



## The Detroit Aquarium

By RICHARD J. CONWAY,  
Director of the Aquarium.

This aquarium is located on Belle Isle, a beautiful park situated in the Detroit River, connected with the city by a bridge. A regular auto-bus line runs every day in the year from the city to the aquarium, a distance of one and one-quarter miles. During the summer months a line of ferry boats furnishes an additional means of access.

The building is two hundred and sixty feet long and seventy-two feet wide; the grotto contains forty-four wall tanks, three large pools and three floor tanks. Twenty-two of the wall tanks are used for marine specimens; the pools are used for large fishes and harbor seal; the remaining wall tanks are used for fresh water specimens.

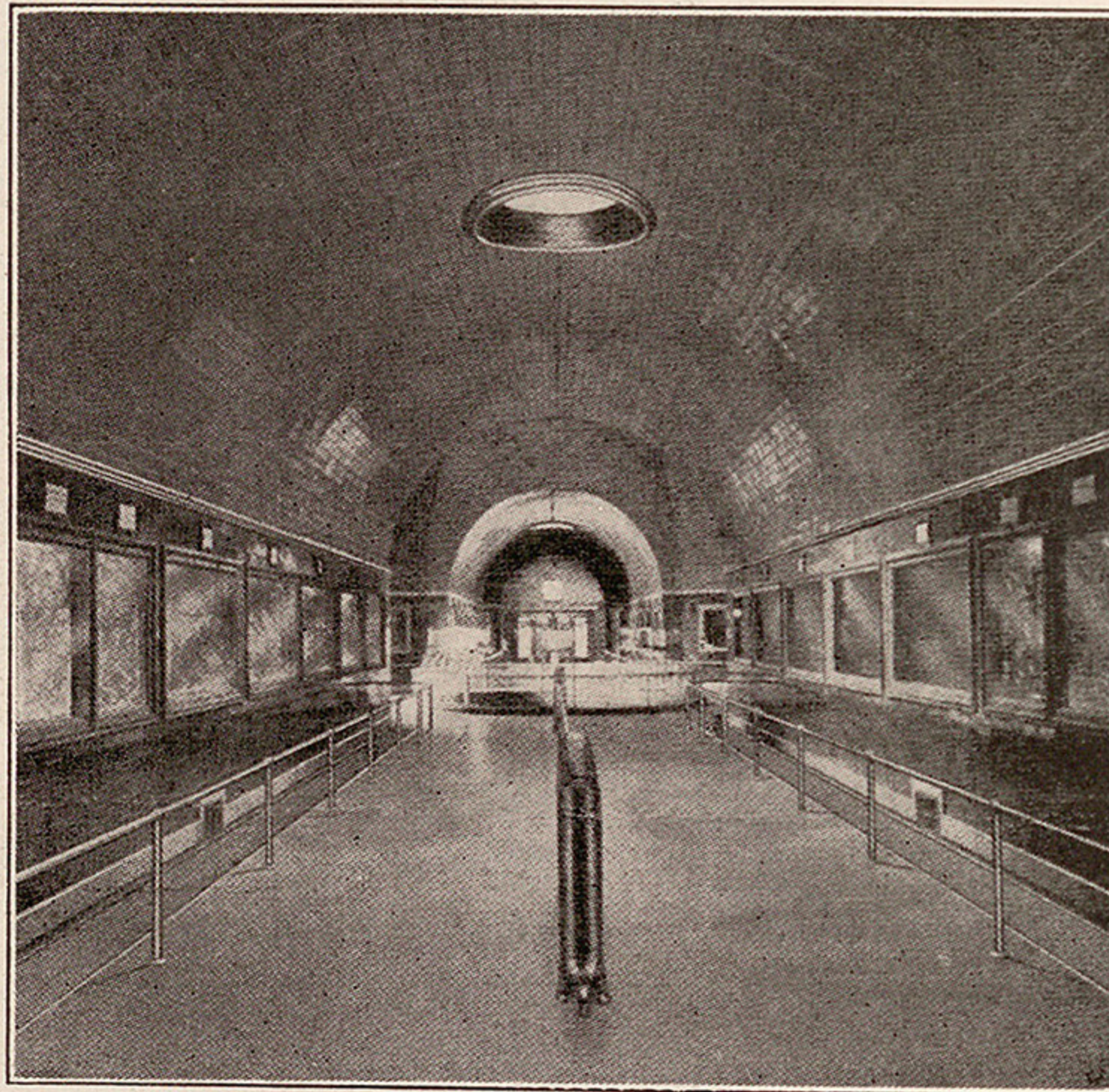
The fresh water supply is received from the city waterworks. The salt water used here was brought from the Atlantic Ocean about nine years ago, and has been in constant use since that time. The only addition to this supply is that which occurs when marine collections are made, when the water in which they are transported is filtered, and then put into a reservoir for use when needed.

