



On the Interesting History of an Early Aquarium Article

By Lee Finley

In the November 3rd, 2023, issue of this web publication I presented an article under the title “DIY – Building your own Aquarium in 1862.” This was based on an 1862 article which appeared in the February 1862 issue of “Peterson’s Ladies National Magazine” which was published in Philadelphia, Pennsylvania. This article was titled “A Cheap And Simple Aquarium” and was noted to have been written by H[enry] J. Vernon.

As part of a now known to be a highly unsatisfactory background check, I had consulted an unpublished listing of 19th Century U.S. magazine appearances of aquarium articles (Finley, no date) and there was no such title previously listed. Within that time frame there was a large amount of non-attributed article republishing, especially from British sources, taking place.

I will skip over some of the other backgrounding and move right to the point of what I later discovered. In July of 1857, in another Philadelphia based magazine, an article titled “Aquariums – NO. II”, with no given author, was published in “Godey’s Lady’s Book and Magazine.” (In the previous issue an article titled “Aquariums – NO. I” had been published.) The 1862 article that I had written about appeared to have been basically modified from this article. Most of the text is the same with some deletions and/or changes here and there. There was also expanded material in the 1857 article that was not in the 1862 presentation. The same illustrations were used in both articles. From some of the included material in the 1857 article it became clear that it was of British origin. Notable among these was the mention of certain fishes. In the “Vernon” article he had noted “...I procured some fish...”. In the earlier article this was presented as “...I procured some fish – a dace and two gudgeons...”. In the U.S. we do have a large group of fishes called dace and these are placed among six or seven genera. The dace of the British is *Leuciscus leuciscus* which is not found in the U.S. Likewise the mentioned gudgeon, *Gobio gobio*, is not seen here. Additionally, the unknown author of the 1857 article mentions first seeing aquariums at the London Zoological Gardens in Regent’s Park. These were obviously important, but deleted, observations.

I then, as I should have done previously, dug deeper into various British sources and finally discovered in an advertisement that in September of 1856 an article titled “A Cheap and Simple Aquarium” (noted to “contain engravings”) was published in a magazine with the title of “The Family Economist.” The search for this on the internet was undertaken, alas, with no satisfaction. My librarian friend at the MCZ Library at Harvard University was also unable to locate any copy of the 1856 piece among various library collections. In my subsequent searching I did find a copy of the volume for 1856 for sale at a UK bookstore which I immediately ordered.

Upon examining the article when the volume arrived it was obvious that it was basically the same expanded version seen in Godey's magazine from 1857. But there are several places where differences are noted. The number of paragraphs is different (Editor's work) and there is a greater use of semicolons as opposed to periods. Additionally, in various spots the author discusses the costs of materials...in Pence and Sterling (Vernon had on cash value noted in Dollars.) In that this article is "patient one" it is what the subsequent ones must be compared with and judged by. And importantly, at the end of the additional material it is clear that the Editor obviously inquired regarding certain aspects of the text. This is not clear in follow-up renditions. Also, and most important to my mind is the following which is written at the end of this material: "I am, Sir, your obedient servant, "J.C."." This was deleted from all follow-up versions that I have examined. I will emphasize that this is NOT H.J.V. The identity of J.C. is unclear, and I can offer no guess or theory as to whom it might be.

I must, in coming towards an ending, note the additional appearance of the article in a shortened version in another British magazine named "The Family Friend." In the Christmas issue of 1861 is this piece which is for all practical purposes the same as that used by Vernon the following year. A copy of this article may be seen on HathiTrust Digital Library by following this link: [#9 - Family friend christmas 1861. - Full View | HathiTrust Digital Library](#). I will avoid using the "P" word herein, but I cannot help in thinking it for "Vernon's article." But I certainly remove my suggestion, used in my initial article, that he was "...a potential candidate for an early member of the North American Native Fishes Association (NANFA)." It is beyond my thoughts, or wishes, to pursue the topic of Henry J. Vernon. But certainly, a full reading of his over 60 widely titled published articles of which I am aware might offer up some clues to various aspects of his writing.

