that will press into the tree. Now place a leg *A* in the slot sawed out of *C*, and pass a 3-inch wire nail through the holes.

When the Christmas tree is taken down the legs may be unhinged and the stand folded and packed away for use next year.



FOLDING TREE STAND.

TO PREVENT THE CHRISTMAS TREE FROM UPSETTING.

BY H. G. L.

The Christmas tree can be safely supported by the use of fine, almost invisible, wire. Fasten three or four wires to the main body of the tree at a point near the top. Draw each wire tight, and secure to brads in the door and window frames, or the picture molding, at opposite sides of the room. Twist one or two of the wires about strong limbs to prevent the tree from turning. This arrangement obviates all necessity for marring the floor.