A small fish hatchery is in operation to show the methods used in hatching

trout and white-fish eggs, also for hatching, for exhibition purposes, such trout and other eggs as are not found in our locality. Through the operation of this hatchery, species of trout not found in the waters of our state have been introduced.

The fish exhibited are collected from the many localities. Most of the fresh water fish are brought from the Great Lakes, inland lakes and their tributaries. The salt water species are collected along

the Atlantic coast, from Maine to Bermuda. Many of the Bermuda fish are especially beautiful. We have in our exhibit some specimens that have been in aquaria tanks containing about four hundred gallons of water for eight years, and as yet have not shown any signs of distress. They



GROTTO—AQUARIUM

appear to be contented, feed regularly, and have increased in size and weight more than four hundred per cent. This species is the Golden Ide (*Idus idus*).

Other specimens that have been kept in the tanks for seven years, such as the Muskellunge, do not show much increase in either size or weight. Data were kept of the amount of live food consumed by one of these specimens weighing seventeen pounds, and it was found to be satisfied with one and one-half pounds of food per week during the summer



months, when it was most active; in the winter months less than one pound per week sufficed.

Much has been said by aquarists about the food of the white-fish under these conditions. We have kept white-fish in aquaria tanks for over three years; this, I think, is the record. We have tried to induce them to take live minnows, yet I have never seen any of them take one, or even attempt to catch one. I have known this species to live in aquaria for six months without taking any food at all. Later we induced them to take raw beef.

I believe that the Sea Horse attracts more attention from the visitors than any other species we exhibit.

The aquarium was built by the city of Detroit, at a cost of about \$115,000.00; the cost of maintenance is about \$11,500.00 annually. It was opened to the public August 18, 1904, and is open to visitors every day in the year. Since the opening day, 6,857,874 persons have visited it, an average of 2,341 per day. These figures prove without a doubt that it is the most popular institution in the city.

In conclusion I may say that I am at a loss to know why more cities do not establish aquariums. In my opinion the result in advertising a city and furnish-

ing instruction to the people is most invaluable.

### Useful Receipts

By CHAS. VON EFF, Brooklyn.

The following cements I have used, and know to be exceptionally good. If properly made and applied they will never leak a drop. Formula No. 1 should be applied while quite warm so that it will thoroughly take hold of both frame and glass; in fact, it is good

