

How Binder Twine is Made.

East India Manila Hemp Makes the Best Twine. Yucatan Supplies the Much-Used Sisal.

Chicago is the greatest twine producing center of the world, and it distributes its output "from China to Peru." The largest amounts are used in Minnesota and the Dakotas, but other states are also great buyers.

Of foreign countries Argentine is far in the lead as a twine consumer, but large sales are made in Southern Africa and Australia, in fact, everywhere in the world where wheat grows.

The best twine is made from East India manila hemp. It is a product of a plant known to botanists as *musa textiles*, a variety of banana palm which grows only in the Philippine Islands. Some fairly good varieties of hemp, although far inferior to the manila, are now being grown in Southern Mexico. Yucatan supplies the much used sisal, which comes from a plant known as the American aloe, resembling the century plant in appearance. The fiber takes its name from Sisal, a seaport town in Yucatan. The work of cutting the fibre, stringing it out, suspending it on rocks to dry, and packing it for shipment, employs thousands of the natives during part of the year. This Yucatan hemp is now much used, although it is not as strong and durable as the East India product.

The various kinds of hemp come to the factory storehouse in bales containing from 270 to 375 pounds. Some of them are bound in rattan and palm leaves and covered with cabalistic lettering in some foreign language. Recently a little of the hemp grown in Kentucky as an experiment has been tried, but it was found not to be fit for binding twine, which must not only be strong and smooth, but uniform in size, so that it will work well in the machine. One Chicago warehouse is three stories high, 275 feet long by 100 feet wide, and is packed from top to bottom with hemp bales, the entire capacity being 5,000 tons. Great caution has to be observed in providing fire protection, for if the piles of bales once become ignited it would be almost impossible to extinguish them.

When the bales of hemp come into the factory from the warehouse they are torn apart and the workmen shake out each of the separate bunches, which are knotted at the end, and somewhat resemble a horse tail, only they are nearly white and very coarse, the fibre varying from two up to six feet in length. So closely is the hemp packed that a bale more than doubles its size when it is loosened. The hemp now goes to the preparing room, where the roar of machinery is so deafening that it is impossible to speak loud enough to be heard. The room is remarkably high, so that the thick hemp dust which fills the atmosphere will be swept out and will not injure the employes. The hemp goes first to the stretching frame, which is a broad wheel about eight feet in diameter, the outer surface being covered with short, sharp pegs set close together. This is covered all over with a shield, which is pierced at one side with a square hole. Through this hole the hemp bunches are switched until the teeth have combed the fibres out straight, tearing away also a good deal of dust and short, valueless fibres.

The hemp now goes to the first spreader or breaker. This consists of two sets of belts, both covered with short metallic teeth or pegs, the first moving more slowly than the second. On being fed into the machine the hemp is spread out, carded and straightened, the second belt pulling it apart longitudinally and making the ribbon thinner. From the end of the first spreader a girl attendant, who is powdered with dust from head to foot,

guides the big loose rope into high tin pails, from which it is fed into the second spreading machine, and so on through eight of them until the hemp ribbon is smooth and even, and much thinner and narrower than at first.

It now goes in high tin pails to the bell machines, where it runs over numerous spools and rollers which smooth it down, twist it and draw it out finer and thinner, making the fibres compact. After going through two of these machines it is ready to be sent to the 600 spindles or looms on the second and third floors.

It is difficult to give an idea of the scene in the spindle rooms. Hundreds of machines, all just alike, with each part moving in unison, each belt flapping in line, and all over a deafening sound of whirling wheels and clicking spindles. Among the machines a few girls move about quietly, keeping them free from dust and seeing that their insatiable mouths are always full. Here the ribbon of hemp runs from the pails through a very little hole, and then it is pulled very fast so that it grows thinner, at the same time being twisted a little. Then it is fed on a big spool or bobbin in the form of the finished twine—about 650 feet to every bobbin. A complete system of inspection and examination is in use at the factory for insuring absolute exactness in the size and strength of the twine. The binder attachment of a harvester is set up in the room, and a bundle of rag bags is bound from time to time to see if the twine is perfect practically.

The bobbins are now sent up to the balling department. Here a great number of girls with incredibly nimble fingers are engaged in operating busy little machines which wind the twine from the bobbin into the well-known shape of the twine balls. The balls are so made that the twine unwinds from the inside out instead of from the outside.

