is to be called *Plastic Behaviour and Design* and is to describe the investigations pertaining to the inelastic ranges of loading.

The first two chapters of volume I present a summary of the specifications and practices that existed in various countries at the time the Steel Structures Research Committee was formed. Differences were observed in the specified live loads, wind loads, working stresses, and column formulas. The procedure indicated for checking the proportions of beams and columns was common to most building codes. For gravity loads, the beams were to be checked as simply supported beams and the columns were to be checked as pin-ended columns with or without eccentric loads. Provisons for continuity of columns were usually in the form of "effective lengths."

The next five chapters deal with the experimental phases of the investigation and present the results of tests on an experimental frame and three actual building frames. Various stiffnesses of beam-to-column connections were considered. These ranged from light beam connections, as in the experimental frame, to exceptionally stiff connections, as in a hotel building. Strains were measured for the various stages of construction ranging from the bare frames to the frames with floors laid and columns encased. It was observed that the behavior of an actual building was radically different from that assumed in the design methods in common use. The behavior was closer to that of a rigidly jointed frame than to that of a structure with hinged-ended beams. The columns had appreciable bending, and even comparatively light beam connections transmitted much heavier bending moments than had been anticipated.

The results of tests concerning the moment-angle change relationships for various types of beam-to-column connections are presented. These results are used in interpreting the behavior of the actual building frames, in developing several analytic procedures for frames with semirigid connections, and in developing a design method for such frames. Various conditions of loading and different types of frames were considered in arriving at a set of recommendations for the design of beams and columns in building frames. In the recommendations for the design of beams, allowance is made for the restraining moments at the ends of the beams. Adjusted standard curves are presented for different connections to maintain constant load factors, even though the design is based on working loads and working stresses. In studying the critical loading conditions causing single curvature or double curvature of columns, the yield stress of the material is used as a criterion of failure. As might be expected, the moments in the columns are large and extremely sensitive to the loading conditions considered. The book includes a summary of the recommendations made by the Steel Structures Research Committee in regard to the design of steel building frames.

In conclusion, the author discusses the reception of the recommendations given by structural designers and organizations involved in codifying practice. In general, a reluctance has been shown in modifying existing codes and rules of practice. This reluctance is principally due to the complications that are involved in the recommended design procedure without such complications being offset by a reduction in the amount of steel required in a building frame. Provided that no adjustments are made in load factors, the recommended design procedure, although rational, leads to lighter beams but heavier columns than ordinarily called for. The author indicates that volume II is to deal with a simpler method of design based on the plastic behavior of structures.

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Biographical Memoirs. vol. XXVIII. National Academy of Sciences, Washington, D.C., 1954 (Order from Columbia Univ. Press, New York). 311 pp. Plates. Paper, $4.

This volume includes notices of Francis G. Blake by John Rodman Paul, of Gano Dunn by Vannevar Bush, of Merritt L. Fernald by Elmer D. Merrill, of Frederick P. Gay by A. R. Dochez, of E. B. Hart by Conrad A. Elvehjem, of Ludvig Hektoen by Paul R. Cannon, of Raymond A. Kelser by Richard E. Shope, of Elmer A. Sperry by J. C. Hunsaker, of George L. Streeter by George W. Corner, and of Frank C. Whitmore by C. S. Marvel. The biographies are as various as their diverse subjects and authors. Perhaps the single quality they share in common is their ability to move the reader to unbounded admiration for the energy, industry, imagination, and humanity of the men they portray. These men were all born, roughly, within the last third of the 19th century, and they have all contributed greatly to the vigor of present American thought. The facts of their lives constitute the raw material of contemporary intellectual history, and for this reason, as well as for the sake of commemorating these individuals from a personal point of view, the volume is fascinating to read.

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Coronary Heart Disease in Young Adults. A multidisciplinary study. Menard M. Gertler and Paul D. White. Harvard Univ. Press, Cambridge, 1954 (For the Commonwealth Fund). xviii + 218 pp. Illus. + plates. $5.

This monograph represents the result of a concerted effort of nine well-known researchers and cardiologists trying to explain why some young persons are singled out and die following an acute coronary episode. Even a few of the conclusions give impressive evidence of the results of this study:

1) Coronary heart disease is more likely to occur if parents or siblings have experienced the disease.