# *"As Accurate as is Humanly Possible": Accessing the Manuscript Industrial Schedules of the 1871 Census of Canada*

by **ELIZABETH BLOOMFIELD**

Questions about the automation and access of archival records have been debated in this journal and were the focus of a recent conference hosted by the Vancouver Island Project and the University of Victoria.[1] This note reports progress in the first stage of a project to facilitate access to the industrial data of the 1871 manuscript census. During 1985-86 the project has been sheltered by the Department of Geography, University of Guelph and assisted by a grant from the Social Sciences and Humanities Research Council of Canada.

The manuscript schedules of industrial establishments, recently made available on microfilm as part of the whole 1871 manuscript census by the Public Archives, constitute a uniquely valuable source.[2] Although similar details were collected in the censuses of 1881, 1891, 1901 and 1911, none of the manuscript industrial schedules for those years have survived.

The 1871 census enumerators recorded the following details of industrial activity in 1870 for each enterprise they included:

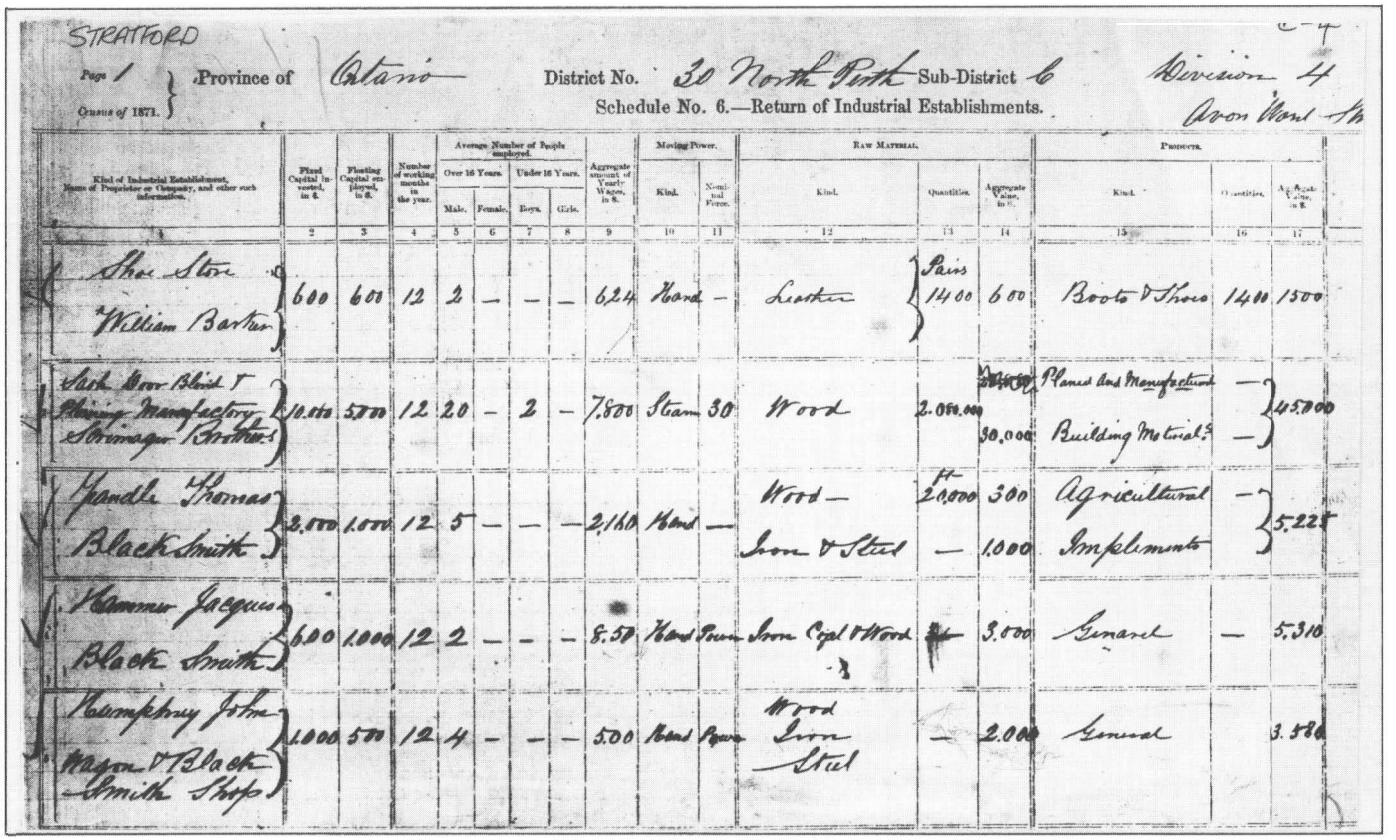
- Name of proprietor(s),
- Statement of type of establishment/nature of product,
- Values of fixed and floating (working) capital,
- Number of working months in the year,
- Average numbers employed, distinguished into males and females over 16 years, boys and girls under 16 years,
- Motive power other than manual (water, steam, horse) with the nominal force stated in units of horse power,
- Quantities and values of specified raw materials,
- Quantities and values of manufactured products.

The format of an original manuscript schedule is illustrated in Figure 1, for part of the town of Stratford, which we shall use for examples in this note. The facsimile also suggests the problems posed for users by the calligraphy and, sometimes, the spelling of the census enumerators.

