

for working designs than the proposed solution No. 1. His new solution gives values of approximately 70 per cent. of the values obtained by solution No. 1. The designer must decide whether he wishes to assume this risk. A study of recent designs would indicate that most engineers are not willing to do so.

The critic is in error in his statement regarding the comparison of the three proposed anchor-bolt solutions. The comparison given in the original paper applied only to the specific problem of 12 bolts and not to the general case, as he would have the reader infer.

The apparent error pointed out in Equation 44 for stress in the shell at connection to the base plate is another case of trimming down the design. The proposed Equation 44a, for the common case where B equals $1\frac{1}{2} D$, gives a stress per lineal inch at the base plate only 44 per cent. of the stress given by Equation 44 of the writer's. Again the designer must choose. For the case of the tapering stack Equation 44a might result in some saving in material.

Therefore, while the critic has pointed out the fallacies of the usual assumptions, which are admitted by all, he has failed to show that the preferred solutions shown on the designing diagrams represent unsafe practice.

W. A. HITCHCOCK,
Assistant professor of Civil Engineering,
University of Wyoming.

Laramie, Wyo., December 6th, 1916.

PERSONAL.

C. ROBERTSON, of Hamilton, Ont., has been appointed assistant engineer of the local electric plant at Orillia, Ont.

L. V. de BURY has been appointed assistant general sales agent at Montreal of the Dominion Iron and Steel Company, Limited.

L. W. OUGHTRED has been appointed superintendent of the Consolidated Mining & Smelting Company's properties at Ainsworth, B.C.

D. R. THOMAS has been appointed mine manager and FRANK G. STEVENS managing engineer of the Davidson Gold Mines, Limited, Porcupine, Ont.

Lieut.-Col. H. P. ANDERSON, chief engineer of the Department of Marine, Ottawa, is a member of the public service board recently appointed by the National Service Commission, Ottawa, Ont.

R. W. MACINTYRE, secretary of the Victoria Branch, Canadian Society of Civil Engineers, has been elected a member of the American Society of Civil Engineers.

DAVID JOHNSTON, formerly municipal engineer in Point Grey and latterly engineer to Saanich Municipality, Vancouver Island, B.C., has enlisted with the Sixth Field Company, Canadian Engineers.

GEORGE S. RICE, chief engineer of the United States Bureau of Mines, Washington, D.C., has been engaged by the Provincial Government of British Columbia to make an investigation of the Coal Creek coal areas of the Crow's Nest Pass Coal Co., near Fernie, B.C.

L. B. BEALE, of Toronto, British Columbia lumber commissioner for Eastern Canada, has just returned after nine weeks' absence, during which time he visited prac-

tically every lumber mill in the province of British Columbia in the interests of his department.

THOMAS ADAMS, town planning advisor of the Dominion Commission of Conservation, delivered an address entitled "Municipal Improvement and Land Development, the Need for Town Planning and a Department of Municipal Affairs," before the Board of Trade of London, Ont., on December 5th.

WILLIAM J. TYERS, formerly supervisor of bridges and buildings, Grand Trunk Railway System, Montreal, has been appointed supervisor of bridges and buildings, Belleville Division, vice Mr. J. McMahon, deceased. P. J. PHELAN will succeed Mr. Tyers at Montreal.

SAM R. HENDERSON, for seven years president of the Manitoba Good Roads Association, was presented with a gold watch at the annual banquet in recognition of his record of valuable service as the chief executive officer of the association. The presentation was made by Mayor R. D. Waugh, of Winnipeg.

HOWARD MURRAY, vice-president and treasurer of the Shawinigan Water and Power Co., Montreal, who has been granted a year's leave of absence by the directors, has joined the staff of the Imperial Munitions Board, and will be associated with the management of the explosives branch. JULIAN C. SMITH, the chief engineer and general superintendent, has been appointed general manager of the company. Mr. Smith has been responsible for the design of several important hydro-electric developments, including that of his own company and the hydraulic section of the Cedars Rapids plant.

OBITUARY.

Sapper L. BROBACHER, 19 Waterloo Avenue, Toronto, who has died from wounds received while in action, was employed as an electrical engineer by the Ontario Hydro-Electric Power Commission before he enlisted with the 4th Canadian Engineers. He was 22 years of age.

Lieut. E. F. M. DANN, a British Columbia civil engineer, who for four years had been employed in that province in connection with the irrigation work of the Dominion Government, died of wounds on November 3rd, somewhere in France. Lieut. Dann was a graduate of the School of Practical Science, Toronto. He enlisted with the 72nd Battalion, Seaforth Highlanders, Vancouver, and had been in France since August, 1915.

JOHN D. ARCHBOLD, president of the Standard Oil Company, of New Jersey, died at his home in Tarrytown, N.Y., on December 5th, following an operation for appendicitis. Mr. Archbold was a native of Ohio, and was 68 years of age. In early life he was an oil refiner and buyer in Western Pennsylvania, and in 1875 he became associated with the Rockefeller interests, a connection that continued until his death. He became president of the Standard Oil Company of New Jersey shortly after the dissolution of the "Trust" was ordered by the United States Supreme Court.

The stand of timber on the two great national forests in Alaska is estimated by the forest service as 70,000,000,000 board feet, while the annual growth will, it is said, produce of pulp wood alone enough for the manufacture of 3,000 tons of wood pulp a day.