causes a downward pull of the lever (L 1) to which pawl (P) is attached, the ratchet wheel is turned the distance of one tooth, and the hand on dial 1 moved one space. A spring (Sp.) lifts the lever (L 1) to its former position after lever (L 2) has returned to the axle of the cage. The number of revolutions made by the cage are thus automatically recorded in figures which can be read at a glance.

Our revolving cages were equipped with these counters about a year ago and we have found them very satisfactory and a saving of much valuable time.

<div style="text-align:right">J. R. SLONAKER</div>

STANFORD UNIVERSITY

THE AMERICAN MATHEMATICAL SOCIETY

THE fiftieth regular meeting of the Chicago Section of the American Mathematical Society, being the eighteenth regular western meeting of the society, was held at Northwestern University, Evanston, Illinois, on Friday, December 29, 1922. The meetings were presided over by Professor Coble, chairman of the section, relieved by Professors Curtiss and Dickson. The following papers were presented. The paper by Professor Moore was presented by Mr. Wilder; the papers of Professor Jackson, Dr.

Camp, and the first paper of Professor Chittenden were read by title:

Ruled surfaces with generators in one-to-one correspondence: E. P. LANE, University of Wisconsin.

Some theorems on continuous curves, with special reference to continuous curves that contain no simple closed curve: R. L. WILDER, University of Texas.

An analysis of the point-set which constitutes the boundary of a complementary domain of a continuous curve: R. L. WILDER.

An uncountable non-dense closed point-set each of whose complementary intervals abuts on another one at each of its ends: R. L. MOORE, University of Texas.

Closed sets of rational points on a plane cubic curve of genus one: MAYME I. LOGSDON, University of Chicago.

Report on a boundary value problem of fourth order: H. T. DAVIS, University of Wisconsin.

The extension of the Weddle and Kummer surfaces to hyperelliptic three-ways of genus three: A. B. COBLE, University of Illinois.

Associated sets of points: A. B. COBLE.

The rational linear algebras of maximum and minimum ranks: L. E. DICKSON, University of Chicago.

A new simple theory of hypercomplex integers: L. E. DICKSON.

Symmetric forms in n *variables:* ARNOLD DRESDEN, University of Wisconsin.

A general class of problems in approximation: DUNHAM JACKSON, University of Minnesota.

Abstract group definitions and applications: W. E. EDINGTON, Purdue University.

On an infinite system of non-abelian groups of order nm^n: W. E. EDINGTON.

On an infinite system of non-abelian groups of order nm^{n-1}: W. E. EDINGTON.

Note on a property of abstract sets which admit a definition of distance: E. W. CHITTENDEN, University of Iowa.

The Schmidt linear differential forms of a limited bilinear form in infinitely many variables: E. W. CHITTENDEN.

On a form of the property of Borel-Lebesgue which is independent of the closure of derived classes: E. W. CHITTENDEN.

Concerning an expansion in the restricted problem of three bodies: K. P. WILLIAMS, University of Indiana.

Expansions in terms of solutions of partial differential equations: C. C. CAMP, University of Illinois.

<div style="text-align:right">ARNOLD DRESDEN,
Secretary of the Chicago Section</div>