Tea Curing and Packing in Foochow.

The following quaintly-worded, yet very graphic description of the work done in a large Chinese tea packing house, is given by the Foochow *Herald,* at the close of a season's operations:

A large tea packing house presents a very different scene from that two months ago. Then, at the door one found lines of fifteen catty boxes and waiting to be soldered up. Now, none. Next, one found fat bags stacked up eight or ten feet, bursting with Pehling tea that escaped here and there through holes temporarily stopped with bamboo leaves; the bottom of the bags mostly stained from contact with wet flights of mountain stairs upon which the exhausted cooly had set them down on the passage.

Now, one finds but empty chests, hundreds in number, square, deep, and oblong, used for handling the tea in the factory. Ordinary tea chests would not stand the rough usage.

Farther on, one came to the dozen long double row of sifters facing each other, forty in a row, the mesh of some taking a pencil—that of others refusing a pencil point—sifting tea leaf rough and bold, that after a persuasive grasp or two in the hand broke, and consented, after a few shakes in the sieve, to be stripped of some of the sappy leaf edges and to appear below, the even and uniform leaf which tea the drinker insists he must have (plus the dust due to the persuading). The transformation in a rough leaf on passing the meshes of a coarse sieve, with a gentle crush from the sifter's hands, enhances a rough, bold tea much in value.

In place of the rows of men then seen, tilting and jerking their sieves in a monotony only broken by the Cantonese taskmaker's roll-call twice a day before the general meal of fish and rice, there is now to be seen only the bare floor of hardened earth, piles of empty benches stacked in a corner, and the sieves of the twelve different sizes used, each in its division in the three-story stands.

The dozen or score of fanning mills are still now. The trained hands are gone that turned the cranks with a uniform motion, sending the heavy tea, light tea, and flaky dust each down its respective spout separated, never again to meet, unless haphazard, mixed in a Whitechapel grocer's window.

The tea leaf separated in these fanning mills has been parted with at the smart loss of Tis, 8,000 on 3,500 piculs to the foreign buyer, and has been let go by the latter to the London dealer or auction room habitue. The mills now stand still. The tea growers in the hills who waited through June and July for their money have now been paid. The losses to the packers here, however, have been so smart that there is little third crop tea now being packed in Foochow, and the mills will rest until another May shall bring the physical courage bred of hot blood back to the pale and dispirited native teamen. There are stacked up in this huge go-down a few hundred packages of a native maker's brick tea wrapped in plaited bamboo strips, bound in half bamboo and triply rattanned. Aside here, the Chinese upper millstone is being turned upon the nether by a Chinese who is grinding the seeds left by the fanning mill.

In these sycee boxes sharp spades are falling upon the tea stems, chopping them fine enough to go into the stemmy dust mixture to which the seed dust gives the strength, while the chopped stems vouch for it being tea.

In the firing house, four Chinese rice kettles, two feet across the mouth, set obliquely across the edge, turn the tea back in a shower over the hand of the stirrer, a wood fire being kept up in the brickwork underneath. Fire holes, scores in number, follow in rows the walls of the firing house; in each an iron pan is placed, now filled and rounded with charcoal ready to be lit. Placed over each of these fires is a huge hour-glass-shaped-basket-hood or muffler that shuts in all heat of each fire to but one outlet—that through the tea sieve that chokes the throat of each basket.

In these baskets is dried off the tea that comes in from the hills wet or flat from constant down-pours and from the first fermentation of the leaf. These fires are out and all is still.

Here too, on the floor above, the benches are empty where girls and women came—some too often—to throw out the stems from the leaf, getting half a cent for removing those from the two catties of tea given them in wound bamboo-woven trays.

The floor is now bare where we saw the Ningteh tea brought to a uniform shade, by shaking in bags with a few spoonfuls of lampblack; then balked upon the floor, only to be strewn white as a grave in spring with the pure muhil blossoms; then blossoms, in turn, buried under another avalanche of funeral tea, and this again with blossoms, life upon death; then both were rudely mingled together and put away in boxes for a night till the fragrance should have been robbed by the dead tea, and the faded flowers be thrown aside, spent and worthless.