Only a very limited amount of this material was published in the official census volumes of the 1870s. The industrial statistics were organized primarily by various types of

1 P.A. Baskerville and C.M. Gaffield, *Archives, Automation and Access: Proceedings of an Interdisciplinary Conference at the University of Victoria, March 1-2, 1985* (Victoria, 1986).

2 T.A. Hillman, *Catalogue of Census Returns on Microfilm, 1666-1881* (Ottawa, 1981).



STRATFORD

Page 1 — Census of 1871. — Province of Ontario — District No. 30 North Perth — Sub-District 6 — Division 4

Schedule No. 6.—Return of Industrial Establishments.

| Kind of Industrial Establishment, Name of Proprietor or Company, and other such information. | Fixed Capital invested, in $. | Floating Capital employed, in $. | Number of working months in the year. | Average Number of People employed. Over 16 Years. Male. | Over 16 Years. Female. | Under 16 Years. Boys. | Under 16 Years. Girls. | Aggregate amount of Yearly Wages, in $. | Moving Power. Kind. | Moving Power. Nominal Force. | Raw Material. Kind. | Raw Material. Quantities. | Raw Material. Aggregate Value, in $. | Products. Kind. | Products. Quantities. | Products. Aggregate Value, in $. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| Shoe Store William Barton | 600 | 600 | 12 | 2 | — | — | — | 624 | Hand | — | Leather | Pairs 1400 | 600 | Boots & Shoes | 1400 | 1500 |
| Sash Door Blind & Planing Manufactory Scrimager Brothers | 10.000 | 5.000 | 12 | 20 | — | 2 | — | 7.800 | Steam | 30 | Wood | 2.000.000 ft | 20.000 30.000 | Planed and Manufactured Building Materials | — — | 45.000 |
| Handle Thomas Blacksmith | 2.500 | 1.000 | 12 | 5 | — | — | — | 2.160 | Hand | — | Wood — Iron & Steel | ft 20.000 — | 300 1.000 | Agricultural Implements | — | 5.225 |
| Hammer Jacques Blacksmith | 600 | 1.000 | 12 | 2 | — | — | — | 8.50 | Hand | Power | Iron Coal & Wood | ton | 3.000 | General | — | 5.310 |
| Humphrey John Wagon & Blacksmith Shop | 1.000 | 500 | 12 | 4 | — | — | — | 5.00 | Hand | Power | Wood Iron Steel | — | 2.000 | General | | 3.580 |

**FIGURE 1**
**Facsimile of Census Manuscript Schedule for Part of Stratford**

industry, which were defined pragmatically rather than systematically. Summary data only were published for each of the 206 census districts (90 in Ontario); and no industrial data at all were published for smaller areal units. Those responsible for the 1871 Census declared that it was "as accurate as is humanly possible" and, as the first nationwide count, it did improve on the quality of the 1861 censuses, such as that of New Brunswick.[3] Our project permits some testing of the accuracy and consistency of the material published on industrial activity in 1870, in relation to the details of the manuscript schedules.

Since the 1871 manuscript schedules were first released in the early 1970s, several scholars have examined them to support studies of particular cities, districts, or industrial types. Gregory Kealey, for example, used the Toronto data to provide a context for his study of industrial workers.[4] The York Social History project, directed by Michael Katz, coded data for industrial establishments in Hamilton, as part of its analysis of industrial capitalism in that city.[5] L.D. McCann has used the industrial schedules for Halifax-Dartmouth and for Pictou County, together with Dun credit ratings.[6] Eve Martel reconstituted the general patterns of industry in Montreal, and Joanne Burgess, the organization of the shoe-making industry there.[7] Paul Craven and Tom Traves have drawn on census manuscript data for evidence of industrial activity in railway workshops and yards;[8] Jim Burant has featured the photographic studios of Saint John;[9] and Ian McKay the confectionery and baking industry of Halifax.[10]

However, these uses of the 1870 data have been specific to each researcher's limited purpose. Different systems of classificaiton have been employed, so that comparisons with other places or industrial sectors or with later periods are almost impossible. Very few of these users have transformed the data into machine-readable form, and those who have done so have been unconcerned about making their records accessible to other researchers. Scholars interested only in one category or sector of industrial activity may be daunted by the time-consuming labour of searching through the microfilmed schedules for a handful of establishments, and could easily miss some which were slightly misplaced in storage or the microfilming process.

The project reported here is making the unpublished data for industrial establishments accessible, in systematic, standardized and machine-readable format, to serve the research interests of economic, business, urban and social historians, historical geographers, industrial archaeologists, and historians of material culture and technology. By coding individual establishments within the framework of census districts, sub-districts and

3 A.A. Brookes, "Doing the Best I Can: The Taking of the 1861 New Brunswick Census," *Histoire sociale* 9 (1976), pp. 73-77.

4 G.S. Kealey, *Toronto Workers Respond to Industrial Capitalism* (Toronto, 1980).

5 M.B. Katz, M.J. Doucet, and M.J. Stern, *The Social Organization of Early Industrial Capitalism* (Cambridge, 1982).

6 L.D. McCann, "The Mercantile-Industrial Transition in the Metals Towns of Pictou County, 1857-1931," *Acadiensis* 10, no. 2 (1981), pp. 29-64.

