

transformed into algebraic equations admitting of easy solution of r , ρ , its velocity and acceleration. This equation has been found to be of the seventh degree or of the eighth if the always existing root ρ equal zero be included. My equation for three bodies, that is, for the solution of orbits of disturbed bodies, is of the twenty-eighth degree and admits at most of three solutions, the examination of which makes it possible to decide whether a body is a satellite, planet, or comet, in cases where the physical appearance of the object does not settle this question in advance.

In spite of the extensive investigations that have been made on the orbit problem there is room for much improvement both in theory and in practise, improvement which can not fail to come through proper cooperation of astronomers and mathematicians.

A. O. LEUSCHNER

UNIVERSITY OF CALIFORNIA

SCIENTIFIC EVENTS

THIRD INTERSTATE CEREAL CONFERENCE

AN executive committee, representing the U. S. Department of Agriculture and state experiment stations, has called a third interstate cereal conference to be held at Kansas City, Coates Hotel, June 12-14. This conference, which has the approval of the Secretary of Agriculture and the directors of the state stations, is for the purpose of discussing questions involved in and work essential to accomplish the enlargement of cereal production and the economic utilization of cereals during the existing war emergency. In addition to the representatives of the institutions mentioned, the flour mills, grain inspection departments, grain dealers and manufacturers of cereal foods and corn products of the grain states are invited to send delegates. Some of the subjects to be discussed are:

Agricultural War Measures in Kansas.
Waste in Cereal Production on the Farm.
The Importance of Good Seed.
The Proportion of Flour and By-products in Milling.

The Preparation of Land for Wheat.
The Use of Barley as a Food.
Corn as a War Crop.
Treatment of Seed Grain for the Prevention of Smuts.
Analysis of the World's Wheat Supply.
The Importance of Grain Sorghums.
Federal Standards for the Grading of Wheat.
Weed Seeds in Relation to Grain Grading.
The Importance of Testing Spring Wheat for Germination.
The Next Step in Improvement in Wheat Cropping.
The Work of Committee on Seed Stocks, U. S. Department of Agriculture.

The delegates to the conference are invited to Manhattan, Kansas, on June 15, to inspect the cereal field work of the Kansas Agricultural Experiment Station.

CHARLES E. CHAMBLISS,
Secretary

U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C.

THE SOCIETY OF INDUSTRIAL ENGINEERS

THE Society of Industrial Engineers, a national organization, the membership of which is to comprise men and women who are industrial engineers, professional technical engineers, accountants, managing executives of commercial and industrial activity, writers, educators and students, was planned in Chicago on May 26. The Society will be permanently organized in Washington, on June 15, on which date the directors have been called to meet.

Charles Buxton Going, for twenty years editor of the *Engineering Magazine*, New York, was chosen provisional President and *pro tem* chairman of the board of directors which was chosen at the session. This board, comprising 15 prominent men from various sections of the United States, the majority of whom have accepted, includes:

Charles Buxton Going, New York; C. E. Knoeppel, industrial engineer and organization counsel, New York; Frank B. Gilbreth, industrial engineer, Providence, R. I.; E. C. Shaw, vice-president The B. F. Goodrich Co., Akron, Ohio; Harrington Emerson, industrial engineer, New York; Charles Piez, president

The Link Belt Co., Chicago; Irving A. Berndt, manager betterment department, Joseph T. Ryerson & Son, Chicago; G. DeA. Babcock, production manager The H. H. Franklin Manufacturing Co., Syracuse, N. Y.; Willard E. Hotchkiss, dean Northwestern University School of Commerce, Chicago; Harry Franklin Porter, Detroit Executives' Club, Detroit, Mich.; H. Thorpe Kessler, President Western Efficiency Society, Chicago; Dexter Kimball, Cornell University, Ithaca, N. Y.; Morris L. Cooke, industrial engineer, Philadelphia; C. Day, industrial engineer, Philadelphia; Herman Schneider, school of engineering, University of Cincinnati, Ohio.

Temporary committees are now at work. Upon completion of the organization its services will at once be tendered to the government, through Howard E. Coffin, chairman of the advisory committee, Council of National Defense, and such other committees as can utilize the services of The Society of Industrial Engineers.

The temporary executive committee consists of Irving A. Berndt, chairman; F. M. Simons, Jr.; H. Thorpe Kessler; H. A. Rose, G. C. Dent, Harry Franklin Porter, C. A. Knoeppel, Willard E. Hotchkiss, S. T. A. Loftis and Charles Buxton Going. G. C. Dent is temporary secretary and H. Thorpe Kessler, treasurer.

The plan of organization adopted provides for a service or promotion bureau under the direction of a vice-president, and divided into two sections: (1) Advisory, and (2) Performing.

This is separate and distinct from the organization of the society proper, although under the direction of the president. The function of this bureau is to list as soon as possible all the industrial specialists in the country who may be qualified to serve either as advisers or as actual directors of efficiency work. From these two groups of advisers and performers the society will draw those necessary to carry on whatever work may be delegated to it in connection with perfecting preparation for war.

All men who possess qualifications that would enable them to serve in either or both of these sections are urged to get in touch with the acting secretary of the organization, G. C. Dent, 327 South La Salle Street, Chicago, as soon as possible.

I. A. BERNDT,

Chairman, Executive Committee.

SUBCOMMITTEES OF THE COUNCIL OF NATIONAL DEFENSE

As has already been noted in SCIENCE seven committees of the Council of National Defense have been organized. Their committees and their chairmen are:

Transportation, including railroad and motor transportation and communication, Daniel Willard, chairman.

Munitions, manufacturing, including standardization and industrial relations, Howard E. Coffin, chairman.

Raw Materials, minerals and metals, Bernard M. Baruch, chairman.

Labor, including conservation of health and welfare of workers, Samuel Gompers, chairman.

Supplies, clothing, etc., Julius Rosenwald, chairman.

Science and Research, including engineering and education, Hollis Godfrey, chairman; Henry E. Crampton, vice-chairman.

Medicine, including general sanitation, Franklin H. Martin, chairman.

Under *Raw Materials*, subcommittees have been formed with chairmen as follows:

General chemicals, William H. Nichols; *fertilizer*, Horace Bowker; *alkalis*, J. D. Pennoek; *acids*, E. H. Grasselli; *miscellaneous chemicals*, Edward Malinckrodt, Jr.; *cement*, John E. Morrow; *alcohol*, Horatio S. Reubens; *aluminium*, Arthur V. Davis; *asbestos*, Thomas F. Manville; *brass*, Charles F. Brooker; *coal tar products*, Wm. H. Childs; *lumber*, R. H. Downman; *lead*, Clinton H. Crane; *mica*, L. W. Kingsley; *nickel*, Ambrose Monell; *oil*, A. C. Bedford; *rubber*, H. S. Hotchkiss; *steel*, Elbert H. Gary; *sulphur*, Henry Whiton; *wool*, Jacob F. Brown; *zinc*, Edgar Palmer; *copper*, John D. Ryan.

The general chemical committee has established headquarters at Washington in charge