

PINS BY THE BILLION.

INGENIOUS MECHANISM EMPLOYED IN THEIR MANUFACTURE.

It Takes From Ten to Sixteen Different Processes to Make One Pin—Turning Out 300 a Minute—Women Are Employed as Inspectors and Sorters.

What becomes of all the pins? It is an old question, and one that has never been answered. Take it in everyday life. Nobody ever willfully destroys or throws away a pin. On the contrary, all tradition is in favor of care in preserving these useful little articles. The connection between good luck and pins is brought out by an ancient Anglo-Saxon saw, which runs:

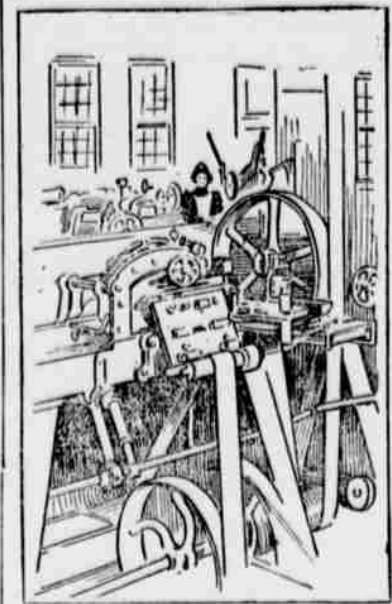
See a pin and pick it up,
And all the day you'll have good luck
See a pin and let it lay,
Bad luck you'll have then all the day.

This may be a little weak in grammar, but the point is obvious enough. Every student of household superstition knows, too, that to come upon a pin lying with the point toward one means bad luck, while the opposite end is an equally potent harbinger of good fortune. And so a long story might be made of the romantic and historical associations of the pin, but lest this prove a tender subject for school-masters, it may be well to turn to the more prosaic and practical side of pinology.

"Can anything be more simple than the making of a pin?" you say, and you hold one up to look at it. There is nothing to it except body, head and point. You may be surprised, then, to learn that this pin in the course of its manufacture passed through from ten to sixteen processes, journeying from basement to roof of a great factory in which are employed hundreds of skilled operatives, all giving their minds and muscles to the task of turning out so simple an object as the ordinary pin. And besides the human workers the industry engages dozens of different kinds of machines, operating with the mysterious and almost intelligent action which makes modern machinery so highly interesting.

It is estimated that nine-tenths of

on in the clasp of this second wheel, the projecting ends pass over the surface of a number of rapidly revolving wheels, which may be described as circular steel files. These wheels



A PIN MACHINE.

grind the end of wire to a neatly tapered point, and after leaving them the points pass across a pumice stone wheel to give them the smoothness which the files cannot impart, and then drop into a wooden box placed beneath the machine to receive them. The process is the same for all grades of pins, except that in the best ones a stream of oil falls upon the points as they pass over the surface of the files. This "pointing in oil" is said to impart a toughness and durability not otherwise obtainable. It will be seen that since the wire was fed into this complicated machine it has passed through four distinct processes—cutting, heading, pointing and smoothing. There are 100 of these machines ranged along the sides of the manufacturing room, each one turning out 300 pins per minute. Not all the machines are like

into it on the opposite side from a big roll. There are raised lines along the roller over which the paper passes and a press descends upon it making a double "crimp" in the paper. At the same time the narrow frame which holds the line of the pins is automatically raised and the pins are neatly thrust through the paper, being released and left in exact and orderly array as soon as they have pierced it.

The long strips of mounted pins are cut into proper lengths as they emerge from the sticking machines and pass on to the inspectors. The inspectors from the court of last resort, where all deformed or injured pins that may by any possibility have escaped the machine, are discarded and thrown out. This work requires the greatest skill, and only experienced hands are employed. It may be said in passing that all the inspectors and most of the workers employed in the sticking department are women. Men do the work in the whitening room and operate the pinmaking machines.

Inspecting the Product.

The inspectors have the lightest and pleasantest room in the factory, for plenty of light and keen vision go together to make their work effective. The inspectors sit in a row before a table. The papers of pins are spread out before them, and they deftly remove all blunt and injured pins, inserting fresh ones in the places. By their work of handling thousands of pins every day their eyes become wonderfully trained, so that they can detect the slightest flaw. Of the pins that they throw out one will be found to have a little hook on the point, another an ill-shaped head, but the imperfections are so slight that the ordinary person, untrained to such work, would not detect one in a hundred. A paper of pins of standard size contains twelve rows, with thirty pins in a row. So deftly and quickly does the inspector do her work that she handles thousands of pins in the course of an hour, yet she almost never overlooks one that contains an imperfection.