7 E. Martel, "L'industrie à Montréal en 1871" (M.A. Thesis, Université du Québec à Montréal, 1978); J. Burgess, "L'industrie de la chaussure," *Revue d'histoire de l'Amérique française* 31 (1977), pp. 187-210.

8 P. Craven and T. Traves, "Canadian Railways as Manufacturers, 1850-1880," Canadian Historical Association, *Historical Papers* (1983), pp. 254-81.

9 J. Burant, "A Written Portrait: Saint John Photographers and Their Studios in the 1871 Census," *Archivaria* 17 (Winter 1983-84), pp. 275-77.

10 I. McKay, "Capital and Labour in the Halifax Baking and Confectionery Industry During the Last Half of the Nineteenth Century," *Labour/Le Travailleur* 3 (1978), pp. 63-108.

enumerators' divisions, by classifying each according to the Standard Industrial Classification, and by the use of computer methods, we can achieve accuracy, consistency, comparability, retrievability, and aggregation.

In the first major phase of the work, the manuscript details for 6,825 industrial establishments in 146 urban or proto-urban centres have been made machine-readable. These establishments constitute 44 per cent of all reported for Ontario in 1871, but 61 per cent of Ontario's total industrial employment and 64 per cent of total provincial production. They also represent 20 per cent of all industrial establishments reported for the four Canadian provinces included in the 1871 census, but 28 per cent of total industrial employment and 33 per cent of total industrial production.

Intensive procedures were developed for verifying basic data, and for editing the databank so that it would be suitable for indexing, search and retrieval, for statistical analysis, for online transmission or copying on diskette to other users, and for printing in hard copy. Particular attention was paid to the accuracy and consistency of the Standard Industrial Classification designations and to verifying the numeric data. Proprietors' names and types of establishments or products were also checked against lists in the R.G. Dun reference books, city and county directories, and county atlases. Where the census enumerator's spelling of a proprietor's name differed significantly from that in a contemporary printed source, while clearly referring to what was the same establishment, the record was "corrected" if this would result in a more conventional and plausible rendering of the name.

The project procedures now enable data for any establishment to be retrieved easily; details for groups of establishments may also be aggregated by geographical unit or industrial type. Both potentialities, illustrated in Tables 1 to 3, are likely to interest scholars in a variety of disciplines.

Table 1 presents the larger industrial establishments of Stratford, to match the material shown in the facsimile schedule above. It also illustrates the range of data available in our databank for each establishment: FIXCAPITAL, FLOCAPITAL, WAGES, RAWMAT and PRODUCTS are the dollar values for fixed capital, floating/working capital, cost of wages, cost of raw materials and value of production, respectively. FORCE refers to the horse power units of non-manual energy, while EMPMEN, EMPWOM, EMPBOY and EMPGIRL specify the numbers of workers by gender and age group. The variable SIC is the Standard Industrial Classification code we have assigned to each enterprise, so that records may be sorted and aggregated by precise industrial types. The Stratford establishments in Table 1 are listed in order of value of production, but they could be as readily retrieved in alphabetical order of the proprietor's name, by size of workforce (TOTEMP), by SIC CODE or by any of the other variables, or indeed in the original order of the manuscript schedules.

The entire databank can also be sorted *en bloc*, without regard to town location, by any of the variables. Thus we can rank all the urban industrial establishments in Ontario by size of workforce, by value of output, or by size of energy source. We can also group establishments by precise industrial type, as we have done for planning mills in Table 2. The Scrimgeour Brothers' planning mill of Stratford, listed in the facsimile schedule (Figure 1) is found to be among the largest, by value of output, in all Ontario urban centres.

Because individual establishments are precisely coded for geographic location and industrial classification, it is possible to aggregate their numeric data into successively larger groupings or areas, including whole towns. Table 3 illustrates this capability, with a summary of the industrial data for the top forty-six urban centres in Ontario, ranked by value of industrial output in 1870. Also illustrated in this table is the possibility of calculating various indices and ratios from the basic data. In addition to AVWAGE (the average wage per industrial worker) and PERCENT (the percentage of a town's total population employed in industrial establishments), other indices could include the average number of workers per establishment and various measures of productivity. It may be noted that Stratford, which ranked nineteenth in value of industrial production in 1870, was less industrialized than other Ontario centres; its AVWAGE and PERCENT values were below the means for Ontario towns and cities with at least 100 industrial workers.

In the next phase of the research project, we are taking two directions. One is to study the feasibility of extending the databank to include rural Ontario as well as the other three provinces enumerated in 1871 — Quebec, New Brunswick, and Nova Scotia. The other is to apply statistical analysis techniques to the records already in this and other databanks, in order to explore major questions in the history of Canadian social and economic development. One is the organization of industrial capitalism in a period of transition from artisanal craftshops to factories using machinery and integrated work processes. Was Ontario industry characterized by the "concurrent phases of capitalist growth," the variable paths of development of different industrial sectors found by Laurie and Schmitz of the Philadelphia Social History Project?[11] Were the new, large factories more or less productive than the manufactories and craftshops? What can we learn about seasonality and wage-rates in the various types of enterprises, and of the participation of women and children in the industrial workforce? We are also interested in the relationship between industrial growth and structure on the one hand and patterns of general urban development.[12]

A research report is available, describing objectives and procedures, and outlining the databank's potential. It contains five maps or diagrams and twenty tables.