One last note: On receiving my copy of the bound 1856 volume of "The Family Economist" I was amazed to see the picture of the window aquarium beautifully hand colored (in addition to a few others within other articles). Having, and finding, no point of reference to this I contacted the book dealer who had supplied the copy. He noted that he was not aware of the publication doing this and suggested that a previous owner might have done it. In any case, for whomever did it, I am happy and proud to have this well-done aquarium coloration in a volume residing in my library. I guess I don't have to know who did the work to enjoy it. And by including it herein hopefully you might all gain a bit of enjoyment for yourself.

So, what follows for any future reference purposes are copies of what now appears to me to be the original presentation of the article (1856) followed by the 1857 U.S. publication (under a different title). Both are from my personal library. The 1861 version is important for its apparent use by Vernon, and I have provided a link to its presence on the internet. My original article is available here on this site in the Article Archives section.

NEW ILLUSTRATED SERIES.

THE

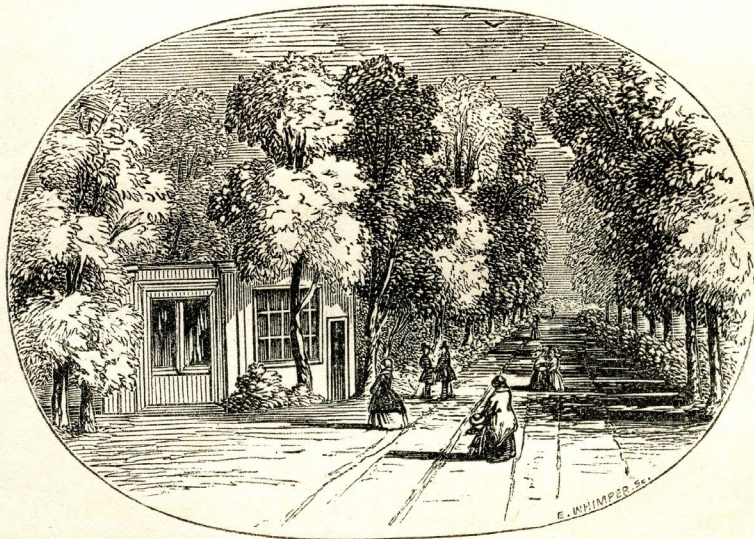
FAMILY ECONOMIST ;

AND

ENTERTAINING COMPANION

FOR

Town and Country.



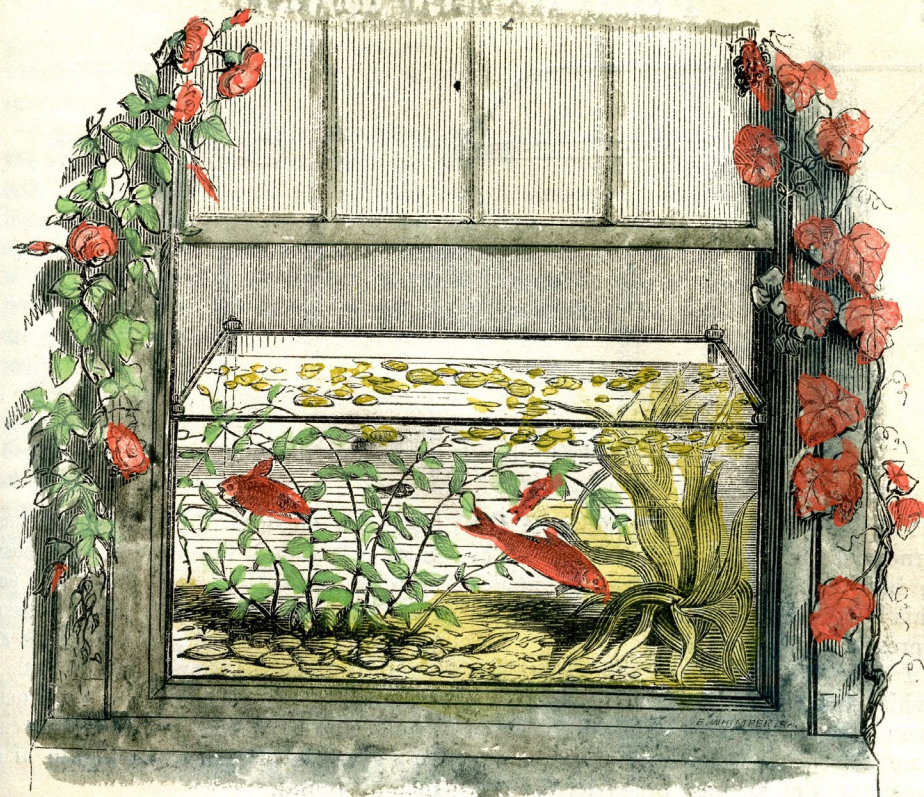
Health-Resorts of Britain.—The Little Spa, Cheltenham.

