Silk Culture.

AN effort was made in the United States some years ago to introduce the culture of silk, but, owing to the unbusiness-like way in which the matter was brought forward, it was a failure. The subject has lately received renewed attention, and from an examination of some of the results already obtained, it appears to be evident that silk can be raised to advantage throughout the greater part of the country. The chief difficulty that has hitherto stood in the way of this industry in this country has been the cost and labor of unwinding the silk filament from the cocoons. Hand reeling machines have long been in use, but they are all too slow and too imperfect to be of any value. A reeling machine, intended to be used by either hand or steam power, has been recently introduced that appears to do the work quickly and thoroughly. It consists of an iron table, supporting a shallow iron boiler open at the top. This boiler is to be filled with water, and kept at a low boiling point by a gas-stove under the table. On the top of the table, which forms a zinc-lined tray or shelf around the boiler, is placed a wooden frame or bridge. This supports four glass rings or guides, directly over the water. Back of the table, and joined to it by an iron frame-work, is a simple form of reeling apparatus. This consists essentially of a horizontal reel and four sliding guides for guiding the filaments upon the reel. At the machine examined, a young girl was employed to turn the reel, but attachments are provided for employing electricity as a motive power if wanted. In using the machine, the reeler sits before the table with a basket of cocoons at her side, and a dish of cold water on the table. A quantity of the cocoons are then placed in the boiling water, and beaten up with a small stiff broom, till the gum on the cocoons is melted, and the ends of the

filaments are loosened. These filaments are gathered as fast as they appear, and are held in the left hand, with the cocoons floating on the water. With the right hand one of the threads is passed through the glass guides, or eyes, over the water, and then a second thread is passed through the next eye. The two threads are then twisted loosely together, and each is carried through one of the sliding guides to the reel. When four threads from four cocoons are thus arranged in pairs, twisted together, and caught over the reel, the machine is set in motion. The revolution of the reel draws the threads from the cocoons, and they roll over and over in the water, unwinding by their own gravity. As fast as the silk is removed from one cocoon, a thread from another is joined to it by merely pressing one filament against the other. They quickly stick together, and thus one filament is joined to another to make a continuous thread. The length of this thread is regulated by the number of cocoons on hand, or the amount of silk required in a skein. The machine examined appeared to be well designed, and admirably adapted to the work. With hand-power it could be made to move at the rate of two or three hundred revolutions a minute while winding four skeins. The labor of attending the apparatus is light, and not particularly taxing to the attention. New cocoons must be added to the reel at the rate of about one in three or four minutes, and many hundred can be unreeled without stopping the machine. The cold water is used to cool the right hand, that must be often thrust into the hot water to remove the empty cocoons as fast as they are unwound. It would seem desirable to use some kind of glove that would resist the heat when the hand is thrust into the hot water. The apparatus is regarded by competent authorities as well adapted to the work, and larger machines, to be used with steam-power, will, no doubt, prove of value.

The culture of the silk-worm appears, from the experience of those who have practically tried it on a commercial scale, to be very simple. All the work can be performed by women and children, and it can be safely recommended as a new employment for persons living in the country who are able to control about six weeks of their time during the early summer. The capital required is quite small, and the plant needed for a moderate number of workers can be established in any dwelling-house or temporary wooden building. The culture consists essentially in the rearing of a number of silk-worm eggs from birth to full maturity—a period of about thirty-five days—and the subsequent care and sale of the cocoons. Unless fresh eggs are bought, there will also be the labor of caring for and rearing the moths for the purpose of securing a fresh supply of eggs for another season. The food of the worms must also be bought or raised, and this is simply a matter of so much farm-work spent on an orchard of mulberry-trees. An agency has already been established in this country for the sale of eggs and the purchase of cocoons and reeled silk. There is also a literature of the subject that can be readily consulted.