

matters pertaining to their plants discussed by outside persons, especially if dangerous conditions are alluded to. If then, the inspector finds anything about a plant which is dangerous, he should confine his remarks to the proper person or persons, and submit his report according to the instructions of his chief. It may at times be advisable in order to emphasize the necessity of certain safeguards to refer to other plants, and if the inspector will use discretion there can be no harm in this. On the contrary, it will go a long way toward convincing the management that certain safeguards are necessary if he can show from actual experience that acci-

dents have occurred due to the lack of them.

In conclusion I wish to say that the above criticisms are made in the most friendly spirit, and I hope that our good friends referred to and you inspectors will accept them in the same spirit. What we need is a better understanding between the management at the plant and the inspectors. Let the owners know that inspections are not made with a view of criticizing or finding fault, but that we want to help them. We are all working for one common good, and in order to obtain the best results, we must co-operate with each other.

Starting a New Hosiery Mill

By DAN BUCKLIN IN TEXTILE WORLD RECORD.

In starting a new hosiery mill, either on a small or large scale, one of the hardest propositions the manager or superintendent has to face is securing of the necessary help. There are only two courses open to pursue in order to secure the desired help, either to obtain experienced help from other places, or break in green help. It depends largely on the location of the mill as to which of these plans is the most advisable. If located near a knitting centre it is advisable to secure experienced help if possible. In order to do this it is usually necessary to pay wages a little above the standard scale of the locality, as it is generally necessary to offer some inducements in order to induce experienced help to make a change from an old established mill to a new one with its uncertainties. An objection to this plan is that it places the new firm at a disadvantage with its competitors. It is a difficult matter afterwards to reduce wages to the standard scale. In rural districts or in a new territory where it is impossible to secure experienced help, the superintendent finds it necessary to break in green help. In such cases it is advisable to engage a few experienced operators, even though it is necessary to pay them considerably more than the regular wages. For one person to teach another properly it is necessary for the teacher to understand the subject thoroughly. For this reason I recommend that experienced help be secured to teach the green help. Then after the mill is in operation and things are going along smoothly it is an easy matter to equalize the wages of the operatives. The number of experienced operatives necessary to teach the green help depends on the size of the mill. It is possible to secure from any of the large mills girls who are experienced in all the different operations in the manufacture of hosiery. In starting a mill on a small scale, one or two of these girls should prove sufficient. In a large mill I would suggest at least one or two skilled operators for each department. These can be secured for about \$12 per week. The operatives which are the most difficult to train are: ribber hands, transfer girls, transfer machine operators or knitters, loopers and menders. We will now take up each of the operations separately and endeavor to show what an ordinary girl should be expect-

ed to do, and the standard prices usually paid for each class of work. The number of ribbed top machines an operator can handle successfully will depend largely on the gauge, quality of yarn, double or single feed, and whether with or without stop motions. However, on single feed machines of medium gauge without stop motions an operator usually runs about 16 machines. If equipped with stop motions they should be able to run about 20 machines. The price paid per dozen also depends on the size and gauge, but on medium gauges usually runs from 1 cent to 2½ cents per dozen, according to size; size 6, 1 to 1½ cents; size 7, 1½ to 1¾ cents; size 9, 2 to 2½ cents. This operation does not require a great amount of skill, an ordinary girl or boy should learn to handle a set of 16 machines successfully in 30 days. The next operation is the picking on or topping the ribbed top ready for transferring to the footers or transfer machines. This operation is one of the most difficult for the help to learn. The chief requisites are good eyes and neatness. It usually takes from 3 to 6 weeks for a girl to be able to learn this work without making much bad work, and from 3 to 6 months before she can make good wages at piece work. The worst feature with this work is the large amount of good tops which are usually spoiled by the girls when learning. An excellent plan to reduce this waste is to knit regular "learning" tops with slack rows about an inch apart, and have the new girls pick these on, pull them off, then pick them on again on the next slack course until she is able to pick them on neatly without leaving drop stitches or otherwise making bad work. When she is able to do this, she can be set to work on regular stock.

The amount of work and price per dozen also depends on the gauge and size. On half hose the quantity and price per dozen of the different gauges should be as follows: 76 and 84 needle, 30 doz. per day at 4 cents per doz.; 100 needle, 25 doz. per day at 4½ cents per doz.; 136 needle, 25 doz. at 5 cents per doz.; 160 needle, 20 doz. at 6 cents per doz.; 180 needle, 20 doz. at 7 cents per doz.; 200 needle, 15 doz. at 8 cents per doz. On misses' and youths' ribbed hose the number of dozen and price

paid for the various gauges are as follows:—

Youths' coarse gauges, sizes 6 to 9, price for topping, per doz., 7 cents for sizes 6 and 7; 8 cents for size 8; 9 cents for size 9. On this class of work a good girl can put on from 15 to 20 dozen per day, according to size. On youths', medium gauge, sizes 6 to 9, the prices usually paid per dozen are: 9 cents for sizes 6 and 7; 10 cents for size 8; 11 cents for size 9. A girl should be able to put on from 12 to 15 dozen per day on this class of work.

Ladies' and misses' fine 300 needle hose 1, sizes 6 to 9: the prices should run from 12 to 14 cents, according to size. A girl should be able to put on 10 to 12 dozen per day.

The next operation is transferring. The number of machines an operator can handle depends on the gauge, speed of machines and class of work. An operator can run more machines on size 9 than they can on the smaller sizes. Also can run more on men's half hose than on youths' or misses' hose. A machine operator should average from 40 to 60 dozen per day, and the prices should range from 3½ to 4½ cents per dozen, according to size and gauge. It usually takes from 3 to 6 weeks for an operator to learn to handle a set of these machines successfully.

We now come to looping or closing the toe. This is the most difficult operation in the manufacture of hosiery. It is very poor policy to try to teach this operation to a green girl. It is much more difficult than topping, owing to there being no loose course to follow. As a general rule topper girls make the best loopers, and as the work is very similar to topping they learn it much more readily than a new girl. When in need of girls in the looping department I have always found it advisable to transfer some of the best girls from the topping to the looping department, and use the new girls for toppers, when they soon become expert toppers. As looping is the last step in the manufacture of hosiery, and as new loopers are sure to spoil considerable work, after the work is nearly finished it is a good plan to try to avoid as much of this bad work as possible. By teaching the looper girls in this way poor work is reduced to a minimum.

The amount of work a girl should be able to turn out in a day also depends on the gauge and class of goods. The following table shows the number of dozen and price for the different gauges, viz.:—

120 needle line,	50 doz. per day, 3½c. per doz.
160 needle line,	45 doz. per day, 4 c. per doz.
136 needle line,	45 doz. per day, 4 c. per doz.
180 needle line,	35 to 40 doz. per day, 4½c. per doz.
200 needle line,	25 to 30 doz. per day, 6 c. per doz.

After the looping comes the welting. This is a very simple operation and is easily learned, for speed is the main object in this work. This comes with experience only. An ordinary girl will welt 125 dozen per day at 1½ cents per dozen. This brings us up to the mending department. This is one of the most important departments in the mill, as neat mending will often result in making firsts of goods that otherwise would go for seconds. Neat girls only should be used in the mending room. The amount of work an inspector or mender can do in a day will of course depend on the condition of the work. If the goods come into the mending department with few holes and