Our round finishes at the shed where Chinese lads, out of long sheets of lead, are glibly making lead cases by moulding them, hatter-like, upon a box, and then running the soldering iron along the edges. Here Chinamen in their natal costume, beside this huge four-hogshead vat of hot water, are washing off the dust and sweat of the day. Here are piles of wood for the hot tea coppers, crates of up-river hardwood charcoal for the firing pans and firing baskets. We must leave without the sight we then had of the mad dervish dance of two Chinese, who, given a dozen pounds of tea stems under their sandals in a tray, performed about the interior periphery a double shuffle, twist and grind of the enemy under the heel, that is cooler for the spectator, the thermometer in the nineties, than for the performers, from whose bodies the perspiration rolls into the tea stems below.

The box factory is elsewhere. We enter on our homeward way. It is another old disused tea hong occupied by foreigners in the days when money was made, tumbledown now and abandoned to Chinese. Inside, a few Chinese youth eating a dollar's worth of rice per month, are rapidly gluing and dovetailing together, by rough wholesale strokes, boxes by the score. Few nails are used, for these are hand-made and cannot be afforded. What a bungling "mending" the merchant will pay for when these frail cases reach the land of rough usage and coarse nails!

Here you see a bit of thin tea-wood, there a bit of paper gaudily daubed with cardinal colors, a stroke or two, side marries end, the gaudy paper cover hides all joints, and the catty boxes, gay with bird, butterfly, dragon, and phœnix, are *en route* to be stared at in a provincial grocer's window.

The only foreign devices we have noted in those busy establishments, where in the season 500 men and women are busy from daylight to dark, are a Fairbanks scales and a Canton-made fire engine. Two red tapers stuck in the earth at the door burn for good luck, and good luck we must wish the patient set who work here.

Nearly 2,000 piculs this season have passed the sieves, one might almost say, a leaf at a time. And so this year, of hundreds of packing houses, some in hamlets in the hills, some, as in Foochow, in cities ten to fifteen miles from the hills. Women have carried, each her picul, up and down the mountain pathways, twenty-five miles a day, not complaining of the bent backs, nor once rudely jostled or insulted by "foreign coolies" from outside districts who come starving their way toward the work offering, their only food a double handful of salt in their girdle to bite at before they drink along the road. Boatmen at river marts have fought pitched battles for the tea, upon the transport of which depended their livelihood.

Probably all the tea leaving Foochow has been lifted up and down as most as if it had been carried up one side of the great Pyramid and down the other a score of times. Plenty of men have been ready to fight for the privilege of carrying it; plenty of women, too, under their loads behind their new husbands.

IMPROVED COFFEE POT.

The annexed engraving shows an improved coffee pot, which is claimed to be a very superior article, and capable of making coffee of a uniformly good quality, where a good properly roasted and ground berry is used. The coffee, C, is placed in the wire cloth sack, S, suspended from the flange, R, at the top of the pot. A trap, T, covers the inner end of the spout and prevents the escape of vapor.

The construction and management of the pot are very simple, and it has the indorsement of a large number of persons who have used it.

Further information may be obtained by addressing the Ideal Coffee Pot Company, 622 Filbert street, Philadelphia, Pa.

The New Mill of the Willimantic Company.

The new thread mill of the Willimantic Linen Company is said to be the largest and finest structure in the world devoted to the manufacture of spool cotton, and also the most capacious cotton mill anywhere on a single floor.

The main building is 820 feet by 174, with two porches at the ends 30 x 40 feet each, and two wings 80 x 60 feet, three stories high. The first girders are supported by 707 columns, 12 inches in diameter, while 352 columns on the main floor support the roof. The walls are chiefly glass resting on brick piers. The roof is also largely of glass, the dark part being covered with felt overlaid with asphalt and gravel.

Internally the mill is divided into five sections, each complete in itself and driven by a separate Porter-Allen engine of 250 horse power, making 350 revolutions. The power is distributed by steel shafting running the entire length of the building, that of each section being coupled directly with its engine. No belting over 2½ inches wide is employed.

The boiler house is 80 feet square, and covers two batteries of eight boilers, each boiler of 80 horse power. The chimney is 16 feet at the base and 152 feet high.

The mill is lighted throughout by Brush electric lamps. The generators are in the center of the building on the basement floor. One supplies 18 lamps of 2,000 candle power, the other is a 40-light machine.

Ring-frame spinning is employed throughout, the yarn ranging from No. 50 up to No. 120. The entire process of thread-making is completed on the main floor, which is 820 feet by 175 feet.

