

established one of the largest manufactories in the world for the production of this article, notwithstanding it was considered a commercial novelty in 1852. Dr. Stenhouse found that if he employed pure paraffin for water-proofing, owing to its tendency to crystallize, it would not adhere sufficiently to fabrics. He therefore conceived the happy idea of adding to it a few per cent of linseed oil, which overcame the defects presented when paraffin was employed alone, effecting a better adhesion between the water-proofing material and the textile fabrics, and rendering leathers more flexible. Dr. Stenhouse melts together paraffin oil with a few per cent of linseed, as above stated. He runs the whole into cakes, and in order to apply this water-proofing agent, he heats the cake and rubs the materials over with it, or spreads the melted mixture over the fabric by means of a brush. His process is applied with great advantage by Messrs. Silver & Co. to the water-proofing of soldiers' tents, and other materials of that class, to the great comfort of the soldiers, for, without increasing the weight of their tents, it renders them impermeable, and protects the men from rain and its attendant discomfort and danger. Another most useful application of Dr. Stenhouse's water-proofing material is the rendering of leather impermeable. By examining the specimens you will immediately see the immense advantage that cavalry will derive from having their saddles rubbed over with this preparation, as it renders the leather incapable of absorbing moisture, and enables the soldier to mount his horse after heavy rain with as much comfort as if it had remained under shelter. It also renders the soles of shoes quite impermeable, and at the same time communicates to them great flexibility, so that the boots of navvies and other similar articles are rendered far more useful and durable, as we all know that the constant wetting and drying of leather expedites in a marked manner its decay. There is one more application of Dr. Stenhouse's water-proofing to which I should wish to call your special attention, as it is of interest to the manufacturers of Manchester and of Lancashire generally. In those districts large quantities of what are called water-proofing materials are used in packing the goods, and preserving them from external wet or injury. Many of these materials are made by covering a coarse calico fabric with a coating of boiled linseed oil, but this class of packing is very imperfect, and loses its strength rapidly, especially in hot climates, owing to the fact that boiled oil absorbs oxygen and carries it on to the fiber, oxidizing it, and, thereby, soon destroying its tenacity. By applying Dr. Stenhouse's process to the fabric previously to the drying oil, not only is great impermeability attained, but the fiber, being saturated with paraffin, is preserved from the subsequent oxidation which it would undergo under the influence of the atmosphere in the presence of the boiled oil alone.

How to Cast Sugar Candles.

"What an atmosphere of dust meets us as we enter the manufactory! The shop we are in is powdered from rafter to floor with a fine impalpable powder, that reminds us of the interior of a flour mill, and the workmen are moving ghosts, even the fringes of their eyelashes are whitened to their tips,

just as the hoar frost whitens every tiny filament it can lay hold of. The dust is that of fine starch, the substance used as a matrix for a certain class of cast sugar goods. We are in that part of the factory now where those 'sweets' are made which are demi-opaque—like snow-water frozen. The sugar is not boiled to a great heat, but is allowed gently to simmer on the fire, while the molds in which it is to be cast are being prepared. This is done by spreading the fine starch over boards, quite evenly, and then inverting another board over it, studded with the forms it is intended to cast. The man we are looking at is about making annulets, or sugar rings, and as he lifts the inverted board from the smooth starch, we see that it is covered with molds of these indented rings placed at regular intervals, and as close together as they can go. Another workman now approaches with a tin receptacle filled with sugar, fitted with six spouts. With great skill and knack he pours out the sugar, and fills ring after ring indented in the starch, as fast as his arm can conveniently travel from left to right. Not a drop is spilt, the sugar standing in each ring with a slightly curved surface, just as a drop of water would do that had fallen upon dust. These starch molds are used for all those sweet-meats which contain fluid or liquor in the interior. The liquor is mixed with the melted sugar indiscriminately, and both enter the mold together, but, curiously enough, the latter instantly crystallizes on the outside of the former, and thus, by a natural law, the liquid flavoring essence becomes imprisoned. It was thought very foolish of George III. to ask how the apples got into the dumplings, but we have little doubt that the manner in which these liquors got inside the sugar plums has puzzled many a head wiser than his. The casting of these liquor sweets employs a large number of persons, and the most extraordinary molds are obliged to be invented to meet the requirements of the trade. Balmoral boots, Tyrolese hats, scissors, knives, fish, and all kind of things, animate and inanimate, are thus produced, the only limit to the design being the size and weight of each article.—*Once a Week.*

Bookbinding Presses.

It has been a standing grievance with mechanics in this country, that the appliances requisite for the successful development of local manufactures could only be had from the shops of the neighboring Republic. So injurious has this state of affairs been, that many branches of trade have been wholly neglected or only partially developed. Two causes, operating together, are fast undoing this state of things, and it will not be long we hope, before mechanical ingenuity in this country will be able to look to our own foundries and forges for the requisite appliances for a more vigorous prosecution of that skilled labor which we possess. The two dispelling causes are, greater resources on the part of machinists, and the employment of workmen of enlarged experience. We are led to make these remarks because of the successful effort of Mr. H. P. Brown to complete a set of presses for bookbinding purposes. The most important article is really a magnificent piece of mechanical skill, having all the proportions for great strength, with neatness, while the smaller or cutting press is a decided improvement on anything of the kind