

CHAPTER 16

Chocolate panning

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16.1 Introduction

16.1.1 History

Historical records on the subject of panning show that it was first used to coat pharmaceutical products. Over 1100 years ago, a gentleman named Razes coated pills or tablets, using materials such as mucilage or slime from *Plantago psyllium* seeds. Over time, honey, gold, silver and finally sugar was used to cover the bitter taste of the pharmaceutical ingredients. To this day much of the equipment and techniques is common to both confectionery and pharmaceutical industries.

The first confectionery-coated mouth-sized pieces were believed to be made in Nîmes, France, around the year 1200. Over the years, new ingredients and centres were mixed and dried in pots and pans, with a final separation by hand. (These techniques can still be used today for the quick production of prototypes.) Descriptions exist of large parabolic dishes hanging from the ceiling on two ropes or chains and being moved over an open fire. This required both stamina and strength to produce the goods. Around 1840, a confectioner in France invented a pan mounted on a shaft, which could be turned manually. The principles of this process and the techniques used then are still valid today, even with the development of ever bigger and more sophisticated equipment. All still involve a rotating container containing the centre pieces. The coating material, whether it be chocolate (e.g. for coating nuts, raisins etc.) or sugar for coating chocolate (Smarties™ and M&Ms™ etc.), is then added in a form in which it can coat the outside of the centres, as they tumble over one another in this container.

16.1.2 Definitions

Coated goods were first termed “dragees” in Europe and were probably derived from the Greek word *tragein* meaning nibbling. The definition of pan coating may best be described with the following words:

“Pan coating is the build-up of a centre (kernel) with a liquid or liquid and powder substances with multiple layers or continuous phases, which are set, hardened or dried to



Figure 16.1 MacIntyre classic manual pan. Source: Reproduced with permission from Hamburg Dresdner Maschinenfabriken GmbH.

smooth or pearled surface and often finished with a sealant and or a polishing agent, utilising rotating pans or drums creating a fluid bed.”

The machinery used is often compared visually with a cement mixer. The drums or pans are horizontal or have their front slightly elevated and are fitted with internal ridges, which are used to aid mixing (see Figure 16.1). As the product mixes, thin layers of liquid are added to coat the centre material. It is during the drying or setting of this coating that the tumbling action causes the surfaces to rub against each other to form a smooth finish.

Care has to be taken before marketing the products made by panning, because some countries have standards covering pan coated goods and it is always advisable to check local laws and regulations. Frequently, panned goods are named by their centres and/or the shell applied to the dragee: an almond centre with a chocolate shell would be called a chocolate almond and so on.

16.2 Panning methods

Although this book is concerned with chocolate, it is worth briefly mentioning all the different types of panning, because more than one technique can be used to make some varieties of panned sweets. The different methods are listed in order of relevance to the chocolate industry.