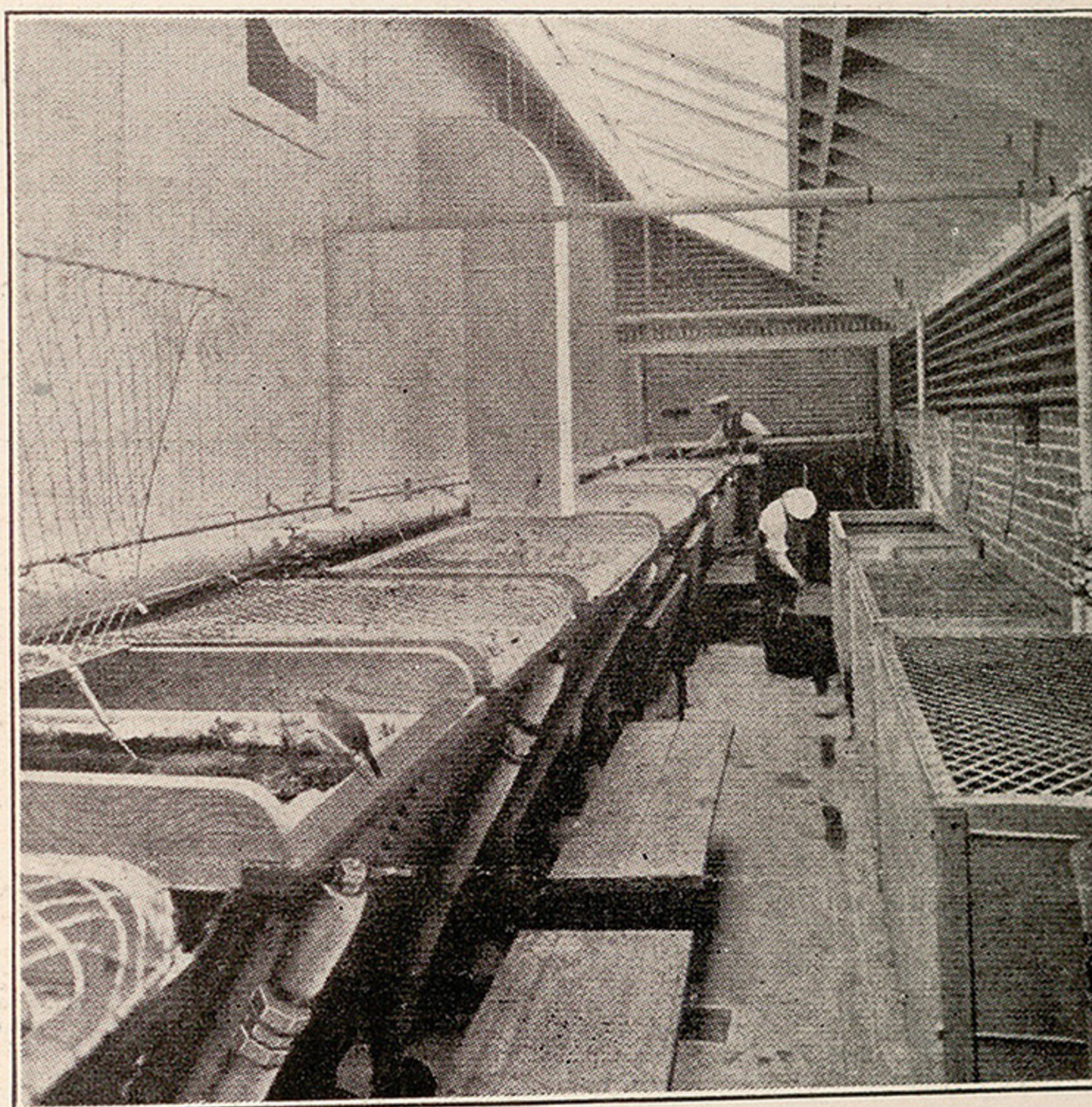
policy to warm glass and frame before cementing.

CEMENT No. 1  
—1 oz. boiled linseed oil; 4 ozs. hard black tar; 1 oz. tallow; 1 lb. resin. Mix well and heat only enough to melt thoroughly.

In making up cement No. 2, heat the oil and dissolve the resin in it; then mix in the other

ingredients and work thoroughly. When the mixture has attained a sticky condition mix in enough glazier's putty to make possible cleanly handling. This cement must be kept warm until used, and should not be mixed up until you are ready for it, as it sets in an hour or two. When this cement is carefully mixed and properly used it is the most satisfactory cement known.

