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Autor: [s.n.]
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THE SWISS POSTAGE STAMP PRODUCTION.

The administration of the P.T.T. (Post, Telegraph and Telephone) has in the building of the Federal Mint its own printing works, where most of the postage stamps of Switzerland are produced. The printing of these stamps was originally done on ordinary printing presses, where the cutting of the sheets and the perforation were separate operations. The increasing use of postage stamps induced the administration of the P.T.T. to suit the printing to the present day requirements and also to alter the process of printing. This required a large rotary machine and several new auxiliary machines. Stamps produced by typography appear harsh and flat, in spite of well executed designs, whereas in those produced by Intaglio (Stichtiefdruck) effects of near and far can be obtained.

The engraved reproduction is a manual process, for an original engraving has to be made first by the artist who does this with a graving tool on a steel plate. From this negative, having been hardened in a salt bath, a positive mould is made. In the moulding machine, a highly polished cylinder on which the desired number of negatively moulded pictures are fixed, is cast. In the chromium bath the cylinder obtains a surface hardening.

The principal part of the new printing plant is the mighty rotary press, which in every detail was built according to instructions of the administration of the P.T.T. with particular regard to Swiss conditions.

On this rotary machine the printing, perforating and numbering of the individual sheet takes place in one operation. On this machine, steel engravings as well as copper engravings can be printed at the same time, a combination in printing which was never possible before. Through this the P.T.T. has one of the most modern postage stamp printing machines.

The personnel for this rotary machine are two minders and two assistants. The daily production is, according to the size of the stamps and hours of working, from two to three million stamps. It is also possible to produce besides small, medium or large stamps, also stamps in the three different printing processes. The machine weighs 14 tons and has a length of seven metres and a width of two-and-a-half metres.

Next to the already mentioned auxiliary plants necessary for the production of the forme cylinders, other appliances for the maintenance of the machine are required. The perforation pins are liable to wear and tear and are carefully exchanged every day, then inspected, tested and if found necessary, the pins and punch plate are overhauled on a special grinding machine. A special arrangement permits to test the pin plate, interchangeable, as regards the conditions of the cut.

Of great importance in the printing of postage stamps is the substance of the printing ink. No ink which was being used for usual reproduction could be used, as special demands are made upon the ink used in intaglio printing. It requires to be easily effaceable, yet must have a certain adhesion. Further it must possess excellent printability and must adhere firmly in a viscous state on the surface of the paper, yet dry quickly. All this is made possible by a special ink mixing and reduction process.

A SWISS CYCLOMETER REGISTER.

(From "Electrical Review," 3.10.1943.)

The skill and care needed for accurately reading the dial markings of meters are minor handicaps so long as trained men or women are employed for compiling the quarterly records. The greater facility with which a simple row of figures may be noted, however, is immediately evident when untrained people have to read meters and such a system would also be advantageous to the many householders who now endeavour to check their consumption of electricity in the interests of economy.

Notwithstanding the greater effort needed for reading watt-hour meters fitted with the dial-pointer type of counting train, that kind of instrument is favoured in Great Britain and the United States. The reason for this is the avoidance of the variable friction that occurs in cyclometer registers when several drums are coupled while rotating. The heavier such drums are the greater is dislike of their use likely to be, so a cyclometer register drum which is made of aluminium has been produced by Landis & Gyr, S.A., of Zug, Switzerland. Its small weight, combined with the inherently more compact construction of cyclometer registers as compared with the dial-pointer type, should arouse interest in the easy reading of counting trains.

A letter received direct from Switzerland explains that this development has not by any means been due to scarcity of raw materials. It is said to have resulted from the company's regular research into meter construction, so that under the circumstances the non-availability of tin alloy formerly used in making cyclometer registers has actually helped the substitution of the lighter metal.

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