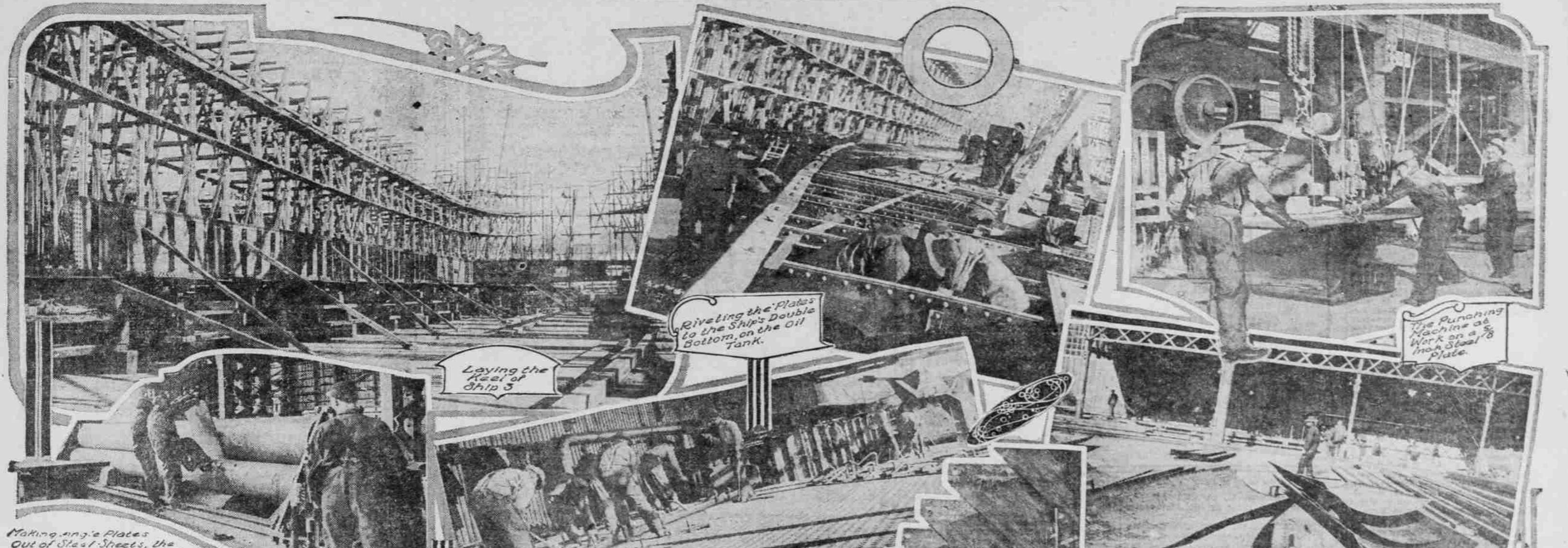


STEEL SHIPBUILDING HERE PROMISES TO BE VAST INDUSTRY

Each Part Shaped at Northwest Company Plant by Huge Machines That Work With Amazing Accuracy—Project May Grow to Involve \$30,000,000 Annually.



Making angle plates out of steel sheets, the top roller weighs 40 tons.

Laying the keel of the ship.

Riveting the plates to the ship's double bottom, on the oil tank.

Hammering a U-plate into proper shape, furnace where steel is heated in the background.

Taking steel from cars and loading it on racks.

Riveting plates to the skeleton of the ship.

The fabricated steel, punched and ready to take its place on the ship.

STEEL shipbuilding is a new industry for Portland that will, when in full swing, contribute vessels with a valuation that will surpass the sum represented by the entire grain crop of the territory draining into Portland.

The titanic magnitude of the scheme that Portland has just entered can be best grasped by a visit to the yards of the Northwest Steel Company, at the foot of Sherman street. The industrial side of shipbuilding, with its substantial share in boosting Portland's payroll and employing thousands of workmen who otherwise might be idle, is immense and will reward scrutiny.

The actual construction of the steel ships, three of which are now under way, with others contemplated, has interested hundreds of spectators and merits explanation.

All of the steel used in the construction of the ships is received at the yards of the Northwest Steel Company rolled. None of the pieces are shaped or punched. This work is done in the company shops that cover some four acres of ground.