VOLUME SIXTH.

London :

WILLIAM WESLEY, 32, PATERNOSTER ROW.

1856.



A CHEAP AND SIMPLE AQUARIUM.



SOME time ago I conceived the idea that with a little care and thought I might construct an Aquarium; and, being fond of Natural History, I determined to make the attempt. Never having seen any, except those in the Zoological Gardens, in the Regent's Park, and that some three or four years ago, I had to proceed very carefully.

My first considerations were of what kind and shape I should make it, and where should it stand? I speedily fixed all the points, and decided upon a glass tank of such size and form as would fit in a window, which, having an aspect towards the west, appeared suitable for the purpose.

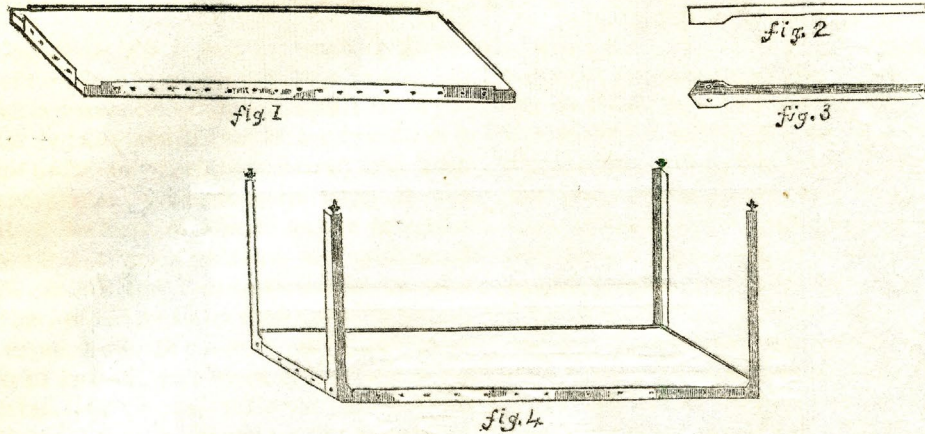
The sill of the window was 2 feet 8 inches; and its breadth $6\frac{1}{2}$ inches; the height of the first row of panes $11\frac{1}{2}$ inches.

I procured from a glazier two sides, two ends, and a bottom, of the proper dimensions, cut from thick glass. The sides were each 2 feet 7 inches by $10\frac{1}{2}$ inches; the ends each $10\frac{1}{2}$ inches by $5\frac{1}{2}$ inches, and the bottom 2 feet 7 inches by $5\frac{1}{4}$ inches. This glass cost three shillings and threepence. I also obtained, from a carpenter, a well-dried inch-board, 2 feet $7\frac{1}{4}$ inches long, and $5\frac{3}{4}$ inches broad, which cost fourpence.

This was for the bottom, and you will perceive that when the glass intended for the bottom was fastened down to it, there would be a space of one-eighth of an inch all round (equal to the thickness of the glass).

I next fastened to each edge of this board a straight planed lath, an inch and a-half broad, which, therefore, stood half an inch above the surface of the board.

VOL. VI.—NO. XXXIII.—SEPTEMBER, 1856.



The laths did not come quite to the corners of the board, for I left a space of an inch on each side of every angle. This board, with the lath at its edges, is represented in figure 1.

