

captive at several of the forts; and he notes that at Fort Presque Isle there were "100 Soldiers and others," and about six swivel guns. While at a village of the Potawatamies, who he believed would be friendly to the English, he relates that they "danced under the English Colours, taken from Gen'l Braddock, and fired through the French Colours, held Council with Major Smith, agreed with him in a project formed by him for taking Fort Dequesne by their assistance with 1500 of their People" (p. 138). The details of this plan to capture Fort Duquesne are lacking, but an alternate plan to capture Detroit and other western forts included proceeding "along the Lake [*Erie*] to the river Beauff, where Fort Prisque Isle is, attempt this Fort, or if too strong for being taken by Surprise, or assault, they leave it, and proceed down the river to the Ohio, as Col'l Washington did on his Interview with the Commander of this Fort, on the Commencement of the Ohio war" (p. 139).

Another account of western Pennsylvania interest is the journal of Charlotte Brown, matron of the general hospital with the English forces in America in 1754 and 1756, the original of which is now in the library of the New York Historical Society. Mrs. Brown reached Hampton Roads, Virginia, in March, 1755, and by June 13 she had arrived at Fort Cumberland. There she was taken ill; on her recovery she did not go farther west, for on July 11 "a Boy came from the Camp and said the General was kill'd 4 Miles from the French Fort and that allmost all S'r Peter Hackets Regiment is cut of by a Party of French and Indians who were behind Trees" (p. 183). Her journal gives a brief glimpse of the distraction of those persons remaining at Fort Cumberland and records her difficult journey to Frederickstown, Maryland. The remaining portion of the journal is of less interest for the history of this region.

In making this source material available to a large number of persons, Miss Calder has not overburdened the text with footnotes. The selection of material was made by Dr. J. Franklin Jameson, chief of the division of manuscripts in the Library of Congress, and the material has been arranged topically rather than chronologically.

*Western Pennsylvania Historical Survey*

JOHN W. HARPSTER

*Men, Money and Molecules.* By WILLIAMS HAYNES, publisher *Chemical Industries*. (Garden City, New York, Doubleday, Doran & Company, Inc., 1936. viii, 214 p. Illustrations, charts.)

THIS interesting volume constitutes a recasting of Mr. Haynes's well-known *Chemical Economics* in popular form. Up-to-date, comprehensive, and written

in a fast-moving style, it should be welcomed by those who want a clear-cut picture of the development of chemical industry in this country to its present tremendous size. Chemicals as an industry through the war years and the two recent depressions and the economic principles governing this industry are first discussed with numerous examples.

Salt, lime, coke, sulphur, coal tar, and cellulose are the great industrial chemical raw materials, but modern industry regularly uses some three thousand different chemicals. The beginnings of American chemical industry were coincident with the founding of the first colonies. The first chemical exports were turpentine and potash. The first chemical manufactures were lead, copper, tin, alum, vitriol, and saltpeter made by John Winthrop, the first chemical industrialist in the country. But these attempts were strictly local in scope, and not until after the Revolutionary War, when the first tariff law was passed and the patent office was established, did the chemical industry have its true beginning. Mr. Haynes traces the growth of the chemical houses, which afterwards became large organizations. The stimulation of World War conditions on the American chemical industry and the steps that have been taken to match the consolidation of the industry abroad are also treated.

The service of chemistry in the conservation of natural resources can be illustrated in a number of ways; for example, the use of sulphuric acid instead of sour milk as an acidic agent; the use of artificial leather instead of cowhides; the making of methanol, acetic acid, and acetone by synthesis instead of by distillation from wood; the use of aluminum, the most abundant of all metals; the substitution of rayon for silk; and the use of lacquers for varnish. Finally the influence of chemical manufactures on standards and habits of living is now so great that the author dares to speak of a Chemical Revolution and an Age of Synthesis, analogous in effects to the older Mechanical Revolution. Chemical influences result in cheaper materials, more goods, more work, and new wealth.

The book concludes with a complete American chemical chronology, compiled by the author and Dr. L. W. Bass, that should be very useful for reference purposes. Of special interest to students of western Pennsylvania history are the references in both the text and the chronology to noteworthy developments in the chemical industry in the trans-Allegheny region, such as the establishment of the first paper mill west of the Alleghenies at Brownsville in 1796 and of the first flint-glass factory, at Pittsburgh, in 1808; the establishment of a chemical plant at Cincinnati in 1839, and the relation of its subsequent growth to

the great petroleum and steel industries of western Pennsylvania and Ohio; the beginnings of coke manufacture, at Connellsville, in 1841 and of the bromine industry, at Freeport, in 1845 or 1846; the refinement of petroleum on a small scale, at Pittsburgh, in 1855; and the first electrolytical production of aluminum on a commercial scale, at New Kensington, in 1888.

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HAROLD K. SALZBERG

*The Rolling Years.* By AGNES SLIGH TURNBULL. (New York, The Macmillan Company, 1936. 436 p.)

OLD residents of New Alexandria and of other like towns in western Pennsylvania will recognize many of the features of New Salem, the fictitious locale for this saga of the McDowell family between 1852 and 1910: the flour mill and tannery on Loyalhanna Creek, the general store, the turnpike to Greensburg and Pittsburgh, the sleeping cows that made walking in the village dangerous after dark, and the mines that began to pollute the streams in the latter half of the last century. The more well-to-do residents of New Salem read the *Pittsburgh Gazette* and the *New York Tribune*; their children learned the A B C's from the *New England Primer* and then toiled over the Presbyterian catechism. The young people went to Elders Ridge Academy, Blairsville Seminary, and sometimes to the Western Theological Seminary at Pittsburgh. Pleasant interludes to which they looked forward included maple sugaring, quilting bees, funerals, and weddings. At the turn of the century square dances, sleigh rides, and "Teachers' Institute" provided excitement. Some, of course, moved to near-by Pittsburgh, where they so far forgot their Presbyterian training as to attend plays at the Nixon Theater and take part in objective after-dinner discussions on the authenticity of the Bible and the nature of death.

"The Presbyterian Church in Action" might be a suitable subtitle for this chronicle of struggling descendants of Scotch-Irish pioneers. The story really begins on a bright Sunday morning in the summer of 1870. The wheat, after days of rain, stands ready to be cut; another day of rain and it will be ruined. Tense and subdued, the McDowell family nevertheless prepares to spend the day as good Presbyterians always spent the Sabbath—at church, in religious reading and singing, in the quiet performance of necessary chores. The despair of the son of the house as he realizes that the grain will be lost unless Monday is fair, the indignant wrath of the father when he sees his neighbor reaping, the