4000 Tons Received Monthly.

The steel comes from all over the United States, from those steel mills that offer the best price for the particular piece needed. The steel comes in all sizes and lengths and thicknesses, according to that is needed for the ship's construction. It comes at the rate of 4000 tons a month, it is loaded onto cars at the steel mills and unloaded from those cars at the shipbuilding yards of the Northwest Steel Company.

The steel is raked according to size and length. Each piece bears a mark that acquaints the workman what part of the ship the finished piece of steel will occupy. While the steel is being raked the workmen have an opportunity to check the pieces to discover

possible errors in making up the order. From the racks the steel is taken to the shops, where it is bent into the proper shape and punched in preparation to be placed in the ship. The steel is handled by cranes operating with steam locomotives upon fixed tracks.

Girders Bent in Furnace.

Steel girders that need bending are taken to a furnace, where an intense heat is maintained. The long pieces of steel, some of them 40 feet or more, are put in the furnace and heated to the temperature that allows workmen with sledge hammers to hammer them into the proper shape.

If the steel needs to be rolled into half or quarter circles it is taken to a huge rolling machine. This machine resembles the rollers on a wash ringer. The upper roller weighs over 40 tons and is capable of prodigious exertion. It bends a huge steel plate into the proper curve with remarkable celerity and accuracy.

When the material is ready for use in the ship it is placed at the head of the ship and transported to its place in the vessel.

Aerial cranes and other mechanical devices are used in great numbers in the transportation of material around the yards and everywhere in electricity and steam exerting its energy.

Heavy Machines Shape Material.

Numerous kinds of heavy machines are necessary for the fabricating of the material from its plain shape to its final size, shape and condition. One of the heaviest of the machines is the punching machine. It has the capacity for approximately 35 holes per minute and those holes are punched through plates of steel all the way

from three-eighths of an inch to an inch in thickness. After the holes are punched they are enlarged to receive the rivets from a steel drill that forces its way through the heavy metal.

When the plates, girders, angles and bars are all fabricated the rest of the work is a matter of assembling and riveting.

The keel of the ship is the first steel that is laid. Then comes the skeleton of steel for the double bottom, or that part of the ship where the oil is stored. The oil tank extends the entire length of the ship and has a capacity of 1500 tons of fuel oil, or enough to carry the

vessel within a steaming radius of 16,000 miles. The lower and upper deck skeleton and the floors are laid after the skeleton for the double bottom and then the plates are riveted to the skeleton.

CHRISTMAS SPIRIT INVADES WORKING GIRLS' HOMES

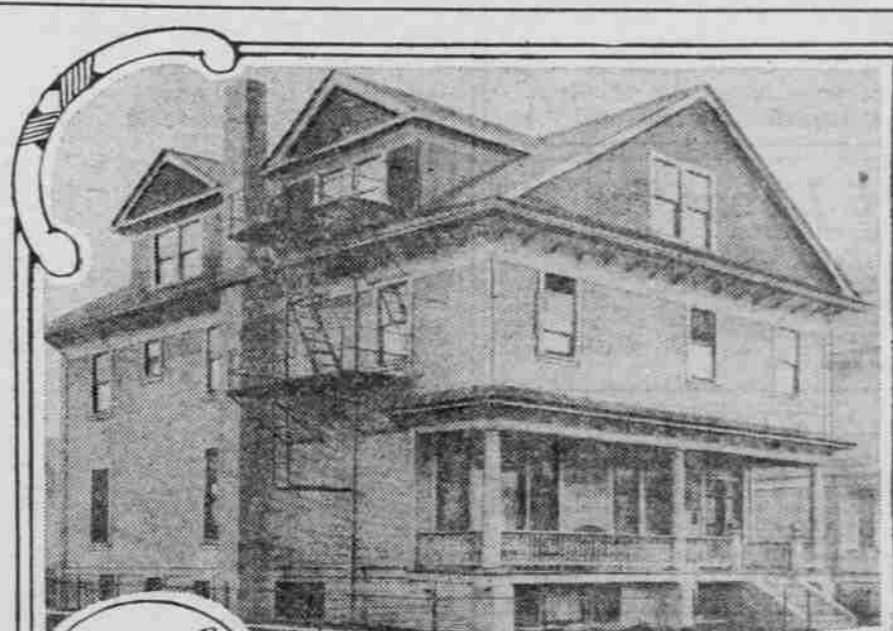
CHRISTMAS is coming and you ought to see the bright young faces about the Maude B. Booth Home for Working Girls, at 12 East Seventh street. They aren't just thinking of themselves and about whether or not they will have a merry time during the holidays. They sit about and read evenings and sew and each Jessie keeps her own little secret about what she's making for Christmas.