I now cut out, from the same lath (which was a quarter of an inch thick), two pieces, in the form of figure 2. Both were $11\frac{1}{2}$ inches long; and the first was five-eighths of an inch broad at the top, and one inch at the bottom; the other was seven-eighths of an inch broad at the top, and an inch and a quarter at the bottom. These, by means of a little glue and sprigs, I fastened together at right angles at the edges, and stuck a little brass ornament on the top, when it presented the appearance of figure 3. The greater width at the bottom extends upwards for an inch and a-half; and you will perceive that when this was applied to one of the corners of the board, figure 1, it would just fit in the opening. As I wanted four of these, viz., one for each corner, and as they must be very strong, I took this model to an iron foundry, and obtained four castings from it. These cost me tenpence.

Two screw holes were now drilled through each, not opposite to each other, for then the screws would meet in the wood, but in the positions shown by the small circles in figure 3.

Having now obtained the standards, I screwed them firmly to the corners for which they were intended, which completed the vessel as far as is represented in figure 4.

It now remained to fit in the glass. For this purpose I procured some putty

from the glazier. I first spread some putty all round the edge of the board forming the bottom, and put a few portions in the middle; it is not necessary to cover all the board; if the edges are carefully done all round, and a little in the middle, the glass will be held quite firmly, and as I said before there would be a space or margin of an eighth of an inch all round.

The inside of the standards, which I first painted with white paint, now had some putty applied to them, and the sides and ends filled in. A slight framework round the top completes the vessel.

No white lead should be allowed to get inside, as it will prove injurious to the fish.

After remaining in this state for a few days, and being tried and found water-tight, it was time to think of stocking it. I covered the bottom with sand, which I washed several times previously to remove the clay which was mixed with it, added a few pebbles, also washed and scrubbed very clean with a brush, and then filled up with rain water.

In half an hour the sand had all subsided, and left the water clear; if the sand had not been well washed before using it, this operation would have required several days, and even then, have been liable to be stirred up easily.

I then obtained some aquatic plants from a pond, and planted them in the sand at the bottom; afterwards, I procured some fish—a dace and two gudgeons—but yet I lacked a few water insects. To catch these, I set forth early in the morning, armed with a walking stick, a

piece of stout wire, a small net, and a vessel to contain and carry home my specimens.

I bent the wire into a circular form, put the net on it, and attached them to the end of my walking stick. With this instrument I soon captured several insects, and two or three fresh-water shell-fish, which, on my return, were speedily transferred to their future home, where they are a source of much interest and amusement.

I would strongly recommend any person who is fond of Natural History—who delights to study and observe the habits of animals—and who can, as it were, converse with a frog or a lizard, to construct one of these Aquariums, as even if they possess little mechanical skill they can scarcely fail, and with regard to specimens cannot go wrong.

The total cost of mine was under five shillings. Little trouble is required to keep it in order—removing decayed leaves, and adding more inhabitants when the vessel appears capable of sustaining them, constitute the chief points of care.

Some recommend that the water should never be changed, and others that a small quantity of water should be taken out every day, and an equal quantity very gently added. I follow the latter practice.

The following letter has since been received from the writer of the foregoing article, which renders the information upon this interesting subject still more complete:—

“To the Editor of the *Family Economist*.

“SIR,—I beg to acknowledge the receipt of yours of the 29th ult., and to return the following replies to your queries:

“1. My Aquarium is inside the window.

“2. I have no doubt but that, into the case of a very frosty night, the water might be frozen; but, at the same time, I neither expect injury to the glass or the fish. The power of freezing water, in the act of congelation, is most prodigious, when anything tends to confine it in more than one direction; but the thickness to which the ice could attain, by one night's cold, would not, I feel certain, have any prejudicial effect on the glass. But if it should be allowed to go on freezing, day after day, without being broken in the intervals, the glass would most certainly be broken, because the superincumbent ice would be stronger than the glass, and as ice occupies more space than the water from which it is frozen, and the ice will not give way, the glass would inevitably be broken.

“3. The description of glass is crown $\frac{3}{8}$ (between $\frac{1}{8}$ and $\frac{1}{16}$ of an inch) in thickness. Plate glass at two shillings per square foot, is too expensive for any but rich amateurs.

