

by an arrangement, according to which the allowable dividend is based upon the price charged to consumers according to a sliding scale. In the case of Sheffield, the salary to be paid the manager and directors increases automatically with the decrease in the price of gas. Such arrangements as these seem an admirable method of stimulating the greatest efficiency in the operation of the utility.

The issue of bonds is in general limited to a definite fraction of the capital stock, seldom more than one-third. Interest not exceeding four per cent may be paid from the capital account during the construction period, provided full publicity is given to the process, including notification of the Board of Trade. Securities are usually disposed of at auction or by a method of tendered bids, similar to the American method of awarding contracts. This has been found generally satisfactory and might well be imitated in this country. The company is privileged to set a reserve price which is filed with the Board of Trade in a sealed envelope. If the sale by bids does not equal the issue of securities, the company may dispose of the remainder to stockholders, employees and consumers at the reserve price.

Interlocking directorates and concentrated control of corporations is avoided by not giving a vote to every share of stock. The voting power decreases as the number of shares held by an individual increases. In the case of one corporation it is provided that no stockholder may have more than six votes.

A study of the British methods might be of advantage to our American congressmen at this time when there is an effort being made at Washington to change our laws so as to secure results, some of which are already in operation in England. A difficulty exists, however, in the fact that most companies in this country are incorporated under the laws of the separate states and it would only be by requiring those engaged in interstate commerce to incorporate under a federal law that control of them can thus be enforced. Such companies however are the principal ones which Congress wishes to control. Local concerns such as public service companies doing business in a single community are sufficiently controlled by local means and do not need the attention of Congress.

ARRANGEMENTS FOR CONVENTION OF NATIONAL ELECTRIC LIGHT ASSOCIATION.

The selection of the Bellevue-Stratford Hotel as headquarters for the convention of the National Electric Light Association to be held in Philadelphia next June insures adequate and satisfactory facilities for carrying on the various activities of the convention. Some interior and exterior views of the hotel are shown elsewhere in this issue. The location of the exhibits upon the top floor of the building adjacent to the Roof Garden will form the most attractive setting for this feature of the convention that has been seen for many years, if ever before. The Convention Committee is actively at

work making plans for a number of features which give promise of a very successful convention.

ECONOMIES ANTICIPATED IN THE ST. PAUL ELECTRIFICATION.

No more important steam railroad electrification has been developed in recent years in this country than that of the Chicago, Milwaukee & St. Paul Railroad in Montana, considering the abolition of the present motive power from the standpoint of operating efficiency. The company's engineers estimate that electrification will save at least 25 per cent in operating costs and it is a foregone conclusion that the quality of service in this mountainous region will be vastly improved by the change. The substitution of electricity will do away with the haulage of coal, at once releasing a large number of coal cars for revenue service. Coal-storage yards will be unnecessary; water tanks will be abolished; and it is likely that the length of freight divisions will be increased from the present length of 100 to a maximum of 200 miles. Engine failures, due to poor coal and bad water, with resulting train delays and heavy repair bills are likely to decrease greatly, and in addition to the expected savings in maintenance due to the electric locomotive, the traffic capacity of the road is to be much enhanced.

It is planned to have the new locomotives capable of hauling a gross trainload of 2,500 tons on a one-per-cent grade at a speed of 15 to 20 miles per hour, whereas the steam locomotives now in use on the Montana divisions haul only 1,650 tons at a speed of from 8 to 10 miles per hour, and the rate is not uniform. Further economies are to be gained by the use of electric braking on down grades, with regeneration of power for use by ascending trains. It is figured that when the entire 440 miles of line are electrified, 60 electric locomotives will handle the normal traffic, compared with 82 steam locomotives.

Wages will be saved through the reduction of overtime work on the part of delayed train crews, and by the purchase of energy from the Montana Power Company at a reported price of about five mills per kilowatt-hour, the problem of power supply will be greatly simplified, leaving the transportation matters of the road freer to receive the attention of its officials. No less than seven plants of the company will serve the railroad, and the danger of an extended interruption of service will be remote. Poles cut from the railroad company's own timber lands will be used in power distribution. It is expected that the first 113 miles of line, from Deer Lodge to Three Forks, across the Rocky Mountains, will be completed by the end of the present year, and that 16 electric locomotives will be in use on this section of the road. The entire project will cost about \$8,000,000, and the results of the electrification are being awaited by all the northern transcontinental lines with keen interest.