The balls are now weighed, and twelve of them are placed in a package and covered with burlaps ready to be shipped to the dealer.—Hardware Dealer.

Furs, Hides, Wool.

Jas. McMillan & Co., of Minneapolis, write as follows on November 25:

Hides—The receipts are larger as is always the case with the advent of cold weather. The sole-leather tanners have stopped buying altogether, and the upper leather and calfskin tanners when buying at all only buy to run a quarter to half capacity, and we have never in eighteen years experience seen such heavy declines as have occurred in both green-salted and dry hides during the past three months. No one can fortell the market as it depends on the sale of leather by the tanners, and if they cannot make sales there will be a further decline. During cold weather ship hides green in a frozen condition. In buying get tare for horns, tailbones and manure, if any, as they have to be deducted for or removed before weighing.

Furs—The receipts of furs will continue to increase as the season advances. Our advices are that the Hudson Bay Co. will have a larger collection than usual of most articles, of which beaver and muskrat will be sold in their January sale, and every other variety in their March sale. The New York furriers who have been carrying furs for a year or two have had scarcely any demand and there have been numerous failures among them with large liabilities. This has discouraged the principal United States dealers, who make a specialty of selling American and foreign furs on time, and it is said that manufactured furs can be bought in New York at 60 per cent. of their value. With these conditions and the low prices that ruled at the last June and October London sales, furs will have to be bought at reasonable prices on a close assortment, and we advise our customers to be conservative and bear down in their prices

in the poor lots. Bear are going out of fashion and will rule on a lower basis of prices. Skunk are prime or No. 1 earlier than any other kind of fur. We are already receiving some that are No. 1 and hope that our customers will send us all the skunk and mink they can, because we have a trade for them between this and the holidays, although skunk are not commanding anywhere near the prices they did last year. The most undesirable articles are badger, beaver, wild cat, gray fox, lynx and wolf, and by themselves are nearly unsalable even at low prices. Prime furs are white or red on the flesh side, unprime, blue or black. Those caught after this will grade prime or No. 1; those caught previously grade No. 2 or 3, and when caught earlier in the fall, No. 4. Bear caught in the summer are actually not worth transportation charges. Most badger that we receive are No. 4 or worthless, as they are only full-furred when they come out of their dens in the spring.

Deer and Antelope—Horse hides and calfskins are declining and they can be substituted for deerskin.

Wool—We learn that there is a movement on foot to have a higher tariff put on woolsens and also to have a tariff placed on wool. A good many advocate that if there can not be a duty placed on wool, manufactured woolsens should be placed on the free list. We do not believe any duty will be put on wool this year.

Dry Goods Trade Notes.

The Toronto Globe in its dry goods report says: "So far this season the weather has been too mild for a satisfactory retail trade. The past week has been more favorable for business. The prices of raw cotton have dropped somewhat, but not enough to affect the present advanced prices on manufactured goods. In the majority of cases cotton fabrics have been calculated on a basis of 8c, which is a little lower than the present market value of the raw cotton. The mill price of the manufactured goods and the price of the raw material are very near each other on such heavy goods as tickings, sheetings, etc. From recent information it would not be a surprise to hear of further advances. There is very little to report in the demand for woollen and worsted dress goods beyond what has already been stated in this column. Desirable plaids are still sought as well as good wearing boucles and other rough effects. The scarcity of these goods has made buyers more eager to pick up any balance left. Staples and plain cottons are quiet, with cashmeres but little inquired for. Henriettas and serges are quiet. The latter, however, are in better demand than the henriettas. Silks are very quiet, with trade bordering on pronounced dullness. Linens, in the fancy lines and sets, are in better request for the Christmas trade. There is every reason to believe that, with seasonable weather and the usual large business during the holidays, the stocks of retailers and jobbers will be so depleted by December 31 as to make possible a further advance in manufacturers' prices."

Our Correspondence Column.

J. C. S.—There is a commercial distinction between the terms which is often incorrectly used. The word "pork" is used to apply to barrel or mess pork. This is the correct commercial meaning of the word. It is not applied to dead fresh meat. Dressed hogs, not pork, is the proper commercial term to use in the latter case. The words "pig and hog" are also not synonymous terms, in a commercial sense. "Pig" is applied only to small or light animals, too small for packers' use, say under 140 pounds, live weight. Larger animals are referred to as "hogs."