to be red hot dippers of molten gold and pouring the flaming liquid into iron molds, a little more than a foot long and two inches in thickness. Three of these molds are fastened together, and three golden ingots are thus molded at one time. We stop and watch the process. It makes us think of that of cooking waffles. The molds are first laid open and greased with lard. They are then locked together with iron bands, stood upon end, and the yellow liquid poured into them. The metal hardens as it strikes the cold iron, and a moment later the molds are opened and the ingots are dropped out upon a table to be seized with a pair of pinchers and plunged into cold water. They come out steaming hot, but soon cool, and later on we have a chance to handle them. We find that each of them looks like a chisel or wedge. It is twelve inches long, half an inch thick, and about two inches wide. The width is graduated according to the size of the coin to be made from the ingots Those we see molded are for twenty-dollar gold pieces, and each ingot is worth, we are told, about $1,400.

As we watch the workmen ladleing out gold like so much water we notice that now and then a bit of the precious metal splashes out and falls to the floor, and we wonder whether there is not some way by which the employes might steal themselves rich. We ask the melter and refiner whether thefts of small amounts of gold are not common. He replies that such a theft would soon be detected, and shows us how every day this room is charged with every bit of gold that comes into it, and how it must give back as much as it gets. He points to the floor, which is covered with an iron network of a honey-comb pattern, the cells of which, an inch in diameter, are raised about half an inch above the floor, so that every bit of gold which falls drops down within them.

Says he: "No one could pick up a grain of gold out of that network without being seen. Some years ago we had only bare floors, and in one of the mints we found that we were losing gold. The leak could not be discovered, until at last the detectives noticed that one of the furnace men was spending more money than his wages warranted. He was buying real estate and was living at an extravagant rate. He was watched, and it was found that he was in the habit of putting shoemaker's wax upon the soles of his boots. Whenever he saw a bit of gold or silver upon the floor he would carelessly step upon it. The precious metal would sink into the wax and stick to his feet. That night he would scrape it off, get out the gold, and come back the next day with a fresh coat of wax for more. With this floor such a thing is not possible. The rooms are swept every day, and the sweepings of this mint amounts to about $10,000 a year. We save every bit of the ashes Our old pots are broken up and remelted, and every bit of gold gotten out. We have, in fact, a record of almost every atom of gold which comes into the mint, from the time it enters the deposit room until it goes out in coin or bullion."

But let us follow the golden ingots we have just seen drop from the molds. They are of the right standard of fineness for gold double eagles, and it would seem that the process of turning them into money would be simple enough. We have the idea, held by many, that our coins are made by casting, the gold and silver being melted and turned into molds, just as in the making of bullets, save that, when the molds are opened, out drop gold dollars and silver dollars, instead of balls of lead. There was never a greater mistake. Our coins are not molded. They are stamped out of cold metal, and an enormous pressure puts upon their faces the beautiful images of the Goddess of Liberty and the American eagle. The gold ingots, gold chisels, wedges, or whatever you choose to call them, are first rolled between cylinders of steel, so graduated that the ingots grow smaller and smaller as they are pulled through them until at last they reach the thickness of a twenty-dollar gold piece. They also grow longer and longer, and they have now been stretched from one foot to between three and four feet in length. As they come from the rolling machines they look like so many strips of hoop iron, save that they are yellow. They are next carried to what might be called the puncher. You have seen the punchers by which cookies, animal crackers and gingerbread men are made out of dough. Well, it is on the same principle that the yellow disks; out of which the coins are made, are cut out of the strips of metal rolled from the ingots, save that the work here is done by machinery, and a heavy press of steel does the cutting. The strips are run under a vertical steel punch, which cuts round pieces of gold out of them at the rate of about sixty a minute, or at the rate of twenty dollars' worth of gold every second. As the disks are cut out they fall down through a hole into a box below, and the remainder of the yellow strip out of which they are cut is taken away to be melted up to make more ingots. As we look we note that the box under the machine is now filled with these round gold blanks They have, as yet, no marks upon them. They are not milled, and there are a number of processes through which they must go before they can be turned into money.

In the first place, every one of those gold disks or blanks must be weighed by hand to see that it is of just the right weight before it is stamped. This is done with blanks of both gold and silver, the blanks for the silver dollars being handled again and again to be sure that they are accurate before they are sent to be made into coins. We follow the box of these round pieces of gold to what is known as the adjusting room. This is an immense hall, in which there are a number of long tables, covered with piles of gold blanks. About the tables sit one hundred women, each having one of these piles before her. Each woman has a pair of small scales, so sensitive that a breath of air would affect their accuracy. With these she weighs each blank. If the balance is perfect, the gold blank is dropped into a box containing those ready for coining. If it is a trifle too heavy the woman rasps some gold off its edge with a flat file. If it is much too heavy, or much too light, it is thrown out to be melted over again. This process goes on until every disk in the box is weighed. The perfect disks are now ready for coinage.

The milling of the coin is the first operation. By this is meant the making the little raised edge which you find around all our coin The process is a singular one. The blanks are dropped into an upright tube, whence they fall into a groove in a steel table, and are carried along between the rim about the edge of the table and a rapidly revolving horizontal wheel. The distance between the wheel and the rim is a trifle less than the diameter of the disk, so that in the revolution the edges of the golden disk are forced up, thus forming the raised or milled edges. There are no little grooves on the edges as yet. This is left for the coining machine. As they come from the milling the disks are merely round pieces of gold with raised edges. They look dirty and they have to be polished and cleaned before they are stamped.

In company with the coiner we go to a room on the lower floor, where the gold is washed before coining. The yellow blanks are carried down stairs in wooden boxes and are emptied into a big copper colander. the lid of which can be tightly closed. When the colander is nearly full it is raised by machinery and dropped into a vat of acid. The acid quickly eats off the dirt, and fifteen minutes later the coins are bright and shining. The colander is now raised and dropped several times into a bath of clear water to get rid of the acid, and the washing is complete. The drying is done in a hot cylinder. This cylinder is half filled with sawdust. After the coins are dumped in it is made to revolve by machinery, and, as the disks become dry, they are thrown out into a barrel of wire netting, through the meshes of which the sawdust drops, and from which the golden disks, now of a beautiful pure yellow, flow on into a box, in which they are carried up stairs to be coined.

Now comes the stamping of the blanks with the impressions which turns them from disks of gold into gold eagles. This work is done by what is known as the coining machine. The golden blanks are fed through a tube, which drops them down one at a time on what might be called a little brass table. As the yellow disks drop a steel finger and thumb comes out from the machine and grasps it and places it between two dies, which move up and down between enormous steel arms. The upper die bears the picture of the Goddess of Liberty and the lower that of the American eagle and the lettering of what might be called the tail side of our gold pieces. As the disk comes between these two dies an enormous pressure is exerted. The dies squeeze it and a second later they drop it, with a perfect impression of one of our gold double eagles upon. At the same time the machine carries it off and drops it into a box provided for the purpose, while the steel feeders have placed another blank between the dies. The gold coins are now handed over to the counters. They are separated into two classes—known as lights and heavies—for some weigh just a trifle more than others. The light ones and the heavy ones are mixed together and then stored away in little bags ready for shipment to the banks in the United States or to the sub-treasuries, as may be demanded.

Frank G. Carpenter

PREACHING IN PENNSYLVANIA.

CARBONDALE, Pa., October 17, 1896.

Realizing that but little is known by the people in Zion of the work that is