is paid. This actuary took the ground that the cost of the medical and hospital service is not dependent upon the pay roll so much as upon the number employed, as, for instance, if there were 1,000 employed at $6 per week in a given plant and 1,000 at $8 per week in another plant of the same industry, the cost of medical and surgical attendance ought in the long run to be the same, but the pay roll in one case is $6,000 per week, and in the other, $8,000, a fixed percentage of which would result in a greater charge to one concern than to the other where the hazard and probable cost for this benefit would be the same. He, therefore, bases the medical and hospital benefits on the number of employees and not upon the pay roll. So, too, in those cases where the compensation is not one-half of the wages, he reasons that the rate cannot be properly made on a strict pay-roll basis, as the employer getting $6 per week will have the same compensation for injury as the one receiving $8, and the employee receiving $30 is entitled to no greater compensation for injury than the one receiving $20. He, therefore, takes these facts into consideration and makes up a formula for computing the premium for any given concern by giving each of these provisions for compensation its due weight. The process is somewhat complicated. Furthermore, he groups the various industries into classes of the same hazard according to his best judgment and to each of these classes assigns a rate which it will cost for each of the divisions into which compensation is divided, namely, compensation for death and dismemberment, compensation for other injuries and for medical and hospital service. Knowing the number of employees receiving $8 per week and under, and the total thereof, the pay-roll of those receiving over $8 and under $20, and the number of employees receiving $20 per week, and the pay roll thereof, he can by applying his rate and his formula, compute the premium for the concern to which the facts apply. Of course, the guess-work factor is not absent. Its uncertainties appear in the classification and in the rate which applies to a given class. These estimates are based upon such statistics in regard to accidents among employees as were available and upon a knowledge of insurance matters as it relates to kindred lines of business.

FIREPROOF CONSTRUCTION: MERITS AND DEMERITS.

(Edward W. Cairns, General Agent North British & Mercantile Insurance Company, before the New York Insurance Society.)

(Continued from page 1421.)

We might dwell at much greater length on the details of both types of building, and the materials and methods employed in them. The history of their development is wonderfully interesting, but I sometimes think we may be inclined to spend too much time in details of a sort which are not important from our standpoint, and overlook the items which more directly affect the quality of fire resistance.

In concrete buildings, as well as tile, the interior trimmings, finish, fixtures and, to some extent, the exterior decorations are not at all peculiar but the same as any other type of buildings, and it is these features which are most affected by fire and which contribute the chief items of loss on the building itself.

Fires in So-Called Fireproof Buildings.

For example, if you will look at the report of the old Parker building, Fourth avenue and Nineteenth street, which burned out January 10, 1908, prepared by Mr. Robinson for the New York Board of Fire Underwriters, you will see that the total sound value was $562,743, of which 42 per cent. was in trim, fixtures and equipment. This was, as you remember, a rather plain loft building of inexpensive type as compared with the hotel or office building—the value just quoted being about 22 cents per cubic foot. The loss on this building was 65.5 per cent. of its value.

In the case of the Calvert building in Baltimore, a typical office building which went through the conflagration, total value was found to be $634,075, or about 32 cents per cubic foot. Fifty-five per cent. was represented by decorations and fixtures. The loss was 57.3 per cent.

The most extreme example of the proportion of destructible and indestructible portions of a fireproof building was Governor Draper's dwelling in Boston, which burned October 5, 1909. This was a beautiful house said to have cost about $250,000, of which only about $50,000 was fireproof structure, the balance being beautiful panelled wainscoting, stairways, mantels, library fixtures, etc., of wood and marble. Fire originated in the house and burned it out almost completely, with the result that the building itself suffered a loss of almost 80 per cent., while the contents were practically total.

I mention these cases chiefly to show what the fireproof building itself is, or may become, and the points at which we may look for loss. Let me cite one more to show in addition what the contents of a fireproof building may become.

The office building of the Emerson-Brantingham Company, Rockford, Ill., was a 3-story reinforced concrete building about 60 x 200, modern and entitled to be classed anywhere as a fine fireproof building occupied for strictly office purposes, no wood floors. The second story was divided in part into private offices by 8-foot partitions of light woodwork and the entire floor was fitted up, but not at all crowded with the usual wood desks, chairs and filing cases. Two months ago fire occurred at night in one end of the second story and simply burned up every burnable thing in the room from end to end, did some superficial damage to the concrete columns and produced enough heat to warp the ceiling or floor above so that a bad bulge and crack could be seen in the floor of the third story.

I could mention a number of other cases of severe loss in so-called fireproof buildings, due in every case to peculiar circumstances easily explained after the fire, but not always so clearly foreseen in advance. I wish it were possible to tabulate all the other cases, very much more numerous, of course, where fireproof construction has retarded fires from within and without so well that very small loss has resulted to either building or contents. Unfortunately, for this argument, those losses are not widely noticed and not knowing them we may fail to do full justice to the buildings as a whole.

The other Extreme.

One such case was furnished a few years ago by the Singer building when a room on one of the upper