104.—PERIOD OF INCUBATION OF EGGS OF GERMAN CARP.

By H. H. CARY, M. D.

[From a letter to Prof. S. F. Baird.]

I have been taking some pains for the past two years to ascertain the period of incubation of the eggs of German carp. A statement in your report for 1875-'76 that they hatched in from twelve to sixteen days was doubtless based on a lower temperature of water than prevails in this latitude during the hatching season. Last year, with the temperature of the water at about 69° the eggs hatched in about five to six days. The present year, with a higher temperature of water, a more carefully conducted experiment has demonstrated that the eggs will hatch in from forty-eight to seventy-two hours. The eggs hatch finely in water at a temperature of 90°.

LA GRANGE, GA., *October* 21, 1883.

105.—SUCCESS OF THE UNITED STATES EXHIBIT AT THE LONDON INTERNATIONAL FISHERIES EXHIBITION.

By JAMES RUSSELL LOWELL.

[Dispatch No. 552, to Hon. Fred'k T. Frelinghuysen, Secretary of State.]

I have the honor to report that the International Fisheries Exhibition promises to be far more successful than even the most sanguine of its projectors had ventured to hope. The wisdom of Congress in making so liberal an appropriation in furtherance of its object is entirely justified both by the substantial encouragement given to the enterprise at its inception by this proof of interest on the part of the United States, and by the fact that the section devoted to our country is more valuable than that of any other, and valuable for reasons of which we may very properly be proud.

I have the highest authority for saying that, quite apart from any consideration of intrinsic interest or curiosity, our share in the Exhibition is superior to all others in virtue of the scientific intelligence shown n its arrangement and classification, thus rendering it more instructive than any other. This is especially gratifying because it is a triumph of a far higher kind than could be won by any ingenuity in our contrivances for the breeding or mechanical perfection in our implements for the taking of fish, though in these also we may safely challenge and in some cases defy comparison.

The credit of this unquestioned success is due undoubtedly in the first place to Professor Baird, whose absence is universally regretted,

but hardly less to the intelligence, zeal, and untiring energy of Professor Goode and his assistants, who literally worked night and day in order to be ready for the day fixed for the opening of the Exhibition.

I shall naturally have occasion to write again and more fully on this topic when more perfectly informed, but could not deny myself the pleasure of reporting to you the impression already made in this international competition by the genius for organization of which our countrymen have here given proof, a faculty certainly not the lowest among those that distinguish the social and civilized man.

LEGATION OF THE UNITED STATES,
London, May 19, 1883.

106.—A NEW FISH-HATCHING APPARATUS.

By von LA VALETTE ST. GEORGE.*

[From a letter to Prof. S. F. Baird.]

The hatching apparatus which, at my request, was sent to you by the Prorector of the Anatomical Institute, Professor Nussbaum, was invented by me and has been described in the Record of Microscopic Anatomy, Vol. XXI.†

The apparatus is intended for the breeding of *Salmonidæ*, and principally for small hatcheries and for the owners of ponds and creeks who have any running water and desire to have them stocked with young *Salmonidæ*. The operation of the same is quite simple. After the two troughs have beeen put one into the other, the impregnated eggs, to the number of 5,000, are placed on the wire bottom of the inside trough, and the opening of the receiving pipe on the outside trough is put under a stream of water. Through this pipe the water flows in and must circulate around the eggs from below. Passing through the wire on the sides of the inside trough, it is discharged on the opposite side of the entrance. The opening for the outlet of the water being higher than the sides of the wire openings prevents the young fish from floating against them. A sieve in front of this construction is quite unnecessary.

In Germany many hundreds of this apparatus are in use. They are practicable and are much praised. For the purpose of encouraging the distribution of the apparatus I have not had it patented.

BONN, *January* 31, 1883.

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*Director of the Anatomical Institute at the University of Bonn, and president of the *Rheinischer Fischerei-Verein.*

†*Archiv fur Mikroskopische Anatomie, Band XXI.* See also page 209 of this volume.—C. W. S.