Blocks," as it should be; another is misnamed "Dresden Plate" when it is a simple "Fan" block. The discussion of the evolution of Broderie Perse appliqué does not indicate that it came very early - 1700s to early 1800s - and was developed because of the expense and scarcity of the chintz fabrics which were so popular. Instead, the author states that it was meant to imitate crewel work. Crewel work did influence the vines and flowers in ordinary appliqué, and did itself appear on quilts, but it did not influence the development of Broderie Perse as such. Again, on page 51, she suggests that dating a quilt with an indelible pen was not commonly done. While that may be true for the 1930s, it was definitely not uncommon from the 1830s to the turn of the century for quilts to be signed, dated, and even inscribed with indelible pen. These are minor points, but they show how closer attention to historical detail would have improved the text.

The book's most serious weakness, though, is its failure to meet its own objective of presenting Ontario's pioneer quilts, which the author defines as nineteenth-century. It touches on many quilting traditions, but barely mentions the earliest woollen quilts of the English and French settlers. While these quilts may be less attractive, they still form a large portion of the quilts of the "pioneers."

Moreover, of the 210 quilts illustrated and discussed, fully half are from the twentieth century and 47 are not from Ontario – 19 are not even Canadian. Surely somewhere in the "more than 2,000" quilts in Marilyn Walker's personal registry there were Ontario quilts which would have served to illustrate the trends the "foreign" ones do. Although one or two are extraordinary

examples of a type (e.g., the Hexagon on page 137), the remainder are quite ordinary. For example, on page 49, there is a Pennsylvania Dutch sampler from 1987 which, while beautiful, does not illustrate the type better than an older example from the Kitchener-Waterloo area would have. The problem may lie in the author's apparent unwillingness to work with museums, which contain many excellent specimens of Ontario quilts. Although she did not wish to include "museum pieces," a compromise here would have allowed the book to truly meet its objective. The presence of so many foreign examples must imply to the reader that there are no comparable Ontario pieces extant; and that is a grave misconception.

Ontario's Heritage Quilts does not present any new historical information, and since the quilts are drawn from a registry that is not publicly accessible, it is of limited use for researchers. However, such a genial and well-illustrated coffee-table book may inspire a general interest in quilt history similar to that in the United States, where research is ongoing, often publicly funded, and led by quilt historians. The Canadian quilting tradition follows our own political and immigration trends, and so is different in many ways, and at times in character, from the American tradition. Academics, governments, and quilt guilds need to work together to produce a comprehensive database accessible to scholars, which will in turn lead to a body of literature. This is an area of material history that has not yet caught the attention of Canadian publishers and researchers, despite a growing market. One can only hope that this book is an indication of an awakening interest.

Donald Wetherell and Elise Corbet, *Breaking New Ground:*A Century of Farm Equipment Manufacturing on the Canadian Prairies

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Wetherell, Donald and Corbet, Elise. Breaking New Ground: A Century of Farm Equipment Manufacturing on the Canadian Prairies, Saskatoon: Fifth House Publishers, 1993. vi & 254 pp., photographs, bibliography, index. Paper \$14.95, ISBN 1-895618-23-1.

As a student of the history of technology, I had great hopes for what I might learn in Wetherell and Corbet's Breaking New Ground. Both the title and subject, a century of farm-implement manufacturing on the Canadian prairies, held forth the promise of insights into the development of agricultural technology beyond the confines of Chicago and Brantford. This was to be an examination of innovation and invention in a milieu where the technology was so closely tied to the market that it might have been used in a field just down the road from where it was manufactured. Properly done, the book would contribute to an understanding of an important area of Canadian material history about which we know far to little. Unfortunately, I was disappointed to discover that little "new ground" was broken. What we are left with, for the most part, is a reworked version of the existing body of literature.

Much of the technology that was used on western Canadian farms was the product of immense full line manufacturers such as International Harvester Co. (IHC) and Cockshutt, who made everything from wheelbarrows to tractors. For them, western Canada was simply part of a much larger and often international market. Their relationship with this distant market was conducted via dealers and blockmen who were often disparagingly characterized by farmers as offering a "one size fits all" approach to agricultural technology. As a consequence of the mass-production techniques adopted by these firms, there was little room for the technological specialization needed to accommodate the differing geography and agricultural practices of western Canada. In fact, the use of technology promoted by the full line companies often encouraged agricultural customs such as deep cultivation and leaving fields free of trash cover, which depleted soil fertility and led eventually to erosion.