“4. My tank will contain $6\frac{1}{2}$ gallons, but I limit the quantity of water to about 5 gallons.

“5. Every day I remove about $\frac{2}{3}$ of a pint of water, and then add a like quantity as gently as possible.

“6. I have had the tank in operation about two months; the only inmates I have lost have been some very young dace, not an inch long.

I have perused the article on the Aquarium, in the number of the *Family Economist*, for December last, and perfectly coincide with the observations there made.—I am, Sir, your obedient servant,

“J. C.”

August 2, 1856.

THE SPIRIT OF PHILANTHROPY.

A sense of an earnest will
To help the lowly living,
And a terrible heart thrill,
If you have no power of giving;
An arm of aid to the weak,
A friendly hand to the friendless,
Kind words, so short to speak,
But where echo is endless:
The world is wide, these things are small,
They may be nothing, but they are all.

MILNES.

GODEY'S LADY'S BOOK.

PHILADELPHIA, JULY, 1857.

THE ART OF PAINTING ON GLASS.

Fig. 4.



METHOD OF PAINTING ON GLASS.

INSTRUCTIONS for working may be divided according to the diversity of the operations, viz: Outlining, Securing, First Painting, Second Painting, Third Painting, and Finishing.

THE OUTLINE.

The chief desideratum in an outline is that it shall remain undisturbed through the subsequent paintings. If the subject be an engraving, and the glass to which it is to be transferred will sufficiently cover it, the shortest process is to trace it. To accomplish this, place the engraving upon a flat surface, with its rough side downward, upon the part to be traced. When the position of the glass is determined, in order to secure it from moving,

small weights should be placed resting on the edges. Before being worked upon, the glass must be well rubbed with a silk handkerchief; and the glass should be sufficiently large to leave a margin of about one-eighth of an inch, to allow the pasting of a narrow paper rim to support the glass which is placed over the picture when finished.

In a small saucer, prepare a tint of rose madder and Prussian blue, using a little ox-gall in the water. With this tint, charge a middling-sized brush, and from this reservoir supply the pen. Commence with the distance, and trace all the outlines, using the pen with a light but firm touch, and without hesitation, as any error can be easily remedied afterwards. Prepare, in another saucer, a tint of madder brown, with a very little Prussian

"See, Laura," she cried, holding up a large silver watch, "your father's watch! I should know it amongst a thousand. Here are his father's initials cut in the band on the back, and the bullet dent that was made at Bunker's Hill. Verily," she said, solemnly, pointing to the dead man, "this is God's retribution; a just punishment for robbing the widow and fatherless. I remember his face well, Laura; he is one of the men who fired your father's house, one to whom I knelt begging him to leave me only that one token; and he spurned me with his foot; and now see, the sea has washed my treasure to my feet."

Maggie looked like one inspired as she poured forth these passionate words; and none questioned her right to keep the watch.

Three years more passed away. Old Grant sent for Maggie, forgave her on his deathbed, and left her his money. She returned to America, "where," said grandfather, chuck-

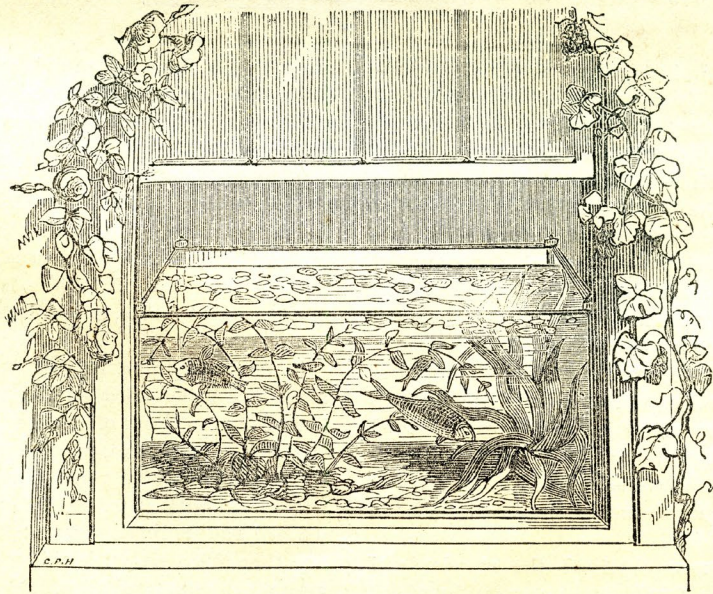
ling, "I met Laura, loved her, married her, and"—his face saddened—"when she died, she gave me the watch bequeathed her by her mother, and told me the story I am now telling you."

