perience would seem to ndicate that for the ordinary uses of the family a portion of both hard and soft wood was the most economical; but it shou d alw.ys be *dry wood*. C.T. ALVORD. *Wilmington, Vt. Cultivator.*

IMPROVEMENT IN SOAP BUBBLES.—The soap bubble is a great institution. It affords to the mora.ist an emblem of frailty, instability, and the transitory character of many things in life and in human affairs. It affords some of the delightful amusements to childhood. It is also of great use as a philosophical instrument. By it, many of the abstruse laws of natural philosophy can b demonstrated, and it has been instrumental in bringing about the discovery of some of the most interesting phenomena of the rays of light. The great Sir Isaac Newton used it for this purpose, and was assisted by it in some of his most brilliant discoveries in this branch of philosophy. It is useful also in demonstration the pressure of aeriform forces, and in exhibiting to the eye, the fact that expansive forces which are free to act on every side, assume a spheroidal form, or direction. We have been in the habit of considering the soap bubble as one of the perfections that could not be improved upon—a thing which was always uniform in its tenuity of substance, and shortness of duration, and we have often regretted this last character of it, wishing that it might last a little longer, or give us some way by which it could be modified in shape if in no other particular. It seems from the account we glean from a foreign journal that in this age of improvements, even the soap bubble comes in for its share of the improvements of the day A mode has been devised by which it is made to not only last longer, but to allow of its being thrown into different shapes and forms almost at will.

We will give an extract of these improvements. It will interes some of our readers who are fond of using the means of research which nature has given us, whereby to enlarge our sphere of knowledge and usefulness, even from so insignificant an instrument as a *buble.*

M. Plateau, an experimental philosopher of Paris, in France, in pursuit of some of his investigations, was anxious to obtain liquid figures of different forms and shapes, that should remain in a quiescent state for some time. He first, made a common mixture of alcohol and water of the density he required. This was to constitute the sphere in which the bubble proceed should remain By using oil, instead of soap suds, and the water and alcohol instead of water to fill it with, he obtained an oil bubble in the alcohol mixture. These, of course, would remain in the mixture some little time. When put up in a vessel, they would remain some time longer than a common soap bubble in the air. On further search, he improved the bubble still further, which has been of much advantage to him in his investigations. He uses glycreine with strong soap suds, with which to make his bubbles. These he found to be capable of enduring much longer than any other kind. He next wanted to obtain them of different shapes, or figures. This he accomplishes by the following very ingenious arrangement. "If" says he, "through an ordinary tobacco pipe; a bubble of this material be blown, and then carefully deposited on a metal ring, one and a half inches in diameter, previously moistened with the same liquid, this bubble, if not disturbed, will last three hours, and if in a close vessel three days." We presume this is the first instance of *hooping* a bubble to make it stronger. In order to make a cylindrical figure of this bubble, Mr. Plateau adopts the following method. Two rings of the same diameter are made. One of them rests upon three legs, and the other slides up and down on a perpendicular shaft, with a thumb screw to fasten it to any height. Blow a bubble and place it carefully on the lower ring. Then let down the upper ring (both being moistened as before) until it crowns the top of the bubble. The bubble then adheres to both; then by raising the ring carefully the bubble will be drawn out into the cylinder. By making figures of several angles, (polyhedrons,) and dipping them into the liquor, a film of it will extend from wire to wire, and form the figure in question.

This is what we call an improvement in the soap bubble, and is hereby rendered more useful as an instrument of investigation and research, as well as more varied and extended in its applications to the sports of those "men of a smaller growth" called children.—*Maine Farmer.*

"WHO IS THE BREEDER?"—By long established custom, the party in whose possession a short-horn calf is *born* is said to be *the breeder* of that calf, although the dam may have been the property of another person, even up to the very day of calving. All the *credit* of having bred the animal is claimed by the dam's new owner; but all the *merit* of having bred the animal is clearly due to another. An outlay of *money* avails to secure the former; but the latter is the result or care, thought, sagacity, anxiety, and experience. It is conceivable that a man of wealth should purchase fifty cows of great value, each in calf to some distinguished bull (a Booth bull, for instance), obtained, by hire, at a distinguished price; and all within a few weeks of bringing forth their offspring. The cows in due time calve; and their produce, *the consequence of another man's capital and judgment*, are recorded in the Herd Book, not to *his* honour to whom, in fact, honour alone belongs, but as memorials of the breeding skill of one who may possibly possess no breeding skill at all, and whose part in the transaction was simply that of arranging a pecuniary investment. The real breeder of a calf is unquestionably the person who brings the sire and dam together; and yet, according to orthodox usage, the place of calving constitutes the criterion. We sug-