Elizabeth Bloomfield, Gerald Bloomfield, Janine Grant, with Peter McCaskell, *Industry in Ontario Urban Centres, 1870: Accessing the Manuscript Census* (1986).

It may be ordered from Publications, Department of Geography, University of Guelph, Guelph, Ontario, Canada, N1G 2W1, for $7.00 (including postage and handling).

11 B. Laurie and M. Schmitz, "Manufacture and Productivity: The Making of an Industrial Base, Philadelphia, 1850-1880," in T. Hershberg, ed., *Philadelphia: Work, Space, Family and Group Experience in the 19th Century* (New York, 1981).

12 E. Bloomfield, *Urban-Industrial Growth Processes in Southern Ontario, 1870-1930* (Winnipeg, 1986).

# TABLE 1
## Larger Industrial Establishments in Stratford, 1870
## (value of production at least $5,000)

| PROPRIETOR | | TYPE ESTABLISHMENT | SIC CODE | POWER | FORCE | FIXCAPITAL | FLOCAPITAL | EMPMEN | EMPWOM | EMPBOY | EMPGIRL | TOTEMP | WAGES | RAWMAT | PRODUCTS | TOWNNAME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BAIRD & | BIRCH | MEAT PACKING | 101 | | 0 | 9000 | 80000 | 20 | 0 | 1 | 0 | 21 | 3600 | 100000 | 110250 | STRATFORD |
| ARGO | ADAM L | FLOUR MILL | 105 | W/S | 40 | 1200 | 10000 | 7 | 0 | 0 | 0 | 7 | 2700 | 49400 | 71000 | STRATFORD |
| WILLIAMSON/FOSTER/CO | | MILLINERY/TAILOR | 249-M/242 | | 0 | 10000 | 10000 | 9 | 28 | 0 | 0 | 37 | 11000 | 30000 | 65000 | STRATFORD |
| SCRIMGEOUR | BROS | PLANING/SASH/DOOR | 254 | STEAM | 30 | 10000 | 5000 | 20 | 0 | 2 | 0 | 22 | 7800 | 30000 | 65000 | STRATFORD |
| EASSON | WILLIAM | SAW/PLANING MILL | 251/254 | STEAM | 25 | 20000 | 3000 | 35 | 0 | 5 | 0 | 40 | 10000 | 15000 | 27000 | STRATFORD |
| MARSHALL & | FULLER | FLAX SCUTCHING MILL | 189-F | STEAM | 25 | 8000 | 10000 | 22 | 15 | 6 | 7 | 50 | 7000 | 0 | 20200 | STRATFORD |
| HORNE & | CLARK | TAILOR/MILLINERY | 242/249-M | | 0 | 3800 | 8000 | 2 | 10 | 0 | 0 | 12 | 2000 | 9000 | 15000 | STRATFORD |
| SHARMAN | JOSEPH | AGRC IMPL/FOUNDRY | 311/294 | STEAM | 12 | 5000 | 5000 | 20 | 0 | 3 | 0 | 23 | 7000 | 3000 | 15000 | STRATFORD |
| SUGDEN & | SONS | WOOLLEN MILLS | 182 | STEAM | 18 | 9000 | 4000 | 7 | 4 | 0 | 2 | 13 | 2750 | 7000 | 14000 | STRATFORD |
| MEYERS | ROBERT | BOOTS & SHOES | 174 | | 0 | 1000 | 5000 | 6 | 1 | 0 | 0 | 9 | 2564 | 5000 | 12000 | STRATFORD |
| GIBSON | JOHN | BAKERY | 107 | | 0 | 600 | 1500 | 2 | 0 | 1 | 0 | 3 | 650 | 8000 | 11500 | STRATFORD |
| SCHOLTZ | JOHN F | WHIP/LEATHER MFY | 179 | | 0 | 2000 | 5000 | 4 | 8 | 0 | 0 | 12 | 1700 | 9000 | 11000 | STRATFORD |
| MCDONALD | D B | CARPENTRY | 421-C | | 0 | 1800 | 1000 | 6 | 0 | 0 | 0 | 8 | 3000 | 6000 | 10000 | STRATFORD |
| OSBERT | J J | TIN/STOVE SHOP | 304-T/307-S | | 0 | 1100 | 100 | 2 | 0 | 0 | 0 | 2 | 336 | 4000 | 10000 | STRATFORD |
| RIGGS | BENJAMIN | SOAP/CANDLES | 376 | | 0 | 4000 | 8000 | 1 | 0 | 0 | 0 | 1 | 450 | 8500 | 10000 | STRATFORD |
| JOHNSON | ABRAHAM | CABINETS | 261 | | 0 | 3000 | 3000 | 10 | 0 | 0 | 0 | 10 | 4000 | 4000 | 10000 | STRATFORD |
