

considered the best for most purposes, but it makes more work than the other, as every bit of it must be cleaned off, every corner wiped out, which takes more time than it does to sandpaper the surface lightly.

The proper handling of varnish is quite a science in itself. The varnishing room should be kept at a proper temperature—75 degrees Fahrenheit is about the right thing. If the room is cold the varnish will thicken, will not spread evenly and will not harden properly. Light and ventilation are also absolutely necessary to facilitate drying. A room that is dark or damp will spoil the varnish, and a room that is excessively warm will keep the varnish soft. Barrels of varnish should not be stored in a very warm room, as the heat will open the joints in the barrels, and the varnish, which will be quite thin owing to the heat, will leak out. In summer, varnish should be stored in a basement where it is cool.

Turning white is caused by the action of water or dampness. The better the grade of varnish and the more elastic it is, the less liable it is to be affected by moisture. In applying two coats of varnish, neither should be heavy, more especially the first coat. If it is, it will not generally get thoroughly dry at the bottom before the second one is applied, and the result will be disastrous, as it will cause the last coat to crack, wrinkle, or sag, as it is called. Another bad result of not giving varnish time to dry will be noticed by the last coat deadening or sinking away. This is caused by the undercoat not having been allowed sufficient time to dry, resulting in the finishing coat becoming absorbed while in the course of hardening.

The varnisher must be careful that there is no oil on the surface to be varnished, as it will cause pitting, or little hollows in the varnish. When varnish is so thick it does not spread well, it may be thinned by adding a little turpentine, but care must be taken that it is thoroughly incorporated in the varnish, as if it is not this will also cause pitting. A long-haired, pliant brush is best with which to apply varnish. It should be spread with long, steady strokes, drawn in a perfectly straight line lengthwise the grain of the wood. Oil japan or liquid dryer should never be added to good varnish. Each coat of varnish should be given three or four days to harden before another coat is added or before the last coat is rubbed, if a rubbed surface is required.

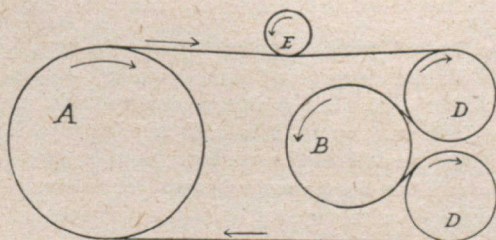
FUTURE OF THE MISSION STYLE.

I think that the Mission style is short-lived and will drop out of sight quick some day. This sort of furniture has always been angular and uncomfortable and I cannot see an excuse for its existence. The Canadian people like ease and comfort and grace; qualities which you would never think of looking for in Mission stuff. The Colonial style has gained a hold in this country that will abide long. As to finishes, I like the wax over golden oak, which is being brought out by the manufacturer in a tentative way. I have never liked the Antwerp, and the weathered seems to have run its short course.—J. D. R.

Machinery and Mill Equipment

BELT DRIVE.

Lots of trouble is experienced sometimes trying to make a twist belt do heavy duty with close centres; the following will explain how one man drives a large 30-inch gang edger, without any trouble. The shafts are very close together and the countershaft had to be driven in the opposite direction from the line shaft. To use an 8-inch double leather belt on a twist would be nothing more or less than to court trouble. In order to accomplish the desired result he concluded to get away from the cross or twist belt proposition, so installed the



Belt Drive.

system as per accompanying sketch. A represents driver and revolves in the direction of the arrow; B the driven and the direction it runs; C represents the belt; D D the idlers, and E a light-riding tightener which keeps the tension always the same. If any repairs are needed, the tightener can be raised and the belt easily removed and returned to place by even a

boy. This belt in question has been used about four years, is in perfect condition to-day, and looks good for ten years more, barring accident, which is practically eliminated. If a cross or twist belt had been used, it would have lasted but a short time at best.

FALLS UNDERCUT PLANER.

Woodworkers will welcome this new tool put on the market by the Falls Machine Company, Sheboygan Falls, Wis., for the safety it affords operators, to say nothing of the reduced cost of the work due to the tremendous output of a machine as compared to hand operation.

The cutter-head is mounted in extra heavy dust-proof bearings, which are yoked together, and adjustable, below the tables as in the ordinary hand jointer. The frame is massive and heavy, and is cast in one piece, milled and planed true, to which are attached the tables and feeding mechanism. The tables are mounted on a special and patented adjusting device, which keeps the edge of the tables the same distance from the cutters at all times, no matter where the tables be adjusted; the motion of the adjustment coincides with the circle described by the cutters in their rotation, so that although the tables are very close to the cutters, they never strike them or are carried further away. The tables also draw apart in a straight line from the cutters, so that a wide opening is made for the sharpening and changing