

INDEX

- Agriculture, 84.
Brown county, 97.
Fond du Lac county, 84.
Outagamie county, 93.
Winnebago county, 89.
- Alden, Wm. C., quoted, 16, 17.
- American Fur Company in Wisconsin, 29.
- Appleton, 58.
birdseye view of, plate XIX.
early manufacturing, 60.
fall of river at, 18.
history, 58.
lower paper mill district, plate XX.
manufactures in 1880, 61.
manufactures, present, 62.
map of, 83.
pulp and paper mills, list of, 63.
type city, 64.
views at, plates VI, VII
water power at, 22, 59.
- Arndt, J. W., quoted, 29.
- Astor, John Jacob, in Wisconsin, 27.
- Astor and Navarino united, 71.
- Barr, Edward, quoted, 50.
- Bay Boom, 48.
- Berlin, Wisconsin, 14.
- Bibliography, publications dealing with
Fox-Wisconsin Valley, 100.
maps, 105.
U. S. government documents, 103,
104.
- Brick-making, near Depere, 69.
- Brown county, agriculture, 97.
crops of, 98, figure 25.
dairying in, 99.
farming conditions in, 97.
farm property of, figure 24.
organized, 71.
size of farms, 99.
soils of, 98.
stock-farming in, 99.
value of farm property, map, 85.
- Calumet, 43.
- Canoe travel, early importance of, 25.
- Canoes and batteaus on Fox River, 28.
- Capital invested in manufacturing, Fox-Winnebago Valley, map, 77.
- Carver, Jonathan, in Wisconsin, 27.
- Cedars Dam, 67.
- Charcoal, importance in early iron smelting, 68.
- Counties of Fox-Winnebago Valley, population, 41.
- Cities of Fox-Winnebago Valley, principal industries of, 83.
- Cities and industries of Fox River Valley, summary of, 76.
- Cities of Wisconsin, population, 41.
- Coal, carried on Fox River, 34.
- Combined Locks dam, 67.
water power at, 22.
- Coueurs de bois, 25.
- Depere, 68.
clay beds near, 16.
fall of river at, 18.
historical facts, 68.
industries, 68.
river scene, plate XXIV.
water power at, 22.
- Doty, James D., state named by, 71.
- Doty Island, plate XVI.
- Durham boats on Fox River, 29.
- Erie Canal, 5.
gives impetus to canal building in Wisconsin, 29.
- Erosion, factors affecting, 6.
slowness of, 6.
- Falls and rapids, cause of, 6.
- Farm scenes, plate XXVIII.
- Flour-mills in Fox-Winnebago Valley
55, 61, 69, 74, 80.
- Fond du Lac, 42.
architectural quality of buildings, 46.
early industries, 43.
first railroad into, 44.
growth of, 43.
historical facts, 43.
lumber mills and yards, plate XI.
manufacturing in, 45, 46.
map of region, plate IX.
present industries, 44.
railroad center, 43, figure 8.
Reuping tannery, plate X.
saw-mills of, 44.
strategic situation of, 42.
transportation, importance of, 42.
type city, 42, 43.
- Fond du Lac county, agriculture, 84-88.
farm products, 87.
farm property, 85, 86.
saw-mills of, 76.
soil of, 86.
- Fort Howard, built, 71.
- Fox Indians, war with, 26.
- Fox River
average fall of, 14.