| REDFORD | JAMES | GRAIN MILL | 105 | STEAM | 20 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 8000 | 9275 | STRATFORD |
| ADAMS | JOHN | TAILOR | 243 | | 0 | 5000 | 2500 | 3 | 11 | 0 | 0 | 14 | 2500 | 6720 | 9100 | STRATFORD |
| ELDER | GEORGE | STAVE FCY | 251 | STEAM | 25 | 6000 | 1000 | 20 | 0 | 6 | 0 | 26 | 5000 | 800 | 8500 | STRATFORD |
| COREY | T F & SONS | PATENT MEDICINES | 374 | | 0 | 600 | 600 | 3 | 0 | 0 | 0 | 3 | 0 | 3270 | 8500 | STRATFORD |
| RIGGS | ISAAC | SAW MILL | 251 | STEAM | 16 | 3000 | 3000 | 8 | 0 | 0 | 0 | 8 | 2800 | 3000 | 7500 | STRATFORD |
| GORDON | JAMES | DRESSES/MILLINERY | 244/249-M | | 0 | 500 | 4000 | 0 | 6 | 0 | 0 | 6 | 1000 | 4000 | 7500 | STRATFORD |
| MCAVOY & | BOX | CABINETS | 261 | | 0 | 2300 | 1600 | 5 | 0 | 1 | 0 | 6 | 1060 | 4800 | 7240 | STRATFORD |
| BIRCH & | SONS | TINSMITH | 304-T | | 0 | 2500 | 1000 | 3 | 0 | 1 | 0 | 4 | 1300 | 600 | 7000 | STRATFORD |
| WHITTAKER | SAMUEL | TINSMITH | 304-T | | 0 | 3000 | 4000 | 3 | 0 | 0 | 0 | 3 | 1000 | 3400 | 7000 | STRATFORD |
| ADAMS & | BACK | MOROCCO/KID LEATHER | 172 | | 0 | 300 | 500 | 3 | 0 | 0 | 0 | 3 | 600 | 4400 | 6700 | STRATFORD |
| CLARK | J J | TAILOR | 243 | | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 9 | 1600 | 5000 | 6600 | STRATFORD |
| LAWSON | THOMAS | BOOTS & SHOES | 174 | | 0 | 3000 | 1500 | 6 | 1 | 0 | 0 | 7 | 1872 | 1200 | 6000 | STRATFORD |
| GIBSON | HENRY | CONFECTIONERY | 108-C | | 0 | 1200 | 1200 | 3 | 0 | 0 | 0 | 3 | 1800 | 1335 | 6000 | STRATFORD |
| DALY | ROBERT | COOPER | 259-C | | 0 | 1000 | 1000 | 6 | 0 | 0 | 0 | 6 | 2400 | 2200 | 6000 | STRATFORD |
| KNEITL | JOSEPH | BOOTS & SHOES | 174 | | 0 | 3500 | 1000 | 3 | 0 | 1 | 0 | 4 | 1000 | 3000 | 6000 | STRATFORD |
| CAMPBELL | DAVID | CABINETS | 261 | STEAM | 8 | 5000 | 1000 | 2 | 2 | 0 | 1 | 5 | 1300 | 2000 | 6000 | STRATFORD |
| GIBSON | WILLIAM | BAKER/CONFECTIONER | 107/108-C | | 0 | 2600 | 4000 | 1 | 0 | 0 | 0 | 1 | 400 | 4000 | 5800 | STRATFORD |
| LEAN | RODERICK | AGRC IMPLEMENTS | 311 | STEAM | 3 | 4000 | 3000 | 4 | 0 | 1 | 0 | 5 | 1400 | 2800 | 5600 | STRATFORD |
| NICOL | DAVID | CARPENTER | 421-C | | 0 | 800 | 4000 | 4 | 0 | 0 | 0 | 4 | 1500 | 3100 | 5500 | STRATFORD |
| HAMMER | JACQUES | BLACKSMITH | 896 | | 0 | 600 | 1000 | 2 | 0 | 0 | 0 | 2 | 850 | 3000 | 5310 | STRATFORD |
| SMITH | ALEXANDER | TANNERY | 172 | STEAM | 12 | 3000 | 1000 | 4 | 1 | 0 | 0 | 5 | 1300 | 3750 | 5250 | STRATFORD |
| YEANDLE | THOS | BLACKSMITH | 896 | | 0 | 2000 | 1000 | 5 | 0 | 0 | 0 | 5 | 2160 | 1300 | 5225 | STRATFORD |
| LYNN & | GOODWIN | CARRIAGES | 329-C | | 0 | 3000 | 3000 | 6 | 0 | 0 | 0 | 6 | 1500 | 2050 | 5194 | STRATFORD |
| WHITEHEAD | E S | WATCHMAKER | 695 | | 0 | 1000 | 500 | 4 | 0 | 0 | 0 | 4 | 1040 | 3000 | 5000 | STRATFORD |
| *** Total *** | | | | | 234 | 143400 | 200000 | 282 | 92 | 28 | 10 | 412 | 101932 | 363625 | 614744 | |

Source: URBIND71 databank.