CEMENT No. 2.—8 ozs. litharge; 6 ozs. plaster Paris; 6 ozs. Portland ce-



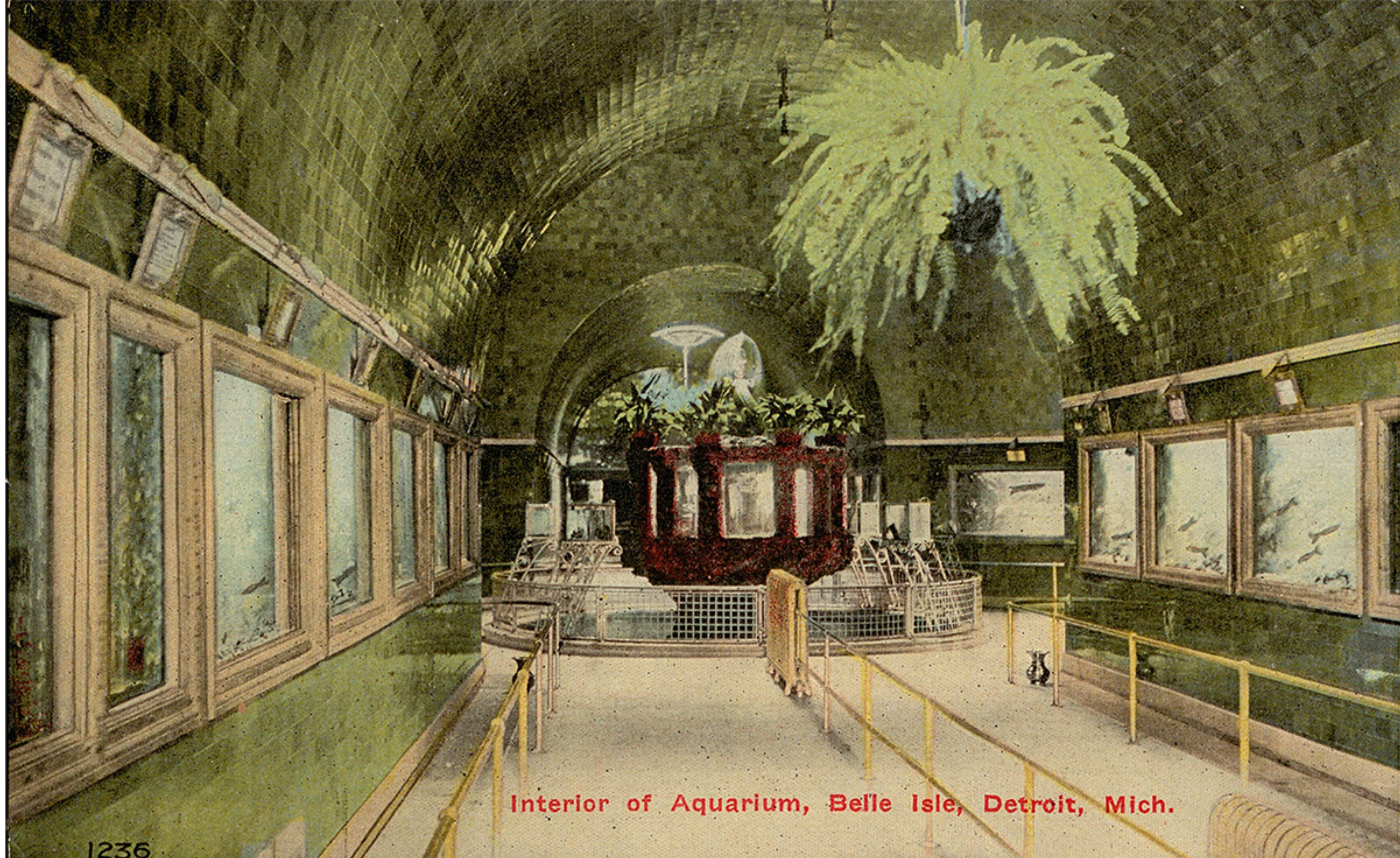
ATTENDANTS' PASSAGE—AQUARIUM

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