

The History of Matchbox Production

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The varying methods for the production of matchboxes over time have been largely determined by the demand for the product and the technological limitations of the time. Similarly, the shape and materials used in producing match containers and packaging have also been a reflection of the society for which they were made. For this reason an understanding of the impetus behind matchbox production and how a matchbox is actually produced is indispensable to the effective evaluation of the graphic design of the matchbox cover. To this end, it is necessary to describe the progression of the match container from its earliest form, the paper capsule, through its development to the multitude of shapes and colors that the present day matchbox exhibits, and to include all the help and hindrance that the process has received along the way.

The processes

When the production of matches went from a small-scale business venture to larger commercial production the first matches and containers were made entirely by hand. The first containers were paper capsules onto the side of which the factory name was embossed. These paper capsules were the most common form of match packaging at the time but oval tubes of brass or chip and turned wooden boxes were also in use.

However, during the late 1840s Per Anton Segelberg at his factory in Örebro instigated the production of a new, and now typical, matchbox, composed of an inner tray and an outer sleeve. The boxes were made of the same wood veneer as the match splints and were held together by a paper covering that was wrapped around the box and glued in place. A paper label was then attached to the front of the box. This proved to be a highly successful design, not least of all because the sides of the outer sleeve provided a suitable area for the striking surface to be applied. This was especially useful with the introduction of Gustaf Erik Pasch's invention of the safety match, patented in 1842, and its necessity to have a reliable striking surface. The box was widely copied, notably by the Jönköping Match Factory, although the paper capsules continued to be used by various factories until at least 1872.

While the rest of the match industry was rapidly becoming increasingly mechanized, the process by which the matchboxes were being made was still almost entirely by hand. This was done outside of the factory at the homes of the employees and usually involved the entire family. One of the out-workers would go to the factory and collect the pre-cut wooden box components, sheets of paper and the flour or other substance used for making the glue. The boxes were then assembled at home and taken back to the factory where the label was applied and the strike surface painted on. A wage would be paid to the outworker determined by the number of completed boxes. A good worker was able to produce in the region of 1,000 boxes during a ten-hour day.

By 1855, the first steps were taken towards mechanizing the matchbox production process with the introduction of a machine in the Jönköping Match Factory, for cutting the paper used to hold a matchbox together. With the exception of a machine to apply the strike surface compound to the outer sleeve of safety-match boxes in 1873, Alexander Lagerman did not turn his attention from improving the match manufacturing process to improving box production until 1881 with the invention of a machine to make the outer sleeve of the box. His invention dramatically lowered the costs of labor involved with the box making process to around 25% of what it had previously been. Due to the more

complicated nature of making the inner tray of a matchbox, his designs for a machine to do so were not completed until 1888. The amount of out-sourced work at the Jönköping match factory rapidly declined when the inner-tray machine was put into operation and by the turn of the century it was practically nil. The same developments took place in most other match factories throughout the world including those of Bryant & May, who also reached a state of fully automated matchbox production in 1888.

By 1848, matchbox labels were being ‘turned, engraved, stereotyped and printed’ by external, non-specialized printers. This arrangement produced mixed results. Because match manufacturers lacked experience with printing, it was most often the printers who ultimately ‘designed’ the labels to the match manufacturers’ requirements. The match manufacturers also lacked the skills needed in the ordering of printing. At worst, the match manufacturers ordered designs in general terms, providing no sketches and only vague written instructions, and then waited to see the printers’ proofs before giving any further input. In this way, many letters of correspondence could be exchanged between the match manufacturer and the printer before a final design was settled upon. Matters could be further complicated if the match manufacturer was producing a consignment of matches for a third or even fourth party.

When a printer was supplied with sketches, they were usually of a ‘rough and ready’ approach that provided the essential elements that the match manufacturer wanted to include on the label but still required the printer to construct the design. An example of this type of practice is shown in a letter dated in 1894 from A. Zachau, founder of the Uddevalla Match Factory, to Norrköpingslithografen, a lithographic printers, about the design of a new zoology book, was attached to the letter which contained the text to go on the label and brief instructions such as ‘clear colours and fine arrangement of the label as a whole’. ‘The Condor’ was to become one of Uddevalla’s great brands.

Sources, such as the correspondence mentioned above, indicate that the external designing and printing of the labels was commissioned by some match manufacturers until at least 1894. However, the lack of records concerning the designing and printing has made it impossible to track the development of the process beyond this with any certainty. At some point, the printing moved into the establishments of the match manufacturers, as this is the practice commonly employed today. It can only be assumed that the printed matter continued to be designed by the printers until the emergence of the graphic designer as a separate profession. However, the printer as designer role still exists in the form of in-house graphic designers at the matchbox printing works.

To take a typical example of the modern process of making matchboxes, the box production line at the Swedish Match Vetländer factory begins in the prepress unit with the outer sleeve of the matchbox. A client is able to send artwork in Portable Document Format (PDF) that has been designed to a PDF template supplied by Swedish Match. This, or the artwork produced internally, is then set-up in the prepress unit to repeat the design the required amount of times as is necessary to fill the width of a sheet of card and the printing plates are then created using Computer To Plate technology. Depending on the type of print run required, the plates are put on to either a reel-fed or a sheet-fed machine.

The reel fed machine has several sections, the first of which is a four-color, offset litho section and prints at eighteen kilometres per hour, on to a reel of card weighing half a ton. The printed sheet then travels through a section where the striking surface compound is applied using a gravure roller with a mould of the strike surface impressed into its surface, and regulated by running it against a doctor blade that scrapes off any excess. The card then progresses to the cutting section where it is cut longitudinally into strips the width of the matchbox, then laterally to form an unfolded matchbox sleeve or ‘skillet’. It is then creased and finally stacked into bundles which are ready to be put in to the outer box-forming machine.

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