# TABLE 2
## Planing Mills in Ontario Urban Centres, 1870, Listed by Value of Output
## (all with output of at least $10,000)

| PROPRIETOR | TYPE ESTABLISHMENT | SIC CODE | POWER | FORCE | FIXCAPITAL | FLOCAPITAL | EMPMEN | EMPWOM | EMPBOY | EMPGIRL | TOTEMP | WAGES | RAWMAT | PRODUCTS | TOWNNAME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CURRIER T M & CO | SASH/BLINDS | 254 | STEAM | 50 | 35000 | 15000 | 70 | 0 | 0 | 0 | 70 | 32000 | 50000 | 85000 | OTTAWA |
| CHRISTOPHER BROS | SASH/DOORS | 254 | STEAM | 50 | 15000 | 17000 | 40 | 0 | 7 | 0 | 47 | 18000 | 30000 | 60000 | INGERSOLL |
| SMITH J B | SASH/BLIND FCY | 254 | STEAM | 30 | 10000 | 20000 | 50 | 0 | 10 | 0 | 60 | 18110 | 40000 | 60000 | TORONTO |
| CLEMENTS J | SASH/BLIND FCY | 254 | STEAM | 20 | 5000 | 0 | 10 | 0 | 4 | 0 | 14 | 4800 | 20000 | 60000 | TORONTO |
| KINNEY LEWIS | PLANING/SASHES/DOORS | 254 | STEAM | 20 | 4000 | 4000 | 16 | 0 | 1 | 0 | 17 | 1100 | 50000 | 58000 | BLENHEIM |
| BURKE WILLIAM | SASH/BLIND FCY | 254 | STEAM | 60 | 10000 | 15000 | 88 | 0 | 12 | 0 | 100 | 26000 | 15000 | 51250 | TORONTO |
| PLENDERLEITH JOHN | PLANING/SASH/BLINDS | 254 | STEAM | 15 | 3000 | 2000 | 30 | 0 | 0 | 0 | 30 | 10000 | 36000 | 50000 | TORONTO |
| SCRIMGEOUR BROS | PLANING/SASH/DOOR | 254 | STEAM | 30 | 10000 | 5000 | 20 | 0 | 2 | 0 | 22 | 7800 | 30000 | 45000 | STRATFORD |
| WRIGHT & OURAND | SASH/DOOR FCY | 254 | STEAM | 16 | 10000 | 12000 | 45 | 0 | 0 | 0 | 45 | 15500 | 10000 | 40000 | LONDON |
| WAGNER J P & CO | SASH/DOOR FCY | 254 | STEAM | 40 | 8000 | 10000 | 40 | 0 | 8 | 0 | 48 | 21000 | 2250 | 39062 | TORONTO |
| STEWART ROBT | SASH/DOOR FCY | 254 | STEAM | 20 | 12000 | 12500 | 20 | 0 | 0 | 0 | 20 | 6500 | 10000 | 35000 | GUELPH |
| GREEN THOMAS | SASH/DOOR FCY | 254 | STEAM | 25 | 15000 | 2000 | 31 | 0 | 0 | 0 | 31 | 12000 | 6000 | 32000 | LONDON |
| OLIVER ADAM & CO | SASH/DOORS | 254 | STEAM | 50 | 20000 | 50000 | 44 | 0 | 6 | 0 | 50 | 13000 | 6000 | 30000 | INGERSOLL |
| ROBERTSON WILLIAM | SASH/DOOR/BLIND FCY | 254 | STEAM | 16 | 4000 | 1000 | 6 | 0 | 0 | 0 | 6 | 2568 | 20500 | 30000 | PETERBOROUGH |
| BRENNAN MICHAEL | SASH/DOOR FACTORY | 254 | STEAM | 20 | 3000 | 2000 | 18 | 0 | 4 | 0 | 22 | 7800 | 18000 | 28000 | HAMILTON |
| FAWCITT BROS | PLANING/SAW MILL | 254/251 | STEAM | 18 | 8000 | 7000 | 18 | 0 | 4 | 0 | 22 | 5000 | 16000 | 25000 | STRATHROY |
| TILLSON EDWIN A | DOOR FACTORY | 254 | WATER | 25 | 7000 | 1000 | 10 | 0 | 0 | 0 | 10 | 3600 | 14000 | 24600 | TILSONBURG |
