

In the manufacture of the bushel basket, after the splints for the trunk basket and for the rims and handles, a braider and tacker is required. The bushel braiding machine is built on the order of a large circular stand. At two inch intervals are grooves in the top of the braider. Into these grooves the bushel splints are fitted by the braider, the opposite end easily fitting after the one end has been inserted. When all the grooves have been filled, large, heavy tacks are driven through the centre of the braid, firmly held with a tin button. The finished braid is cast on a pile and the process continued. The tacker then picks up the finished braid, placing it on the tacking machine. The device has a large iron form, the shape of the inside of the finished basket. To this the braid is placed, being held on the form by a pinion in its middle. A large handle lever pulls the form into a wedge, a trifle larger than the form itself, causing the basket to assume its embryo shape.

Now the rim is tacked along the top, with a small reinforcement rim half way down the basket. This finished, the part basket is piled up and later sent upstairs to the second floor of the factory, where the small rim on the bottom is tacked on, and where the expert handlers nail on the handles with $1\frac{1}{4}$ -inch wire staples. The handles are bent by being shoved, in the early condition of the wood, through the steam boxes, as is also the log before being placed into the veneer and cutting machines. The handles are bent and placed on edges in the handle-holders. The baskets are then entirely finished and taken to the dry-rooms, where, at an exceedingly high temperature, the baskets are thoroughly dried within a few hours. The covers for bushel baskets are packed in dozen lots and given to the growers separately.

The manufacture of half bushels, pecks, and fifths is on the same order as that of the bushel makes. The forms, of course, suit the size of the basket, and the braider machines have the grooves fitted square instead of round. The forms fit the form-socket by foot-lever, too, instead of handle-lever. The work of manufacturing halves, quarters and fifths, and the other sizes, is much easier than that of bushels. The handles for these smaller sizes, which are larger than the handles of the bushels, are bent in the same manner as the bushel handles.

The speed in manufacture of baskets by skilled workmen is a wonder to the onlooker. The braider no sooner completes the braid than it is jealously snatched from the pile by the tacker, who, with his mouth as a tack-box, nails around the sides and rims in lightning time.

TRUNK BOXES AND TOOL CHESTS.

For quite a long time, probably ever since built-up lumber from veneers has been in use, the best trunk boxes have been made of veneers.

There are now some cheap trunks made of solid lumber because it is cheaper, but all the better trunks have both the boxes and the tops made of veneers, or rather of built-up lumber. The traveller, of necessity, must have a strong trunk, substantially fastened together to stand the wear of handling in and out of baggage cars, and to get the strength and size desired frequently involves so much weight in a trunk that when it is filled it runs over the free allotment weight of 150 pounds, and he has to pay for what is called excess baggage. Naturally it doesn't take many trips or many payments for excess baggage, to use up as much as the trunk cost, and the majority of travellers would rather

pay two or three times the price of the trunk originally, and have it made a few pounds lighter, provided they could get the same strength. The way to get this, to get the highest degree of strength, is by the use of three or five-ply built-up lumber made of veneers.

The wide use of veneers in this manner, and the success their use has attained, suggest the possibilities of further extending it in various other lines. Take the line of tool chests, for example, which is quite a large line when we consider the entire country, and here, as in the trunk, business weight is frequently quite an object. Strength is always an important item, and unquestionably in the making of tool chests, as in the making of trunks, strength and lightness of weights can be obtained by the use of veneers. This applies not only to big tool chests, but also to the smaller ones used by carpenters in carrying certain of their tools about their work. The tools themselves make weight enough, and light, strong boxes should appeal especially to them—sufficiently that the difference in the cost of making them should be readily paid.

Not only that, but there is another reason why the tool-box people should emulate the trunk people, both in construction and finish. The carpenter or millwright's tool-box, made and finished like the trunk, with end handles on it, can be packed with overalls and jumper any time and checked along as baggage, whereas if he used the regulation box he would have to let it go as freight or express. There are many points in favor of the extensive use of veneers in making tool-chests and boxes, both for woodworkers and for some of the metal-workers, and it is a line that both the veneer men and panel manufacturers might look into during the present slack period and make a start toward extensively developing. It doesn't call for fine veneers, but rather for tough native woods, and if once fully developed it should afford quite a market for veneers and built-up stock, both for bodies and tops, just as to-day the trunk trade furnishes a good volume of the business.

HORIZONTAL BAND RESAWS.

Little or nothing is usually said about this machine, though it is one of the best machines that has ever been put on the market for box factory work. It not only increases the output of a box factory 50 per cent., but it saws the stock much nicer than can be done on a vertical resawing machine.

Some people have an idea that the vertical band resaw can cut more box shooks in ten hours than can be sawn on a horizontal machine, but as one who has had experience with both vertical and horizontal resaws, I say it is impossible to put as many box shooks through the vertical resaw as can be put through the horizontal machine in ten hours. Why? Because a horizontal machine that is up-to-date is equipped with an automatic hopper feed, with a steel chain and steel bars with which to deliver the stock to the saw. The completed shooks can be placed in the hopper, feed in large bunches, and each piece is delivered to the rolls before reaching the saw, by this automatic arrangement; and the beauty of it is, a continuous feed is maintained as long as the shooks are kept piled in the hopper feed.

The advantage the horizontal band resaw has over the vertical is that boxes 20 and 26-inch wide, made out of pieces that are $1\frac{1}{2}$ to 3-inch wide, can be resawed on the horizontal in one piece, whereas on the vertical machine it is necessary to saw one piece at a time. Another thing:—If the boxes which are being sawed are, we will say, 26-inch wide and not