



### Prairie and Plow

► WHEN FARMERS first transplanted themselves from the Old World to the New, most of them came from countries that had once been forest-covered. Land had to be won with the ax before it could be given to the plow. Unforested land was mostly moor, heath, rocky upland or swamp—all unfit for farming, though the swamplands might be reclaimed by draining.

They found essentially similar conditions in the eastern part of this country, where the first settlements were established. When a pioneer went out to win a farm from the wilderness, the first thing he had to do was "make a clearing". The trees were cut down, and except for the logs he needed for his cabin and rail fences, they were burned to get rid of them. Potash, leached out of the ashes, was used mainly in soap-making, though some of it might be traded for such "store goods" as gunpowder, calico, salt and ironware. Then the stumps were pulled or blown out, and finally the land could be plowed and planted.

Not until the generation after the Revolution, when the first great wave of migration broke into the West, did settlers encounter extensive natural grasslands. There were "prairie islands" in the forest cover of Ohio, and when the settlers got to northern Illinois they found a continuous sea of tall grass, with timber belts confined mostly to the banks of rivers.

At first they didn't know what to

make of it. A doctrine arose, and was widely accepted, that only soil that could grow such big things as trees was "strong" and could produce good crops; soil that grew only grass was "weak" and not fit for farming. So for some years the farmers stuck stubbornly to the river banks and did not attempt to break the prairie sod, which was really much richer than the cut-over land they were cultivating.

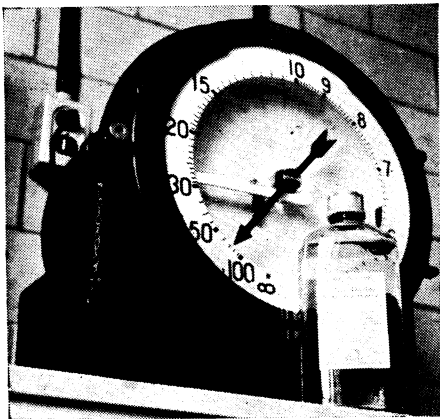
There were two other, and better, reasons for the failure at first to put the grasslands under the plow. Early transportation followed the rivers a good deal, going either by boat or along roads that stuck to the easy water-level grades.

The other reason was the unsuitability of the early part-wooden or cast-iron plows for the tough task of ripping through the matted, cordlike roots of the prairie grasses. But about a hundred years ago steel plows began to be built—big ones, too, drawn by six or eight span of oxen. They made possible the conquest of the long-grass prairies, which are now the world's most productive corn lands.

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ATOMIC ENERGY COMMISSION: Official Records; Special Supplement: Report to the Security Council, *Columbia Univ. Press*, 141 p., paper, \$1. The five parts of this report, in French and English, cover proceedings, findings, recommendations, first report on scientific and technical aspects of the problem of control and on safeguards to ensure the use of atomic energy only for peaceful purposes.

CHEMICAL BURNS OF THE HUMAN CORNEA—Ralph McLaughlin; CHEMICAL BURNS OF THE RABBIT CORNEA—C. P. Carpenter and H. F. Smyth, Jr.—*Mellon Inst.*, 10 p., paper, free. These are reprinted from the "American Journal of Ophthalmology".

CONTRIBUTIONS FROM THE UNITED STATES NATIONAL HERBARIUM, Vol. 30, Part 1, *Gov't Printing Office*, 404 p., paper, \$1. This volume contains "A Botanical Bibliography of the Islands of the Pacific" by Elmer D. Merrill and "A Subject Index to Elmer D. Merrill's 'A Botanical Bibliography of the Islands of the Pacific'" by E. H. Walker.

DOORWAYS TO SCIENCE—George W. Hunter and Walter G. Whitman—*Am. Book*, 546 p., illus., \$2.40. A text for a general science course in junior high school, it

attempts to relate study to the world of science surrounding the individual. By including vacation hobbies and vocations, it develops useful leisure time pursuits.

FINAL JUDGMENT—Victor H. Bernstein—*Boni & Gaer*, 289 p., \$3.50. The degeneration of science is told here. Using documents only recently available from German sources, this story of Nuremberg reveals the full horror of the sadistic and brutal "experiments" of Nazi so-called scientists.

FUNDAMENTALS OF EARTH SCIENCE—Henry Dewey Thompson—*Appleton-Century*, 461 p., illus., \$3.75. Collected into one course, physiography, mineralogy, geology, geography and meteorology are treated as earth sciences and this college text serves to stimulate further studies and to satisfy the general student. Generous use of aerial photographs is especially noteworthy.

GOING FORWARD WITH SCIENCE; OUR WORLD OF TOMORROW, BOOK VII—G. S. Craig and John Urban—*Ginn*, 412 p., illus., \$1.56. For grade schools, this well-written text discusses The Pond in the Classroom, The Earth's Mineral Treasures, A World of Light and Color and other interesting topics.

HEATING, VENTILATING, AIR-CONDITIONING GUIDE, 1947—*Am. Soc. of Heating and Ventilating Engineers*, 25th ed., 1282 p., illus., \$6. Technical data section includes reference material on design and specification of equipment and results of laboratory research; a manufacturers' cata-

logue data section is also present.

JANE'S FIGHTING SHIPS 1944-45 (Corrected to April, 1946)—Francis E. McMurtrie—*Macmillan*, 636 p., illus., \$19. Presenting a picture of Allied naval strength at its peak, this edition includes vessels which have already been removed from the effective list. As full listing as possible is found in the War Loss section. Because of slow release of information for security reasons, and others, details sometimes conflict.

POSTGLACIAL FOREST SUCCESSION, CLIMATE, AND CHRONOLOGY IN THE PACIFIC NORTHWEST—Henry P. Hansen—*American Philosophical Society*, Transactions, Vol. 37, pt. 1, 130 p., illus., paper, \$2.25. The results and interpretations of pollen found in 70 sedimentary columns from widely scattered areas give a picture of the major vegetational trends and climatic cycles of the region.

PRACTICAL EMULSIONS—H. Bennett—*Chemical Pub.*, 568 p., 2nd ed. rev., \$8.50. A practical book on emulsions for industrial use with a comprehensive list of emulsifying agents and the most recently developed formulae.

SCIENCE: A STORY OF DISCOVERY AND PROGRESS—Ira C. Davis and Richard W. Sharpe—*Holt*, new ed., 538 p., illus., \$2.36. By beginning each unit with the historical background of the subject discussed, this junior high school text in general science helps pupils appreciate the scientific contributions to civilization.

THE STORY OF WATER SUPPLY—F. W. Robins—*Oxford Univ. Press*, 207 p., illus., \$5.50. Of vital necessity for the establishment of communities and their survival, water has dictated their location and touched off wars whose outcome depended entirely on control of a dependable water source.

TOWARD BETTER PHOTOGRAPHY—Vincent McGarrett—*Am. Photographic Pub.*, 260 p., illus., \$3. With chapters on color films, movies, and trouble shooting as well as selecting a camera and dark room technique, the careful reader becomes a better operator.

TRAINING HIGH SCHOOL YOUTH FOR EMPLOYMENT—C. E. Rakestraw—*Am. Tech. Soc.*, 217 p., illus., \$3.50. A plan is offered herein whereby vocational training on a cooperative part-time basis can be offered in high schools. Cooperative diversified occupations programs have been tried and found to fill the gap between school and employment.

*Science News Letter*, April 19, 1947



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