The architectural design and finish of the mill are elaborate. In all the windows are ample boxes for window-gardening. In the three towers are large water tanks of 30,000 gallons capacity each, to supply the closets and for other uses. The four entrance porches are neatly fitted up and supplied with wardrobes, each operative being given a numbered compartment. The spacious main entrance leads to the inspecting room, 60 x 80 feet, tastefully finished opening upon the main room. Here, says a reporter of the *Economist,* to whom we owe these particulars, "a view, grander than was ever seen in any mill, either in the Old World or in the New, is afforded. The wide sweep of perspective, broad and ample, the long rows of windows bordered with stained glass above, and fringed with the bloom of plants and flowers below, the solid floor shining as clean as if waxed for the occasion, the whirl of spinning frames, the long white rows of bobbins and spools, the numerous lines of contented but busy operatives in their clean attire, white and neat, as the color of the skein so deftly shaped into thread for spools, all tend to form a busy, changing, stirring scene not to be forgotten."

In one of the wings is the dining-room provided for the operatives. The room is light and cheerful, and fitted up with the appliances needed for serving hot lunches.

The mill is located on the north bank of the Willimantic River, and from its high elevation commands an extended view of the surrounding country. Some idea may be formed of the skill and energy displayed in its completion, when it is stated that the site it occupies was a pine forest up to the first of March, 1880. During the first week of that month the excavations for foundations were commenced, and during the second week the timber was cleared away. In the short space of ten months the most beautiful and complete thread works of the country, or of the world, were erected, and thousands of spindles set running in the manufacture of six-cord spool cotton.

Glass Eyes.

A reporter of the Chicago *Inter Ocean* has been investigating the trade in glass eyes. From the leading dealer in the West, a firm which has sold glass eyes for many years, he learned that there were as many as a thousand wearers of them in that city, and that from 600 to 800 eyes are sold there every year. The best eyes are made at Uri, in Germany, the manufacture centering at that place on account of the occurrence there of fine silicates and other minerals needed in the business. The German eyes withstand the corrosive action of tears and other secretions better than those made in France.

At Uri are made also vast quantities of eyes used by taxidermists in mounting birds, animals, and other natural history specimens, besides a superior quality of glass marbles, known to boys as agates.

The artificial eye is a delicate shell or case, very light and thin, and concave so as to fit over what is left of the eyeball. The shell is cut from a hollow ball or bubble of glass, the iris is blown in, and then the whole is delicately recoated.

The trade in Chicago has undergone a curious change. Twenty years ago there were sold very many more dark eyes than light, but from that period on the sale of dark eyes has been perceptibly dying out. Now nearly all are light eyes, say twenty light to one dark. In Boston the percentage is even larger, about thirty-five blue or light eyes to one brown; while on the other hand, in New Orleans fifty brown or dark eyes are sold to one light. Regarding the change of color in Chicago of course fashion has nothing to do with it. No one has yet decreed that party-colored optics shall be the rage. The change simply shows that the influx of population has been from the East principally and from northern Europe.

Surgical operations are performed much more skillfully than formerly. Time was when it was deemed necessary to take out the eye entirely. Then the artificial eye became a fixed, glassy, staring object. Now amputation of portions of the eye can be performed in very many instances, and the glass eye fitted on the stump, which moves quite naturally.

Sometimes those who have lost an eye will keep two or three artificial substitutes. They will use one for the daylight with a small pupil, and another for night time with a large pupil to offset the dilatation.

Flexible Shafting for Tower Clocks.

Philadelphia has recently adopted a time ball similar to that used in this city. The automatic apparatus for dropping the ball at noon was devised by the builder of the clock, Mr. G. W. Russel, the city time keeper. To a delicate hair trigger the armature of a magnet is attached, so that when the electric current is passed through the magnet the movement of the armature sets off the trigger and lets the ball drop.

The current is sent to the magnet in a very simple manner. In the clock are three wheels, one of which revolves but once in twenty-four hours, the other once in one hour, and the other once in a minute. In each of the three wheels is a notch, and, of course, these three notches can be in the same straight line but once in twenty-four hours. This occurs on the completion of the last second before noon, and then a lever attached to the escapement drops into the notches, completes the electric circuit, and sets off the hair trigger.

The time ball is placed above the clock tower of the Union Insurance Company's new building at Third and Walnut streets, and is visible from a long distance.

Owing to lack of space it was found inexpedient to put the machinery of the clock in the tower, so it was placed in a separate loft and connected with the dial by flexible shafting. This avoids obscuring the skeleton dial by the boxing that would have been necessary with the usual right angle connection. Mr. Russel claims that this is the first application of flexible shafting to tower clocks, and that the result has been satisfactory. The time is taken daily from Washington.