

then, bending the thread, it was advanced over the space between two of these (that is, about one-hundredth of an inch) to the point where it leaves one rib to proceed to the next one.

But thus far we have each rib composed of only two threads and the transverse lines running in only one direction. How is it as to the other set of obliquely transverse lines which cross the first set? and how are the two additional threads added to each rib? All of this is done precisely as the first set was made. Returning from the side *g b* of the frame, the work is only a repetition in the opposite direction of the work first done as above related. Having finished about three-fourths of the frame, retreating from it and working towards itself, as above stated, the larva now passes up into it, adding to the floor and the foundations as it goes, till having reached the upper end, it doubles upon itself, and reverses its position, protruding about one-fourth of its body through the open end of the frame, which it now begins anew from the other end and repeats here the work already done, until the two portions almost touch. Then it ceases to follow the regular pattern of the reticulation, and by a series of longitudinal threads passed rapidly to and fro, connects the two pieces of the frame much as a tailor darns a rent in a garment, and this darn may be detected even in an old cocoon. The larva is now completely enclosed in the frame work, and immediately begins to spin its cocoon proper within it. This occupies only the central position, not extending into either end of the frame. It works very rapidly, and in three hours from the time that it begins to spin is entirely concealed from sight.

It is very interesting to watch the little architect at work upon its reticulated frame. It evidently understands its trade, whether we call it a house-builder or weaver. It knows exactly what it has to do, and how to do it, and "goes straight along" with its work with an air of as much conscious intelligence and understanding as any other builder of homes either with or without hands. It is difficult to watch its operations without feeling that here is a conscious intelligence at work. All other known species of the genus, save one, make these ribbed cocoons, and to do so they must work much as this one does. How the instinct to make a cocoon, and especially one like this, ever originated—what advantage in "the struggle for existence" the reticulated pattern possesses over a common one in which the threads are carried hither and thither apparently without order or plan—and why this instinct should be lacking in a single species, are questions as unanswerable as why some spiders are