Grandfather paused; we were all silent; then there was a startling cry from Mary; and, looking up, I saw standing in the doorway Robert Sampson.

"I have been listening for the hundredth time, I think," he said, when the first burst of joy was over, "to the story of grandfather's watch; but I could not interrupt it, impatient as I was to clasp Mary to my heart, and tell you all that I have returned rich to cherish you all in comfort, and restore to grandfather many of the old luxuries I see"—and he glanced around the poor room—"he has been doing without."

And your humble servant left them to their joys, having gratified her own curiosity, and heard the history of "Grandfather's Watch."

AQUARIUMS.—NO. II.



ACCORDING to our promise, we give a second style of Aquarium, and the personal experience of one whose opinion is considered authority.

"Some time ago," says the writer, "I conceived the idea that with a little care and thought I might construct an aquarium; and, being fond of Natural History, I determined

to make the attempt. Never having seen any, except those in the Zoological Gardens, in the Regent's Park, and that some three or four years ago, I had to proceed very carefully.

"My first considerations were of what kind and shape I should make it, and where should it stand? I speedily fixed all the points, and decided upon a glass tank of such size and

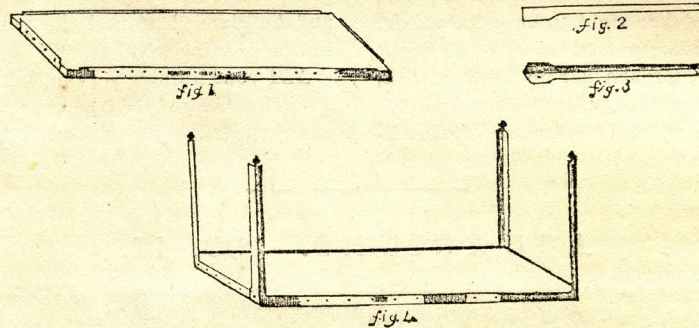
form as would fit in a window, which, having an aspect towards the west, appeared suitable for the purpose.

"The sill of the window was 2 feet 8 inches; its breadth $6\frac{1}{2}$ inches; the height of the first row of panes $11\frac{1}{2}$ inches. I procured from a glazier two sides, two ends, and a bottom, of the proper dimensions, cut from thick glass. The sides were each 2 feet 7 inches by $10\frac{1}{2}$ inches; the ends each $10\frac{1}{2}$ inches by $5\frac{1}{2}$ inches, and the bottom 2 feet 7 inches by $5\frac{1}{4}$ inches. I also obtained from a carpenter a well-dried inch-board, 2 feet $7\frac{1}{4}$ inches long, and $5\frac{3}{4}$ inches broad. This was for the bottom, and you will perceive that when the glass intended for the bottom was fastened down to it, there

would be a space of one-eighth of an inch all round (equal to the thickness of the glass).

"I next fastened to each edge of this board a straight planed lath, an inch and a half broad, which, therefore, stood half an inch above the surface of the board. The laths did not come quite to the corners of the board, for I left a space of an inch on each side of every angle. This board, with the lath at its edges, is represented in fig. 1.

"I now cut out from the same lath (which was a quarter of an inch thick), two pieces, in the form of fig. 2. Both were $11\frac{1}{2}$ inches long; and the first was five-eighths of an inch broad at the top, and one inch at the bottom; the other was seven-eighths of an inch broad at



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"It now remained to fit in the glass. For this purpose I procured some putty from the glazier. I first spread some putty all around the edge of the board forming the bottom, and put a few portions in the middle. It is not necessary to cover all the board. If the edges

are carefully done all round, and a little in the middle, the glass will be held quite firmly, and, as I said before, there would be a space or margin of an eighth of an inch all round.