But what is an open secret about the house is the little toy's Christmas tree at the Larrabee Day Nursery, next door, which is every year decorated by the girls of Booth Home, of whom there are usually 40.

Rooms Are Cheerful.

The rooms are cheerful and pennants and pictures, odds and ends and novelties transform the sleeping rooms into as cheery a place as any college girl enjoys. There's a piano in the big living-room and comfortable big chairs and tables and books. There the girls entertain their guests until 10 o'clock. The dining-room downstairs is clean and bright. Everything about the place, from the tubs and ironing boards downstairs for the girls' convenience to the big living-room, with its many books, bespeaks the preservation of the ideal home atmosphere. The girls receive room and board at the home for \$1 a week and many are kept without charge until they can find employment.

Many of the girls have been there for a long time and some have gone out of the home working for the Volunteers of America. No girls is allowed to stay at the home unless she is good and refined enough to obey the rules. They are not obliged to come, but are welcome to services each morning and at other times.



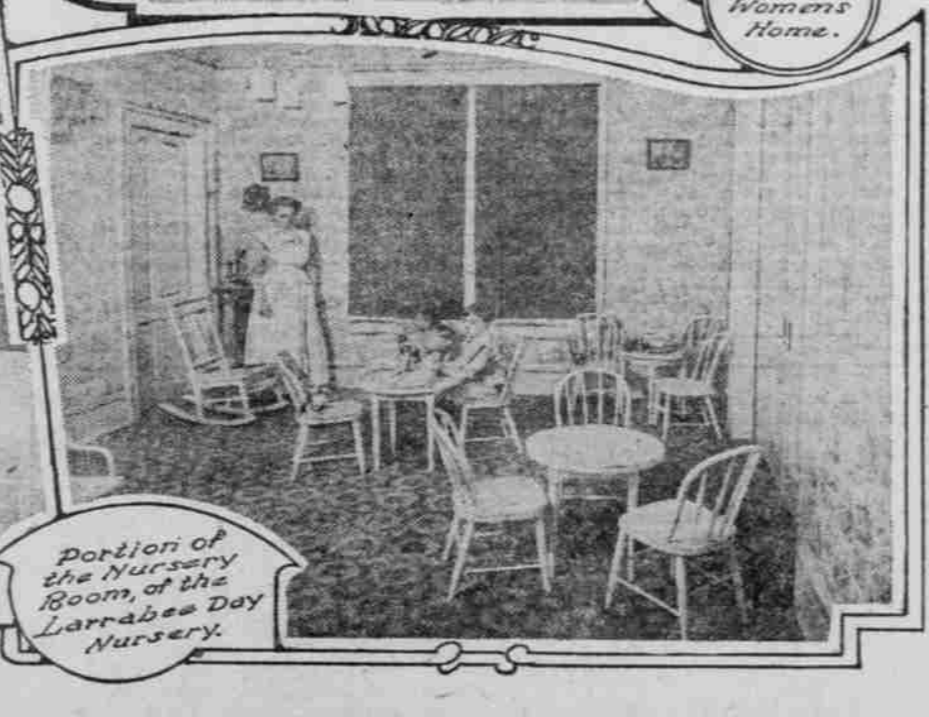
Maude B. Booth Home.



Living Room of Booth Home.



One of the 22 Bed rooms of Women's Home.



Portion of the Nursery Room of the Larrabee Day Nursery.

Public Library Notes. The little folk stories and shows them games. Quite another feature of the work of the Volunteers of America is the prison relief work of the Hope Halls for the reformation of the discharged prisoners. There are only a few in the country. But through the Hope Halls hundreds of thousands of men to new, brighter lives and clean moral habits. They stand as a bulwark against the old associates who try to draw down the retaining wall.