After leaving the inspectors, the papers are folded, labeled and packed in cases, ready for shipment. It may have been only two or three hours since the little pin now reposing in its neat case, along with hundreds of its fellows, was part of a coil of wire many rods in length, but during that time it has passed through a dozen different operations and twice that number of pairs of hands.

The process described is that through which the ordinary pin, what may be called the house pin, passes, but, of course, there are endless variations on this usual form. Some of the brass pins are allowed to retain their original color, and these, of course, do not pass through the nickeling baths. Instead, they are boiled in another solution. Then there is the murderous hatpin and others which it is desirable to have a dark color. These are subjected to the treatment known as japanning. From the manufacturing room they go to the basement, where they are placed in a revolving cylinder half filled with the hot japanning mixture. When removed from here they are hung on racks and placed in big ovens under an intense heat, where they are allowed to "bake" for an hour or more. Then they are removed, cleaned in sawdust and henceforth treated like the others.

Safety Pins.

Safety pins require more hand labor than any other kind, and are made by a separate process. The point is sharpened while the pin is still a straight piece of wire. Then it passes through a machine which deftly winds it about an upright steel rod, thus making the spring. The heads are made separately by a machine which stamps them out of long strips of wire, and the two parts are firmly joined by a clamping machine.

No machine has yet been invented that will stick safety pins into the papers, and this part of the work is done by hand. Here again experience lends speed, however, and a girl who is an expert can mount 100 gross of safeties in a day.

The statement that 300 workmen and more than 100 rapid working machines, capable of turning out 300 or more pins per minute, are employed in a single factory gives no adequate impression of the great mountain of pins that is required to supply the market every year.—Washington Star.

Why Orange Blossoms Are Worn.

Much uncertainty exists as to why the orange blossom has been so much worn by brides, but the general opinion seems to be that it was adopted as an emblem of fruitfulness. According to some authorities the practice has been derived from the Saracens, among whom the orange blossom was regarded as a symbol of a prosperous marriage, a circumstance which is partly to be accounted for by the fact that, in the East, the orange tree bears ripe fruit and blossoms at the same time.—New York Ledger.

No great man ever had time to play checkers in the middle of the day.



The boy scrooped on the bicycle bridge, whence all but him had fled. The moon lit up the bicycle wreck, and the boy stood on his head.—Judge.



Kilted Skirts.
The new kilted skirt must be made by an expert dressmaker, as they need to be cut so that there is no fullness around the hips, while the plaits round the feet must set with sufficient amplitude or the effect is ruined.

A Preservering Woman.
Mary Ann Basscombe of Stapleton, Staten Island, is one of the most persevering women in America. Born in a little frame house in Stapleton 56 years ago, she began life at 12 years of age as maid of all work, receiving as wages but \$15 a year. Yet, from this humble beginning she has succeeded, through her own unaided efforts, in amassing a fortune of more than \$500,000.

Cambridge Degrees for Women.
The syndicate of Cambridge university, England, has reported in favor of granting the degree of bachelor of arts to women. It has been suggested that the title of degree might better be changed to spinster of arts in case of the young woman who succeeded in earning it. On the other hand, some one rises to insist that the youthful undergraduates would sooner or later change the name to artful spinsters.

Beware of the Hairpin!
A French scientist announces that the loss of mental balance is often induced by the use of hairpins. The head, especially at the back, is the most sensitive part of a woman's anatomy. Further, that she is likely to fix upon a nerve centre as the permanent spot on which to locate her coils of hair, and thus persistently "jab" with a hairpin the regions which should be kept free from the slightest touch. It is claimed that this is the reason so many are sent to madhouses, with some other cause for their malady assigned.

120 Hats for a Month.
A considerable sensation has been caused at Caunes by the arrival there of the Princess Louise of Saxe-Coburg Gotha, who intends to make a month's stay at that fascinating spot, and who, if rumor may be relied upon, has taken with her as many as 120 hats to wear during that period. She is occupying half of a very large hotel, and it is said that one whole room has been set apart for these hats, while two other salons are devoted to as many as 200 gowns, all of them of the most costly and elaborate description possible. No less than 80 packing cases were employed in the transport of these gorgeous garments, and it is difficult to imagine how many gowns the princess must have left behind in Coburg, if she considers that as many toilettes as these are necessary for a visit of a month only to the sunny South.