This state of affairs provided incentive for local entrepreneurs to develop equipment suited to specific regional conditions. For example, because these individuals were aware of requirements for a sub-surface cultivator, they were in the advantageous position of being able to design equipment to fit that particular need. We learn that before World War II the lack of a proper industrial infrastructure limited the development of the agricultural manufacturing industry in western Canada. For instance, beyond the standard steel stock available from

Manitoba Rolling Mills, manufacturers had to attempt to acquire their specialized needs from distant sources. The short line firms which developed did not compete with the full line manufacturers, but rather filled the product niches unoccupied by, or of no interest to, the larger firms. We learn that Versatile's entry into the production of tractors and swathers marked it as one of a small number of firms that were exceptions to this general trend.

Although the book details the factors that led to the creation of an indigenous implement-manufacturing industry, we discover very little about the various firms that took up the challenge. Where one might have wished an indepth discussion of these companies and the material culture that they produced, we find a recitation of who made what and in what year. We learn that Otto Wobick conceived a subsurface cultivator; we even have a picture of him standing beside his invention (more about that in a moment). Yet, beyond the most rudimentary of analysis, the book does not reveal what prompted farmers like Wobick to develop specialized equipment.

Another area which is not adequately covered is that of prairie manufacturers' marketing techniques. Informed readers will no doubt already be quite familiar with the promotional activities of Case and Hart-Parr, and would have been equally interested to know how the Boychuk brothers or Charles Noble succeeded in drawing attention to their patents and products. More visuals of advertisements and trade literature distributed by these firms would have helped. Moreover, there is no shortage of material from which to choose: the pages of the Nor' West Farmer were full of advertisements, and institutions such as the Western Development Museum have healthy collections of these publications. Given the important role that non-English-speaking immigrants played in the agricultural development of certain parts of western Canada, some discussion of how local entrepreneurs associated with a particular ethnic community marketed their agricultural products within that community is warranted.

As the book ultimately deals with "things," it could have greatly benefited from an increase in the number of photographs. An adept weave of text and illustrative material would have made the book much more useful and enjoyable for casual readers and academics alike. An excellent example of this sort of approach can

be found in Thomas Isern's examination of harvesting techniques and technology on the North American plains. As well, no effort seems to have been made to locate and photo-document extant examples of the products of these firms for inclusion in the book. Here again, there certainly is no lack of evidence from which to choose, since public collections on the prairies are rife with this material that, because it was often produced locally, is reasonably well documented.

At times the authors also display a disconcerting lack of understanding of the technology itself. Using a quotation from a 1932 source (by which time nostalgia for steam power had already taken root), reference is made to early self-propelled steam engines as "huge machines" (p. 89). This is inaccurate and does much to perpetuate the myth of "mammoth technology" on the prairies. Although some steam engines were enormous, their size and cost would have limited their use mostly to bonanza farms. Just as all farmers today do not operate John Deere four-wheel-drive tractors, all farmers around 1900 did not use 100 HP Case steam traction engines.

It is also dangerous to refer to the era of steam technology on the prairies as being cohesive when in fact it was made up of at least two quite different sub-periods, involving quite different steam technology. The authors go on to suggest that steam was faster and cheaper than the available alternatives such as "animal treadmills," neglecting the 10- and 12-horse sweeps that for

a time truly did provide an alternative for threshing purposes.

This example illustrates the problems that can occur when one does not engage in original research but rather reworks the existing historiography; the error regarding horse power was copied from Spector. The problem occurs when they misconstrue David Spector's comment (p. 152)2 regarding internal combustion tractors and water. The point was not that "they did not need water to operate" (p. 90) - as many were water-cooled, they obviously did - but rather that they did not require the quantity of water necessary with a steam boiler. Similarly questionable is the authors' interpretation of the invention of the manure spreader, attributed to a farmer near Stratford, Ontario, who sold out to IHC prior to World War I (p. 198). Were one unfamiliar with the actual chronology of events, one might not be aware upon reading this book that firms on both sides of the international border had been manufacturing manure spreaders before 1900.

Given the richness of the subject matter, one would wish this book to whet the appetite for further in-depth research. Unfortunately, rather than teasing and prompting, it frustrates. In order to gain a better understanding of the prairie implement-manufacturing industry, there must be much more consideration given to the significance of the material culture and the motivation behind its creation. In this presentation it seems bland and colourless, and I am sure that the reality could not be farther from the truth.

NOTES

- Thomas D. Isern, Bull Threshers and Bindlestiffs: Harvesting and Threshing on the North American Plains (Lawrence: University of Kansas, 1990).
- David Spector, Agriculture on the Prairies 1880– 1940 (Ottawa: National Historic Parks and Sites Branch, 1983).

Laurence F. Gross, The Course of Industrial Decline: The Boott Cotton Mills of Lowell, Massachusetts, 1835–1955

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