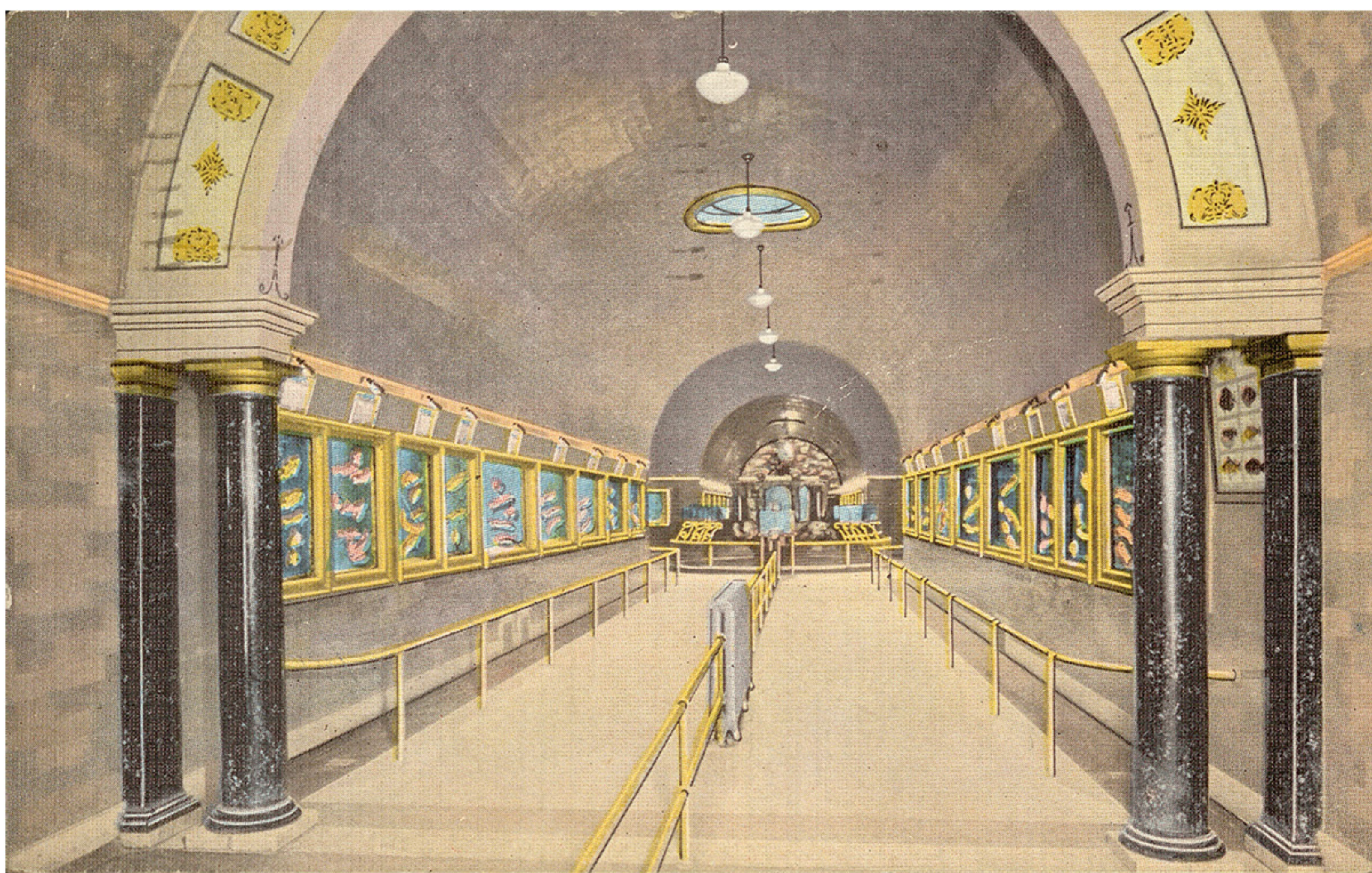
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Interior of Aquarium, Belle Isle, Detroit, Mich.

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