INDEX

- catchment basin of, 22.
 close approach of, to Wisconsin River, 14.
 commercial waterway, 27.
 drainage map, plate IV.
 early canoe routes, 26.
 early navigation on, 28, 29.
 exploration of, 24.
 freight carried on, 35.
 history of improvement, 29.
 historic events connected with, 26.
 importance in fur trade, 28.
 increase of lockages on, 35.
 list of locks, 36, table, p. 36.
 maximum flow of, 23.
 navigation of, past and present, 24, 28, 35.
 opened to steamboat navigation, 31, 32.
 peculiarities of, 13.
 survey of, 30.
 uniformity of discharge, 22.
 upper course, 14.
- Fox River waterway**
 average yearly cost of improvement, 39.
 average yearly cost of operation, 39.
 expenditures for operating and maintaining, 39.
 list of articles carried on (1890), 37, (1913), 38.
 U. S. appropriations for, 40.
- Fox-Winnepago Valley**,
 capital invested in manufacturing, map, 77.
 causes of, 8, 10, 11.
 cities of, 41.
 cross section of, fig. 1.
 drainage map, plate IV.
 erosion of, 10.
 forests of, 12.
 geological map, plate III.
 glaciation in, 9.
 glacial lake in, 14.
 industries, summary of, 76.
 manufacturing, persons engaged in, map, 78.
 natural resources of, 12.
 origin of, 7.
 physical features of, 7, 11.
 power employed in manufacturing, map, 79.
 principal towns of, figure 5.
 pulp and paper industries, cause of growth, 80.
 red till and clay in, 16.
 relative size of cities in, figure 5.
 relief map, plate II.
 trading posts in, 26.
 value of manufactured products, map, 82.
- Fox-Wisconsin waterway**
 period of government control, 34.
 period of greatest use, 33.
 sold on foreclosure, 32.
 taken over by U. S. government, 32.
- Freight** carried on Fox River, (1890), 37, (1913), 38.
- Freight rates**, influenced by water transportation, 34.
- French**, the, interest in fur trade, 28.
- French explorations**, 24.
- Fur trade**, importance of, 25.
- Fur trading posts of Wisconsin**, 70.
- Gatun Dam**, Panama, 15.
- Geographical environment**, man and his, 1.
- Geography**, applied, aim of, 2.
 content of, 1.
- Geography**, physical, content of, 1.
- Glacial lobes in Wisconsin**, 9, figure 2.
- Glacial period**, the, 9.
- Glaciation of Fox-Winnepago Valley**, 9.
- Glaciers**, deposits left by, 6, 15, 16.
 effect upon rivers, 6, 14, 15, 17.
- Grand Kaukauna**, fall of river at, 18.
- Great Lakes**, importance of to Wisconsin, 26.
- Green Bay**, 69.
 commanding position of, 72.
 diversified industries of, 72, 74, 75.
 early industries, 71.
 early settlement of, 24.
 first railroad, 71.
 fur trading post at, 69, 70.
 harbor scenes, plates XXV, XXVI, XXVII.
 history, 69, 70.
 Nicolet at, 69.
 paper mills, 74.
 port, 73.
 saw-mills, 71.
 tonnage of vessels arriving at, 73.
 type city, 72.
- Green Bay and Mississippi Canal Co.**,
 water rights of Fox River, 32.
- Green Bay lobe of Wisconsin glacier**, 17.
- Groseilliers**, in Wisconsin, 26.
- Ground moraine**, origin of, 15.
- Harney**, Richard J., quoted, 55.
- Ice age**, the, 9.
- Illinois territory**, Wisconsin part of, 71.
- Improvement of Fox-Wisconsin waterway** begun, 30.
 opened to navigation, 30.
 turned over to private company, 30.
- Indian trails**, importance of, 25.
- Industries and cities**, summary of, 76.

INDEX

- Interglacial periods, 9.
 Iron smelting in Fox River Valley, 68.
 Iron-using industries, in Green Bay, 82.
- Joliet, in Wisconsin, 26.
- Kaukauna, 65.
 birdseye view, plate XXII.
 dam, canal and lock, plate XXIII.
 early history, 65.
 limestone quarry, plate XX.
 water power and industries, 22, 66.
- Kimberly, 66.
 fall of river at, 18.
 mill at, plate XXI.
 water power at, 22.
- LaCrosse, as a lumber center, 48.
 Lawson, P. V., quoted, 34.
 LeSueur, in Wisconsin, 26.
 Little Chute, 67.
 fall of river at, 18.
 water power at, 22.
- Little Lake Butte des Mortes, 18.
 Little Rapids, 68.
 fall of river at, 18.
 water power at, 22.
- Lockages on Fox River, number of
 (1890) 36, (1913) 37.
- Lower Fox River,
 channel of, 18.
 characteristics of, 17.
 concentration of fall, 19, cause of,
 20.
 length of, 18.
 only important north flowing river
 in state, 13.
 profile of, plate VIII.
 rapid fall of, 17.
 rapids of, statistics, 18.
 total descent of, 18.
- Mann, Capt. L. M., statistics furnished
 by, 34.
- Manufactured products of Fox-Winne-
 bago Valley, value, map, 82.
- Manufactures, in Wisconsin cities, value
 of, 35.
- Manufacturing, persons engaged in,
 Fox-Winnebago Valley, map, 78.
- Marquette, in Wisconsin, 26.
- Martin, Doborah B., quoted, 72.
- Menasha (see also Neenah-Menasha)
 manufacturing in, 56.
 paper mills in, 56.
 sketch map of river, plate XVIII.
 U. S. government dam, plate XVIII.
 Wooden Ware Company, 57.
- Michigan, Lake, origin of, 9.
- Michigan territory, Wisconsin part of,
 71.
- Military roads, from Green Bay, 71.
- Navarino and Astor united, 71.
- Neenah, as a flour-milling center, 55.
 capacity of paper mills, 56.
 Kimberly-Clark Co., 55, 56.
 manufacturing in, 56.
 mill scene in, plate XVII.
 paper and pulp making, 55.
- Neenah and Menasha, 53.
 favorable location of, 54.
 flour-milling in, 55.
 historical facts, 54.
 industrial unit, 53.
 type city, 54.
 U. S. contour map of, plate XVI.
 water power at, 22, 54.
- New France, relation of Wisconsin to
 5, 24.
- Niagara limestone, 8, 15.
- Nicolet, Jean, 24.
- North Fond du Lac, 46.
- Oshkosh, 47.
 boat-building in, 50.
 development of manufacturing, 49
 fires in, 49.
 first railroad, 49.
 growth of, 49.
 history, 48.
 logging scene at, plate XIV.
 lumber center, 47, 50.
 organization as village, 49.
 origin of name, 49.
 Paine Lumber Co., 51, plant, plate
 XV.
 panoramic view, plate XII.
 present industries, 51.
 present railways of, 49, 52.
 saw-mills in, 50.
 transportation facilities, 52.
 type city, 48.
 rank as manufacturing city, 52.
 view in 1863, plate XIII.
 wood-working center, 49.
- Outagamie county
 agriculture, 93.
 crops of, 96, figure 22.
 dairying, 96.
 farm property, 95, figure 21.
 glacial drift in, 94.
 livestock in, 95.
 soil of, 93.
 value of farm property, map, 85.
- Paper mills of Fox River Valley, list of,
 81, capacity of, 81.
- Paper and pulp centers, map, 53.
- Pineries of Wolf River, 12.
- Plank roads, public interest in, 30.
- Population of Fox River counties,
 growth, figure 6.
- Portage, canal at, 14.
- Power employed in manufacturing, Fox-
 Winnebago Valley, map, 79.

