HOW PINS ARE MADE.

When you look at one of those little insignificant pins, do you ever think that a great deal of trouble was taken to get it just right? Well, it takes a great deal of work to make a perfect pin.

First, a reel of brass wire is taken of suitable thickness. The wire passes over a straightening board, after which it is seized by two jaws, and a cutter descends and cuts it off, leaving a projecting part for a head. On the withdrawal of the cutter a hammer flies forward and makes a head on the pin; then the jaws open and the pins drop on a finely ground metal plate, with the heads upward, until the end to be pointed comes into contact with a cylindrical roller with a grinding surface, which soon puts a fine point on the pins. They then fall into a box ready to receive them, and are ready for the second stage. After they are yellowed or cleaned, they are tinned, or whitened, as it is called. The pins are now ready to be placed in papers. One girl feeds a machine with pins, and another supplies the machine with paper. The pins fall into a box the bottom of which is made of small, square steel bars, sufficiently wide apart to let the shank of the pin fall through, but not the head. As soon as the pins have fallen through the bottom of the box and the rows are complete, the bottom detaches itself, and row after row of pins is sent at regular interals to be placed in the papers. Meanwhile the paper has been properly folded and pierced to receive the pins, which by the nicest imaginable adjustments come exactly to their places.

Pins were first used in England in the 15th century. They were first made of iron wire, but in 1540 brass pins were brought over from France by Catherine Howard, Queen of Henry VIII. At first pins were made by filing a piece of wire, and by twisting the other end.

There were several inventions previously for holding together parts of the dress, such as buckles, brooches, clasps, hooks, etc. They are very costly to make, but our readers think nothing now-a-days of a pin, unless they happen to sit on the point of it, in which case they usually say what they think without being questioned.—*Treasure Trove.*

HE who waits to do a great deal of good at once will never do anything.—*Samuel Johnson.*

MAKING GLOBES.

The material of a globe is a thick, pulpy paper like soft straw board, and this is formed into two hemispheres from disks. A flat disk is cut in gores, or radical pieces, from centre to circumference, half of the gores being removed and the others brought together, forming a hemispherical cup. These disks are gored under a cutting press, the dies of which are so exact that the gores come together at their edges to make a perfect hemisphere. The formation is also done by a press with hemispherical mould and die, the edges of the gores being covered with glue. Two of these hemispheres are then united by glue and mounted on a wire, the ends of which are the two axes of the finished globe. All this work is done while the paper is in a moist state. After drying, the rough paper globe is rasped down to a surface by coarse sand-paper, followed by finer paper, and then receives a coating of paint or enamel that will take a clean, smooth finish.

The instructive portion is a map of the world, printed in twelve sections, each of lozenge shape, the points extending from pole to pole, exactly as though the peel of an orange was cut through from stem to bud in twelve equal divisions. These maps are obtained in Scotland generally, although there are two or three establishments otherwheres which produce them. The paper of these maps is very thin but tenacious, and is held to the globe by glue. The operator—generally a woman—begins at one pole, pasting with the left hand and laying the sheet with the right, working along one edge to the north or other pole, coaxing the edge of the paper over the curvature of the globe with an ivory spatula, and working down the entire paper to an absolutely smooth surface.

As there are no laps to these lozenge sections the edges must absolutely meet, else there would be a mixed up mess, especially among the islands of some of the great archipelagoes and in the arbitrary political borders of the nations. This is probably the most exact work in globe-making, and yet it appears to be easy because the operator is so expert in coaxing down fulnesses and in expanding scanty portions, all the time keeping absolute relation and perfect joining with the other sections and to their edges. The metallic work—the equators, meridians and stands—are finished by machinery. A coat of transparent varnish over the paper surface completes the work, and thus a globe is built.—*Scientific American.*

OUTLINE DRAWING LESSON FOR THE YOUNG.
(*From a photograph*).

BUOYS.

Many of our young readers will be likely to take excursions by water this summer, and they will notice that upon entering any harbor there are buoys of different colors, on either side of the channel. Those on the right hand are invariably painted red and those on the left, black. A buoy with horizontal stripes of both red and black indicates the centre of a very narrow channel, to which a vessel should keep as close as possible. Red and black vertical stripes show the locality of spits, or small points of land running into the sea, and of reefs. A buoy having red and black checks is to give warning against a rock or some other obstruction. In case of two such obstructions, with a channel between, the buoy on the right will have red and white checks, and the one on the left, black and white checks. A green buoy is used to mark wrecks and has the word "wreck" painted in white letters upon it. By the way, would it not be a nice plan to have boys so marked that one could tell at a glance what they are good for? Indeed we believe they are if one looks sharp.—*Congregationalist.*

THE KITCHEN-GOD.

Among the many gods of the Chinese is the kitchen-god. They put up a new one every New Year's Day, when they burn the old one. They think that this god takes care of everything in the kitchen and if the fire don't burn, or the bread is baking to fast, or there is any trouble, they scold and beat the god. When he is burned, they think he goes to heaven, and tells all that has happened in their kitchen for a year; so sometimes they daub molasses on his mouth before they burn him, and they think then he can't tell. What sad ideas these people have of God and of Providence!

EVERY duty which is bidden to wait returns with seven fresh duties at its back.—*Charles Kingsley.*