"The inside of the standards, which I first painted with white paint, now had some putty applied to them, and the sides and ends filled in. A slight frame-work round the top completes the vessel. No white lead should be allowed to get inside, as it will prove injurious to the fish.

"After remaining in this state for a few days, and being tried and found water-tight, it was time to think of stocking it. I covered the bottom with sand, which I washed several times previously to remove the clay which was mixed with it, added a few pebbles, also washed and scrubbed very clean with a brush, and then filled up with rain-water. In half an hour the sand had all subsided, and left the water clear; if the sand had not been well washed before using it, this operation would have required several days, and even then have been liable to be stirred up easily.

"I then obtained some aquatic plants from a pond, and planted them in the sand at the bottom; afterwards, I procured some fish—a dace and two gudgeons—but yet I lacked a few

water insects. To catch these, I set forth early in the morning, armed with a walking-stick, a piece of stout wire, a small net, and a vessel to contain and carry home my specimens.

"I bent the wire into a circular form, put the net on it, and attached them to the end of my walking-stick. With this instrument I soon captured several insects, and two or three fresh-water shell-fish, which, on my return, were speedily transferred to their future home, where they are a source of much interest and amusement.

"I would strongly recommend any person who is fond of natural history—who delights to study and observe the habits of animals—and who can, as it were, converse with a frog or a lizard, to construct one of these aquariums, as, even if they possess little mechanical skill, they can scarcely fail, and with regard to specimens cannot go wrong.

"Little trouble is required to keep it in order. Removing decayed leaves, and adding more inhabitants when the vessel appears capable of sustaining them, constitute the chief points of care.

"Some recommend that the water should never be changed, and others that a small quantity of water should be taken out every day, and an equal quantity very gently added. I follow the latter practice."

The following additional information was furnished by the same authority:—

"My aquarium is inside the window. I have no doubt that, in the case of a very frosty night, the water might be frozen; but, at the same time, I expect injury neither to the glass nor the fish. The power of freezing water, in the act of congelation, is most prodigious, when anything tends to confine it in more than one direction; but the thickness to which the ice could attain, by one night's cold, would not, I feel certain, have any prejudicial effect on the glass. But if it should be allowed to go on freezing, day after day, without being broken in the intervals, the glass would most certainly be broken, because the superincumbent ice would be stronger than the glass, and as ice occupies more space than the water from which it is frozen, and the ice will not give way, the glass would inevitably be broken.

"The description of glass is crown $\frac{3}{32}$ (between $\frac{1}{8}$ and $\frac{1}{16}$ of an inch) in thickness. Plate glass is too expensive for any but rich amateurs.

"My tank will contain $6\frac{1}{2}$ gallons, but I limit the quantity of water to about 5 gallons.

"Every day I remove about two-thirds of a pint of water, and then add a like quantity as gently as possible.

"I have had the tank in operation about two months; the only inmates I have lost have been some very young dace, not an inch long."



PATERNAL DUTY.

THE father who plunges into business so deeply that he has no leisure for domestic duties and pleasures, and whose only intercourse with his children consists in a brief word of authority, or a surly lamentation over their intolerable expensiveness, is equally to be pitied and to be blamed. What right has he to devote to other pursuits the time which God has allotted to his children? Nor is it an excuse to say that he cannot support his family in their present style of living without this effort. I ask by what right can his family demand to live in a manner which requires him to neglect his most solemn and important duties? Nor is it an excuse to say that he wishes to leave them a competence. Is he under obligation to leave them that competence which *he* desires? Is it an advantage to be relieved from the necessity of labor? Besides, is money the only desirable bequest which a father can leave to his children? Surely, well-cultivated intellects; hearts sensible to domestic affection; the love of parents and brethren and sisters; a taste for home pleasures; habits of order, regularity, and industry; hatred of vice and vicious men; and a lively sensibility to their excellence of virtue, are as valuable a legacy as an inheritance of property—simple property, purchased by the loss of every habit which would render that property a blessing.