legs, but they all got over it, either by suffering for a few days outside, or by applying the heroic mode of returning into the caisson at once, as soon as the pains manifested themselves, and then coming out very slowly.*

The shortening of the hours of labor produced the best results in keeping the men in good condition, but even this was not necessary for all constitutions, because some could remain below with impunity for six hours at the highest pressure.

After the locks were passed the men had their choice of coming up either by an elevator or by circular stairs.

During the winter months all tendency to congestion of the lungs, owing to the sudden change of temperature in coming out of the locks, was controlled by means of steam coils in the latter, so arranged as to warm the air when coming out of the lock and to cool it when passing in.

The general condition of the air below was very pure, due to the absence of candles and illumination by gas alone.

Mr. Collingwood found that as the pressure increased the gas-burners gave more light, and at thirty-five pounds a one-foot burner gave as much light as a four-foot burner outside. We therefore had a maximum production of light with a minimum production of irrespirable gases.

The services of Dr. A. H. Smith were engaged for the purpose of attending to all caisson cases and examining new candidates for work below. He has been quite successful in

* Among the numerous explanations offered, as to the causes of these pains, the most satisfactory one seems to be that of Prof. Rameaux, of Strasburg, in whose opinion these accidents are due to the fact that the normal gases of the blood (carbonic acid, oxygen and nitrogen), dissolve themselves to a high degree under the influence of extreme pressure, and return into a gaseous state as soon as the pressure is reduced to one atmosphere, obstructing the views and exposing the patient to the same dangers that would be produced by an injection of air into the veins.

A rather severe personal experience of the writer, resulting from a stay of several hours in the New York caisson, would seem to confirm the above view to some extent. Relief from the excruciating pain was afforded in his case by a hypodermic injection of morphine in the arm, where the pain was most intense, and a further stupefaction by morphine, taken for twenty-four hours internally until the pains abated.