scene of a shepherd with a crook in his hand, sitting on the right with two ewes and a lamb. The other spandrel represents the triumph of Ceres, and is on the north front. Ceres, the central figure, is represented as standing erect, holding a sheaf of wheat in her left hand and a shepherd's crook in her right. Further down on the pediment are other reliefs. On the left is a reproduction of Flora, Bacchus, and other mythological deities seated in a chariot drawn by two tigers. Over against this relief on the right hand is a figure of Mercury and pastoral deities in a car drawn by two dragons. The statuary is all the work of William Philip Martini of New York, with the exception of Diana, which is the work of Mr. Augustus St. Gaudens.

In addition to these decorations and ornamentations in staff, there are six mural paintings on the exterior walls, four on the west face and two on the east. These paintings consist of female figures gracefully draped, with flowers and fruit in their hands typifying the fruitfulness of nature. These paintings were executed by Mr. George W. Maynard. In the main entranceway are four mural paintings similar to the others in style and effect. One of these, representing "Fertility," carries a sheaf of wheat and a basket of fruit. The other figure, "Abundance," carries a shock of grain in one hand, while in the other there is an overturned horn of plenty, from which fruit and flowers are flowing out in abundance. Two other figures painted on the side walls of the entranceway represent mythological beings. One is a male figure driving a chariot drawn by dragons, the other a female figure in a chariot drawn by lionesses. The ornamental painting in connection with these figures was done by Charles Schladermaundt.

Thirty-seven States in this country and thirty-five foreign nations and states have exhibits in this building. The interior arrangement is such as to provide over fourteen acres of desirable space for purposes of exhibiting.

AN IMPROVED UNICYCLE.

A wheel which can be easily steered and propelled, and which is designed to enable a rider to attain a high rate of speed, is shown in the accompanying engraving, and forms the subject of a patent issued to Mr. James Imlah, of Barre, Vt. This wheel has an inner wheel supporting a suitable framework and having a double rim, the two parts of which engage ball bearings of inner annular flanges connected by spokes with the tire of the outer wheel, so that as the latter travels on the ground the inner wheel rolls off on the flanges, and the rider in his seat holds the framework in normal position, the inner wheel not revolving. Between the two ball bearings in the rim is an internal gear in mesh with a gear wheel on a shaft in the framework, a sprocket wheel on this shaft being connected with a similar wheel on the treadle shaft, by the operation of which the large gear wheel is rotated to give motion to the exterior wheel. By means of a brake lever pivoted on the steering lever, a brake may be applied to the shaft of the large gear wheel to stop the machine. The steering lever is arranged in front of the rider's seat, and by means of the mechanism connected therewith friction rollers may be brought into engagement with opposite edges of the double

IMLAH'S UNICYCLE.

rim, the roller coming in contact with one edge of the rim, turning the wheel in the opposite direction, and when engaging the other edge moving the wheel in the reverse direction. One can easily get into the machine by turning the framework half way around, allowing the saddle to come back into place after stepping in.

THE PEARL BUTTON INDUSTRY.