Braid Trimmings.
The coats and jackets of the handsomest tailor made gowns are trimmed with heavy mohair braid; but it should be noted that it is put on with restraint, never lavishly. The most frequently repeated motive is to cover the side forms in the back with two rows of the braid, close together, which turn squarely at the top, about a quarter of an inch from the armholes, and at the lower end, an inch or two from the edge, are finished with trefoil loops; these are left loose, not sewed flat. The fronts are usually trimmed in military style, with graduated rows, from three to five, and finished in similar fashion with trefails. It will be noticed that the skirts of these utility gowns are still, as a rule, absolutely plain, as are also those of many dressier cloth gowns, and those of fancy figured silks and rich brocades.—Demorest's Family Magazine.

Sleeves Are Drooping.
Sleeves droop at the shoulders and gradually lessen until they are fairly tight at the wrist, and this cuts off the last resource pocketless women had for disposing of the essential handkerchief. It was convenient to tuck the fine linen square into the sleeve before it became the narrow, pointed, curiously shaped conceit of the moment. Now the tiny bag for carrying the handkerchief is a necessity. Very pretty ones are to be had, crocheted in black or white silk, beaded with minute steel or gilt beads, describing tiny diamonds or blocks. They have flaps at the top with a short beaded fringe, and are large enough to hold the handkerchief and nothing else. All the handsomest bags are beaded, and the majority have very handsome tops of sterling silver or gold, often jewel studded. The latest shopping bag is called a "toggle," for no reason given.—St. Louis Star.

Parasols Are Beautiful.
The parasols this year are beautiful beyond description, and the colorings, combinations and new effects are simply marvelous. The richest and heaviest materials are utilized in strong contrast to the most diaphanous and perishable, and scores of fabrics which in times past were never thought of in the creation of a parasol are now brought into prominent use. The size and shape of this season's models are varied somewhat from those fashion-

HELPS FOR HOUSEWIVES.

Dressing for Poultry.

Make the dressing as usual, and just before stuffing the turkey add one teaspoonful of baking powder. It will make it light, delicate and digestible, a surprise to all who have not tried or tasted it.

In Praise of Parsnip Stew.

In one of Miss Wilkins' delightful stories for children she sings the praises incidentally of parsnip stew. The dish sounded so attractive to one family who read the story that it was promptly tried. A favorite luncheon dish was thus discovered, and one that is often called for during these first spring days. The most satisfactory recipe found was the following: Boil three slices of salt pork an hour and a half; scrape five large parsnips, cut in quarters lengthwise, and add to the pork; boil half an hour longer and add two sliced potatoes. When these are soft the stew is ready to serve.—New York Post.

How to Cook Rice.

Boiled rice—the substitute for bread in Eastern countries—is cooked to perfection in the following way: The grains are washed again and again, until perfectly free from all the starchy matter clinging to them. Water is then heated to a boiling point and kept in a perpetually bubbling condition, and the grains are then carefully dropped in and kept in a constant state of action by the volcano-like bubbling of the boiling water, which keeps them well astir. When a single grain can be crushed between the fingers the rice is done, and is then taken off the fire and drained, being ready for consumption. A little lemon added while boiling blanches the rice beautifully, and a dish of it thus prepared is delicious. Each grain lies apart, and is of snowy whiteness, and its taste so pure that to add flavoring of any kind would be a pity.

Mayonnaise Dressing.

Mayonnaise dressing is made by Miss Colling, the well-known teacher of cookery, as follows:

Put the yolks of two eggs into a cold soup plate, beat or stir a moment with a silver or wooden fork, then add half a teaspoonful of salt, a dash of cayenne, and, if you like it, half a teaspoonful of mustard. Work these well together, then add a few drops at a time, from a half to a pint of olive oil, stirring rapidly and steadily all the time. Stir only one way, as reversing the motion may cause it to curdle. While adding the oil add also, occasionally, a few drops of lemon juice or vinegar. If too thick when finished, add vinegar or lemon juice until it attains the consistency you desire. The more oil you use the thicker the dressing. If the dressing should curdle, begin again with one or two more yolks in another plate, and after stirring well add one teaspoonful at a time of the curdled mayonnaise, and when all has been stirred in continue adding oil as before until the desired amount is obtained. Everything used in making the mayonnaise dressing, dish included, should be ice cold, especially in hot weather.

Household Hints.

Imitation marble paper highly varnished may be washed with cold water and soap.

Look well at your breakfast table, even though there is no one but the waitress to see you.

When you are really hungry for your breakfast you can rest assured you are in excellent health.

Papier-mache, much used for moldings and ornaments in rooms, may be cleaned with soap and water.

The woman who really loves her home will never be reconciled to apartments, no matter how attractive they may be.

Putting vinegar on spinach is considered by some people as an epicurean crime similar to that of adding sugar to lettuce.

Baked potatoes have their starch grains more thoroughly cooked than when either boiled or steamed, and, for this reason, may often be eaten by delicate invalids who cannot touch them boiled.