| WATT WILLIAM | PLANING | 254 | STEAM | 12 | 10000 | 5000 | 20 | 0 | 0 | 0 | 20 | 5000 | 9600 | 20000 | BRANTFORD |
| MCLAREN J & CO | SASH FACTORY | 254 | WATER | 50 | 20000 | 35000 | 20 | 0 | 0 | 0 | 20 | 7000 | 10000 | 20000 | OTTAWA |
| BOULT STEPHEN | SASH,DOOR | 254 | STEAM | 20 | 4000 | 3000 | 12 | 0 | 1 | 0 | 13 | 5770 | 4000 | 18000 | GUELPH |
| HELLEMS & JACKSON | PLANING/SASH/BLINDS | 254 | STEAM | 20 | 7000 | 8000 | 10 | 0 | 7 | 0 | 17 | 4000 | 10000 | 18000 | ST CATHARINES |
| SHARPE GEORGE | PLANING MILL | 254 | STEAM | 25 | 2000 | 2000 | 10 | 0 | 0 | 0 | 10 | 5000 | 5000 | 15000 | HAMILTON |
| SYKES JOHN | PLANING/SASH/DOORS | 254 | STEAM | 15 | 2000 | 2500 | 6 | 0 | 1 | 0 | 7 | 4000 | 8500 | 15000 | OSHAWA |
| LYON JOHN | SASH,DOOR,BLIND FCY | 254 | WATER | 10 | 6000 | 8000 | 14 | 0 | 3 | 0 | 17 | 6000 | 5000 | 14410 | PARIS |
| BACHELDOR GEORGE | PLANING MILL | 254 | STEAM | 20 | 0 | 0 | 20 | 0 | 5 | 0 | 25 | 7800 | 4100 | 13950 | HAMILTON |
| BROADFOOT & GRAY | PLANING MILL | 254 | STEAM | 15 | 6000 | 6000 | 10 | 1 | 0 | 0 | 11 | 4000 | 4800 | 12500 | SEAFORTH |
| EVANS & MCKENAGHER | PLANING FACTORY | 254 | STEAM | 18 | 3600 | 500 | 5 | 0 | 0 | 0 | 5 | 2000 | 9000 | 12000 | KINCARDINE |
| HOSKINS RICHARD | SASH/DOOR FCY | 254 | | 0 | 1600 | 900 | 14 | 0 | 1 | 0 | 15 | 6500 | 4000 | 12000 | LONDON |
| TURNBULL DAVID & CO | PLANING FCY | 254 | WATER | 10 | 4000 | 2000 | 15 | 0 | 0 | 0 | 15 | 4500 | 10000 | 12000 | PARIS |
| GROSE STEPHEN | SASH/DOOR FCY | 254 | STEAM | 22 | 3500 | 4000 | 10 | 0 | 0 | 0 | 10 | 4000 | 2000 | 12000 | WHITBY |
| ARMSTRONG & PATTON | PLANING/SHINGLE MILL | 254/251-S | STEAM | 48 | 8000 | 5000 | 17 | 0 | 0 | 0 | 17 | 4400 | 4825 | 11400 | IROQUOIS |
| SCHOFIELD FREEMAN | SASH/DOOR/BLIND FCY | 254 | STEAM | 20 | 3500 | 4000 | 15 | 0 | 0 | 0 | 15 | 5500 | 3745 | 10275 | WOODSTOCK |
| DAVIS & MCRAE | SASH/BLIND FCY | 254 | | 0 | 1600 | 500 | 12 | 0 | 0 | 0 | 12 | 4000 | 2000 | 10000 | BELLEVILLE |
| PICKERING JOSEPH | SASH/DOOR FCY | 254 | STEAM | 16 | 2800 | 2000 | 10 | 0 | 2 | 0 | 12 | 3000 | 1300 | 10000 | BRANTFORD |
| SMITH MATHIAS | SASH/DOOR FCY | 254 | WATER | 27 | 4000 | 3000 | 9 | 0 | 2 | 0 | 11 | 4500 | 1500 | 10000 | NAPANEE |
| WOODS G A & CO | SASH/BLIND/FANNING M | 254/311 | STEAM | 15 | 5000 | 3000 | 12 | 0 | 0 | 0 | 12 | 3500 | 2400 | 10000 | PORT HOPE |
| O'BYRNE BERNARD | SASH/DOOR/PLANING | 254 | | 0 | 1000 | 1000 | 10 | 0 | 2 | 0 | 12 | 4000 | 6000 | 10000 | STRATHROY |
| *** Total *** | | | | 868 | 274600 | 270900 | 807 | 1 | 82 | 0 | 890 | 299248 | 481520 | 1019447 | |