INDEX

- Pulp mills of Fox River Valley, list of, 81, capacity of, 81.
Pulp and paper centers, map, 53.
- Race factor in geography, 2.
Radisson, in Wisconsin, 26.
Rainfall of eastern Wisconsin, 22.
Rapide Croche, fall of river at, 18.
 U. S. gaging station at, 34.
 water power at, 22.
- Rapids and falls, cause of, 6.
Red clay in other parts of Wisconsin, 17.
Red till, origin of, 16.
Relief map of Wisconsin, plate I.
Rivers, importance of in history, 24.
Roach, Thomas, quoted, 34.
Rocks, the differing character of, 8.
 influence upon topography, 8.
 uplift of, 7.
Rocks of Wisconsin, origin of, 7.
- Saw-mill centers of Wisconsin, 48.
Schooners, sailing, on Lake Winnebago, 50.
Stage of development, a factor in geography, 3.
Steamboats built on Fox River, list of, 34.
 early, on Fox River, 31.
St. Francis Xavier, mission of, 26.
St. Lawrence River, relation to exploration of Wisconsin, 24, 26.
Summary of cities and industries, 76.
- Taycheedah, 43.
Terminal moraine, 9, 15.
Thwaites, Dr. R. G., quoted, 29.
Till sheet, origin of, 15.
Turner, Prof. F. J., quoted, 25, 28.
- Upper Fox River, 13, 14, plate VIII, 35.
 locks and lockages, 36, 37.
- Valleys and mankind, 4.
 in American history, 5.
 due to erosion, 5.
 of the old world, 4.
- Van den Broek, Theodore, founder of Little Chute, 67.
Voyageurs, 25.
- Warren, Maj. G. K., reports on Fox-Wisconsin waterway, 18, 33.
- "Walk in the Water", arrival of at Green Bay, 71.
- Water power of Fox River, 19, 21, 22, figure 4, table II (p. 22), 54, 59, 60, 64, 66, 67, 69.
- Water powers of Wisconsin, map, plate V.
- West Depere, 68.
- Wheat growing in Fox-Winnebago Valley, 80.
- Whitman, Daniel, quoted, 29.
- Winnebago county
 agriculture, 89.
 crops of, 90.
 dairying, 91.
 soil of, 90.
 value of farm property, 88, 89.
 saw-mills of, 76.
- Winnebago, Lake.
 considered for U. S. Naval station, 33.
 dimensions of, 14.
 effect upon floods, 22.
 evaporation from, 22.
 former extent of, 17.
 height above sea level, 17.
 importance of position of outlet, 21.
 maps, plates II, III, IV.
 origin of, 15.
 outlet of, 16.
 past and present, 14.
 relation of red clay to, 16.
 shallowness of, 15.
 steamboats built on, 34.
- Winnebago, Fort, 29.
Winnebago Indians, met by Nicolet, 24.
Winnebago rapids, fall of river at, 18.
Winnebago Valley, cross-section of, figure 1.
- Wisconsin River improvement, cost of, 40.
- Wisconsin territory created, 71.
- Wooden ware industry in Menasha, 57.
Wood-using industries, change in, 51.
- Wolf River, course of, 14.
 dams on, 14, 51.
 log driving on, 14.
 lumber camps on, 50.
 navigation of, 12.
 pineries, 12, 47.
 proposed storage reservoirs in upper course, 23.
- Wrightstown, 67.