An odd but effective remedy for food scorched in the kettle is to lift the receptacle at once from the stove and set it in a pan of cold water. In nearly every instance the burned taste will be entirely removed.

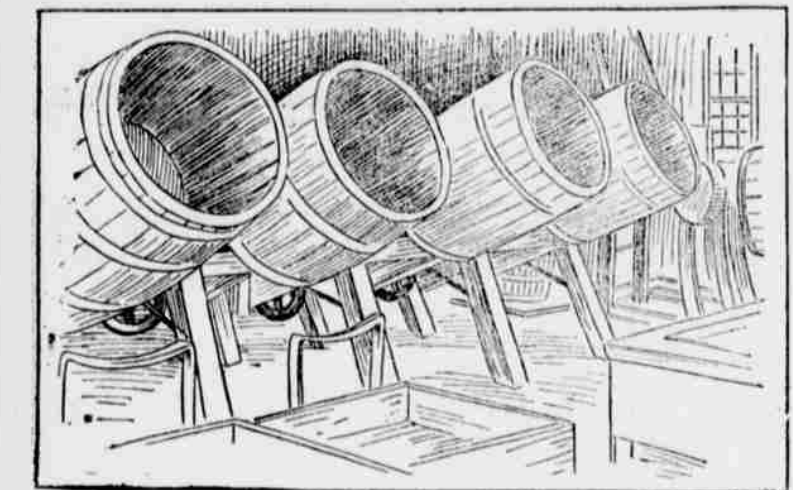
The more you handle puff paste the better it is, according to the authority of a cook; but it must be managed carefully, like delicate tulle, and the fundamental principle is, to keep the air in, not to press it out.

In selecting lobsters and crabs, the housekeeper should bear in mind that the heaviest are the best. Freshly-taken lobsters will respond to the pressure of the finger on their eyes by a strong motion of the claws.

The less plain pie crust is touched the better it is. The under crust of a custard pie may be kept from being soggy by brushing it over with the white of an egg beaten up with a little water, just before pouring in the custard.

Wall paper may be cleaned first by dusting it with a clean cloth and then by gently rubbing it with a stale loaf of bread; the crumb surface should be cut smoothly, the dirty face of the bread being cut away from time to time.

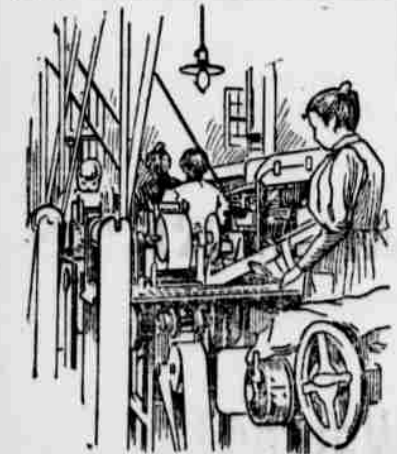
Medium-sized crabs are the sweetest. In perfect condition, the joints of the legs are stiff, and the body has an agreeable smell. In a fresh crab, the eyes are bright and firmly set; in a stale crab, they look dead and seem loose.



TUMBLING BARRELS, WHERE THE PINS ARE CLEANED.

all American pins are made in Connecticut, and the largest pin factory in the country is in that State. The number of pins turned out by this one factory in the course of the year, if placed end to end, would form a line reaching three times around the earth. The total production of the country is about twice this number, or nearly enough to extend in a straight line from the earth to the moon.

The pins make their appearance at the factory in the form of coiled wire packed in barrels. The ordinary pin is made from brass wire, though iron is used for the cheapest grades. The first step in the transformation process is the straightening of the wire. The coils are placed on revolving racks and fed from these into a machine from the vise-like grasp of which the wire emerges perfectly straight. Thence it goes directly to the pin machines, where the most interesting step in the



PIN STICKING MACHINE—PUTTING PINS IN PAPERS.

work of manufacture goes on. The pin machine, like the printing press, combines in one compact piece of mechanism a number of interesting processes.

In the Machine.

As the wire is fed into the machinery it encounters a sharp knife, which cuts it off into uniform lengths of whatever size may be desired. As each little length of wire drops from the knife it falls upon a wheel, perhaps ten inches in diameter, set upright in the frame of the machine. The edge of this wheel is notched into a number of little grooves, each one just large enough to hold one of the bits of wire. The embryo pins settle into these grooves and are carried along by the revolving wheel until an iron thumb and finger seizes and holds them firmly, while an automatic hammer, by a single smart blow, puts a head on one end. Then they fall upon another grooved wheel, which revolves horizontally and looks like a miniature barbed wire with the bits of wire projecting from its rim. As the wires move