

We have already noted something of the remarkable development in special machinery in the manufacture of capsules, pills and tablets, all of which are peculiar to the manufacture of medicines, and one could very easily deal with the development of this machinery entirely apart from any of the products and processes themselves. Aside from the special machines just mentioned, probably no one thing has had so much effect on medicinal products as the great improvement in different types of vacuum apparatus in the last fifteen or twenty years. Vacuum stills for the recovery of liquids or the concentration of fluids where the solid residue is desired, vacuum dryers for the handling of products such as dry extracts of drugs or granular effervescent salts, and even the use of vacuum pumps for filtration, for the handling of liquids in quantity and numerous other minor purposes make it unusually important in a wide scope of work.

From the baking industry we have taken over the type of mixers there used as being the best for pharmaceutical processes; from the flour mill we have adapted the roller mills to be used in handling tablet granulation; from the liquor industry we have adapted stills and vacuum pans of various forms; from the laundries we have taken special types of centrifugal machines; from the sugar industry, centrifugal machines of different design for other purposes, from the manufacture of confectionery we have derived lozenge machinery and notably the type of pans for sugar-coating pills and tablets which are the same as have been used for sugar-coating nuts; from the paint manufacturers we have taken over the mills for grinding paints and put them to use for grinding ointments and have taken their automatic filling machinery for use in filling tubes of tooth-paste ointments, etc. In fact, wherever a machine has been found that could, in any way, be adapted to pharmaceutical practice, it has been done, and used as it was, or, as frequently the case, after some modifications.

It is sometimes hard for the historian to refrain from assuming the role of prophet, but it is plainly evident to all that a great change in medicinal preparations is occurring, the old galenicals in many cases giving way to products from the biological field, and it requires no seer with supernatural vision to see still greater changes in the future, both in materials and methods, and the establishment of a more potent and definite *materia medica*.

*Laboratories of Parke, Davis & Co.*

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#### STATES HAVING RECIPROCAL REGISTRATION.

The following states now have reciprocal license privileges for pharmacists through the work of the National Association of Boards of Pharmacy:

Active—Alabama, Arkansas, Arizona, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, Oklahoma, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, Wisconsin.

Associate—Colorado, New York, North Carolina, Pennsylvania.

Any information desired about reciprocal registration may be secured from H. C. Christensen, Secretary N. A. B. P., No. 150 Bowen Avenue, Chicago, Illinois.