

ENGINEERING

Cheap Processes Applicable Now to High-Grade Printing

THE SPEED and economy of mass production newspaper processes can now be applied to the making of high grade printing plates, it became known at the Third Conference of Technical Experts in the Printing Industry held in New York under the auspices of the American Society of Mechanical Engineers.

Using the simple paper matrices of stereotyping, Europeans have for years been making plates of as high quality as those produced in America by more

expensive electroplating processes, it was said. A committee investigated the foreign methods and found that they could not be readily applied in this country. Speed, a necessity in the American industry, means nothing to the European, and secret formulae, known only to individual foremen, are largely responsible for success abroad.

But new methods keyed to the tempo and standardization of American industry are now being developed in this country. In one, described by George

A. Kubler of New York City, the impression of type and engravings is made into a film of metallic and chemical emulsions instead of into the soft surface of an ordinary paper matrix. These emulsions are coated over the surface of an ordinary mat.

"The face of the new coated matrix is smooth to such a degree that the original plate to be reproduced, no matter how fine the screen, is not affected by the grain of the texture of the papier-mache base, as is the case with ordinary and special matrices," Mr. Kubler said.

How European secrets were rediscovered in this country was told by Arnold A. Schwartz of Dunellen, N. J. A stereotyping plant was brought from Switzerland in 1923 in the hope that it would work as well here as in Europe, Mr. Schwartz said. Two foreign workers were even sent with the machinery. But plates made by this apparatus were of such poor quality that they could not be used. Rough matrix paper was found to be the chief fault.

But now after years of research, the difficulties have been overcome, he said. A satisfactory paper and a properly alloyed metal have been developed, so that the new apparatus is operated at full capacity. Mr. Schwartz believes printing from these stereotype plates equals that produced from high-grade, lead-moulded, nickel-plated electrotypes.

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PHYSICS

Blow Bubbles of Rubber To Test Elastic Strength

HOW the elastic and extensible properties of rubber can be gauged by means of an apparatus which has been in use for many years in France by large bakeries, has been divulged in a communication to the French Academy of Science.

M. Marcel Chopin, in an investigation carried out under the auspices of the French Aircraft Research Division, used a method of testing thin layers of unvulcanized rubber of known thickness. These were securely fixed over a plate with a central hole and the pressure needed to blow the thin films to different volumes until they break is recorded by a manometer.

This simple method gives the tenacity and extensibility of rubber. It has been previously used to determine the baking qualities of various types of flour.

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