Source: URBIND71 databank, compiled from 1871 manuscript census schedules.

## TABLE 3
## Ontario Urban Centres in 1870, Ranked by Value of Output: The Top 46 Centres

| TOWN NAME | POP | ESTAB | CAPITAL | EMPLOY | WAGES | RAWMAT | PRODUCTS | PERCENT | AVWAGE | FORCE |
|---|---|---|---|---|---|---|---|---|---|---|
| TORONTO | 56092 | 542 | 4428650 | 9653 | 2696531 | 7098197 | 14544699 | 17.2 | 279.35 | 2147 |
| HAMILTON | 26716 | 326 | 1578164 | 4785 | 1375611 | 2900141 | 5634044 | 17.9 | 287.48 | 1236 |
| OTTAWA | 21745 | 233 | 1095420 | 3210 | 880057 | 2565976 | 4176610 | 14.7 | 274.16 | 2199 |
| LONDON | 15826 | 216 | 1026834 | 2295 | 699287 | 1999254 | 3551520 | 14.5 | 304.70 | 535 |
| ST CATHARINES | 7864 | 158 | 506352 | 1416 | 425052 | 1731661 | 2584700 | 18.0 | 300.18 | 750 |
| GUELPH | 6878 | 109 | 486715 | 1131 | 376487 | 1057379 | 1901500 | 16.4 | 332.88 | 608 |
| BRANTFORD | 8107 | 98 | 794295 | 1258 | 424602 | 916309 | 1835577 | 15.5 | 337.52 | 442 |
| KINGSTON | 12407 | 158 | 534155 | 1317 | 347209 | 721795 | 1362756 | 10.6 | 263.64 | 201 |
| GALT | 3827 | 74 | 395726 | 796 | 226843 | 663293 | 1217110 | 20.8 | 285.00 | 561 |
| OSHAWA | 3185 | 41 | 379450 | 732 | 259350 | 612776 | 1095780 | 23.0 | 354.30 | 274 |
| CHATHAM | 5873 | 95 | 268540 | 716 | 234481 | 465325 | 916980 | 12.2 | 327.49 | 492 |
| GODERICH | 3954 | 65 | 196560 | 388 | 101823 | 638326 | 892230 | 9.8 | 262.43 | 561 |
| DUNDAS | 3135 | 64 | 495430 | 682 | 182575 | 461824 | 882477 | 21.7 | 267.70 | 673 |
| PORT HOPE | 5114 | 77 | 263450 | 560 | 155273 | 530183 | 875000 | 10.9 | 277.27 | 348 |
| INGERSOLL | 4022 | 69 | 314090 | 627 | 194917 | 523194 | 856212 | 15.6 | 310.87 | 430 |
| PARIS | 2640 | 45 | 186120 | 410 | 108120 | 547082 | 844367 | 15.5 | 263.71 | 282 |
| BELLEVILLE | 7305 | 102 | 285970 | 914 | 213748 | 325998 | 810465 | 12.5 | 233.86 | 641 |
| PETERBOROUGH | 4611 | 96 | 311595 | 759 | 214282 | 397949 | 775095 | 16.5 | 282.32 | 396 |
| STRATFORD | 4313 | 82 | 193650 | 538 | 128482 | 409107 | 720206 | 12.5 | 238.81 | 241 |
| HAWKESBURY | 1671 | 39 | 145150 | 301 | 53590 | 487224 | 673405 | 18.0 | 178.04 | 317 |
| LINDSAY | 4049 | 75 | 237400 | 446 | 124797 | 375663 | 659391 | 11.0 | 279.81 | 676 |
| ALMONTE | 2080 | 46 | 326051 | 553 | 125708 | 438423 | 645050 | 26.6 | 227.32 | 530 |
| COBOURG | 4442 | 87 | 285550 | 501 | 131545 | 411149 | 642217 | 11.3 | 262.56 | 266 |
| BROCKVILLE | 5102 | 110 | 185089 | 706 | 192122 | 290206 | 628315 | 13.8 | 272.13 | 196 |
| WATERLOO | 1594 | 52 | 118735 | 218 | 60312 | 412627 | 616835 | 13.7 | 276.66 | 186 |
| GANANOQUE | 2020 | 49 | 200900 | 419 | 113760 | 280135 | 604170 | 20.7 | 271.50 | 759 |
| MERRITTON* | 1000 | 10 | 373500 | 429 | 96136 | 264060 | 596917 | 42.9 | 224.09 | 690 |
| BOWMANVILLE | 3034 | 60 | 133370 | 417 | 118170 | 342744 | 560305 | 13.7 | 283.38 | 216 |
| NAPANEE | 2967 | 62 | 127415 | 383 | 85936 | 307714 | 514200 | 12.9 | 224.38 | 504 |
| FERGUS | 1666 | 42 | 151210 | 281 | 85128 | 309960 | 511402 | 16.9 | 302.95 | 492 |
| WOODSTOCK | 3982 | 72 | 166595 | 453 | 114200 | 312357 | 510065 | 11.4 | 252.10 | 335 |
| STRATHROY | 3232 | 62 | 154150 | 437 | 111120 | 266820 | 504400 | 13.5 | 254.28 | 291 |
| PETROLIA | 2651 | 48 | 98750 | 187 | 76376 | 297156 | 486342 | 7.1 | 408.43 | 188 |
| ELORA | 1498 | 41 | 119230 | 162 | 41760 | 354010 | 479358 | 10.8 | 257.78 | 240 |
| PRESCOTT | 2617 | 39 | 140200 | 303 | 100888 | 170373 | 479184 | 11.6 | 332.96 | 225 |
| SMITHS FALLS | 1150 | 43 | 135425 | 328 | 93241 | 238186 | 463668 | 28.5 | 284.27 | 451 |
| ST MARYS | 3120 | 71 | 122220 | 396 | 91359 | 270100 | 457126 | 12.7 | 230.70 | 289 |
| COLLINGWOOD | 2829 | 49 | 192000 | 327 | 78796 | 235537 | 434553 | 11.6 | 240.97 | 435 |
| HESPELER | 797 | 22 | 145655 | 266 | 62025 | 264612 | 431303 | 33.4 | 233.18 | 416 |
| PRESTON | 1408 | 52 | 150396 | 245 | 52080 | 242480 | 404388 | 17.4 | 212.57 | 153 |
| GEORGETOWN | 1282 | 35 | 107150 | 283 | 64818 | 256300 | 386318 | 22.1 | 229.04 | 321 |
| NEWMARKET | 1760 | 40 | 79200 | 189 | 57084 | 261354 | 375570 | 10.7 | 302.03 | 202 |
| THOROLD | 1635 | 39 | 61000 | 165 | 49973 | 281651 | 372006 | 10.1 | 302.87 | 310 |
| SARNIA | 2929 | 55 | 108185 | 222 | 59146 | 140890 | 371153 | 7.6 | 266.42 | 158 |
| MITCHELL | 1802 | 38 | 96210 | 279 | 75946 | 207129 | 366565 | 15.5 | 272.21 | 187 |
| CARLETON PLACE | 1205 | 31 | 104350 | 333 | 76756 | 212975 | 357801 | 27.6 | 230.50 | 357 |
| *** Total *** | 267136 | 4019 | 18006252 | 41416 | 11637502 | 32497604 | 59009335 | | | 22407 |

Source: URBIND71 databank, compiled from 1871 manuscript census schedules.