

THE STORY OF SUGAR.

PROFESSOR W. P. GAMBLE.

From early childhood, the boys and girls of Canada are familiar with the substance called sugar. We all know that it is used in large quantities for the purpose of giving a pleasant taste to many of the delicious dishes prepared for our use ; but how many of my young friends have taken the trouble to inquire into the origin and manufacture of this useful substance ?



Fig. 75. The Maple in summer.

There are many kinds of sugar ; but the one we shall speak of more particularly is the cane-sugar, so called because it was first manufactured from the sugar cane. Pure cane-sugar, as it appears on our market, consists of a mass of white crystals. If this sugar be heated to 320° Fahrenheit, it will melt to a colorless liquid, which rapidly assumes an amber hue, such as you have noticed when boiling it for the purpose of making taffy. If heated to a still higher degree, it turns brown, becomes less sweet, and gradually takes on a bitter taste.

Old-fashioned brown sugar owed its color and flavor, in part at least, to this treatment ; for, as sugar was formerly made, in the process of evaporation over the open fire some of the sugar was browned or half burned. Cane-sugar was formerly sold more extensively than at present in the form of coarse brown sugar. To-day, with the improved methods of manufac-

ture, we see very little cane-sugar placed on our markets in this form. You might think that cane-sugar, from its name, is found only in



Fig. 76. The Maple leaf and key.



Fig. 77. The Maple when it bleeds.



Fig. 78. Shows a branch of the Maple when growth again becomes active.