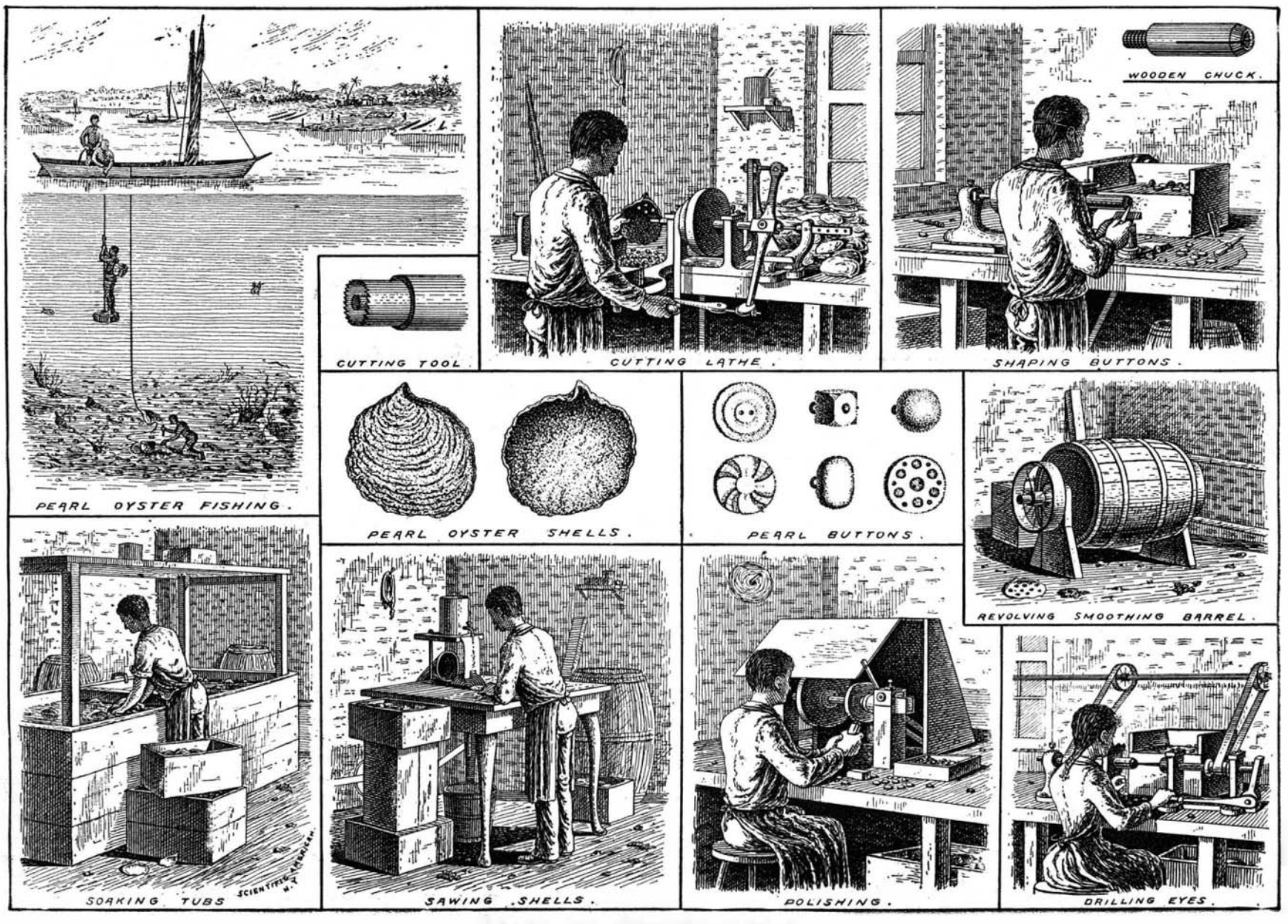
The pearl oyster shells from which pearl buttons are made come principally from the coast of Australia and the South Pacific islands. The oysters are gathered in the spring, beginning in the month of March and ending in May. Fully 200,000 persons are employed in gathering the oyster during the season. When the boats arrive at the grounds, the divers are stripped naked and well oiled; their noses and ears are stuffed with cotton and a sponge dipped in oil fastened to one of their arms. Armed with knives, they and their baskets are then lowered to the bottom of the sea by means of large 40 or 50 lb. stones attached to ropes. The divers remain under water from 50 to 80 seconds. As soon as a basket is filled it is drawn up and the diver comes up to the surface. After resting a few moments he again descends, filling the basket again, and so on until he becomes exhausted, when another man takes his place.

The fishing is done in about 8 to 10 fathoms of water. The shells are imported into this country. There are two varieties. the white and the black or smoked pearl. They run from 2 × 3 inches to 6 × 8 inches in diameter, the largest of the shells being about a half inch in thickness near the joint. The shells are very brittle when they arrive in this country, and have to be soaked in water before they can be worked. This soaking brings them back more to their natural state. After soaking in tubs they are taken to the cutting lathe.

The operator, taking the shell in one hand, by means of a lever forces a hollow saw-edged tool against the shell, which cuts its way through, the circular piece dropping out of the hollow tool when drawn back by the lever. This operation is continued until the entire shell is perforated. The teeth of this sawing tool are 1-32 part of an inch in length.

These circular pieces are then taken to another lathe to be trimmed and formed. The circular piece of pearl is placed in the end of a slotted dogwood chuck which is hollowed out the same shape as the button. The attendant, by the use of sharp-pointed tools made of saw files, trims and forms the button as it revolves. Fancy designs on the faces of the buttons are made with ball and circular saw-shaped tools, which are placed in lathes, the operator holding the button in his hands and pressing it against the tool as it revolves. The drilling of the eyes is also done on a lathe, the button being placed in a chuck similar to that on the forming machine. The attendant by means of a lever forces the drill against the button, which cuts out the eyes.

For smoothing off ridges the buttons are put into a revolving barrel with a mixture of powdered pumice stone and water. The polishing wheels are 6 and 14 inches in diameter and made of 54 separate pieces of unbleached muslin clamped together at the center on the shaft of the machine. The revolving of the shaft causes the circular pieces to stick together, forming a perfect wheel. The attendant puts a button in the end of a small wooden chuck, rubs a little rouge made of a mixture of tripoli, flour and tallow, and presses it up against the muslin wheels, which give it a beauti-



THE PEARL BUTTON INDUSTRY.