nating rehandling in field; and on large operations where pace is available, this can often be done with steel as well as other material, if hoists and material tracks or roads are given some attention as to layout and position before work is started in the field. The main object is to eliminate distance, for work is really distance versus resistance, as the definition goes, and the further application of all possible mechanical means to handle material from cars or wagon to position is another factor which results in a great reduction of accidents.

Our second consideration being given to nails, we find that orderliness in handling of lumber containing protruding nails, eliminates foot punctures by the score. Plank or forms of this character should be stacked with nails down and not be allowed to be strewn all over the job. In order to re-use the plank or board, the carpenter must drive ths nails back, and their removal as soon as the plank or brace is taken down is undoubtedly the best As regards concrete form lumber that has been practice. stripped, if it has no further use in the building as fabricated, it should be stacked and nails removed by the cleaning gang, if there is one, as soon as possible to make .t available for other use, for certainly the re-use of lumber these days is economy, and a carpenter usually will take a new piece rather than stop to remove nails. In a multiple-story concrete building, forms are usually stripped and immediately placed in position for the next floor. and the same applies to braces, so that the immediate removal or driving back of nails is necessary and foot punctures are made less possible than on the ordinary timber or house job. Elimination of strewn lumber will reduce nail accidents and its reclamation should be taken in hand at once in order to make it fit for re-use, which in itself will cause a saving in the final lumber bill.

To avoid employees falling, railings should be erected on staging and scatfolds; runways of sufficient width provided; and material generally should not be strewn promiscuously about the job. Openings should be covered or railed and good stable ladders built. Climbing up or down hoist towers should be forbidden, and all moving lines boxed so as to avoid tripping. Working alsles should be kept clear of waste and surplus material.

To avoid falling material, storage of the same should confined to the interior aisles, and scaffolds provided with a sideboard to prevent brick especially from going over the edge

In discharging debris, closed-in chutes should be installed, wheeling runways to be of sufficient width and overloading of wheel-barrows forbidden, especially when brick are being moved.

Naturally the safety movement must begin with the management itself, and if contractors generally will review the results obtained by those contractors who maintain Safety Bureaus, they will readily see that it is a paying branch of the organization. The gratifying results obtained by Fred T. Ley and Company, of which Mr. L. D. Woedtke is Director of Safety, have already been mentioned. Inasmuch as the work covers a period of only three years, they are indicative of the immense amount of good work that can be done in accident prevention in general contracting, as propaganda of this kind is really in its infancy in this field.

The next step for an organization to undertake is the addition of a Safety Bureau, under whose direction the work is carried on. The first consideration must be given to the field organization itself, meaning the engineers, superintendents and in fact the entire rank and file, for co-operation must exist; and foremen generally must sec that the safety rules are observed.

As a further matter of co-operation, the construction department should turn over to the safety man a complete schedule of the job in hand, showing the progress expected, this being the first step. Second, a set of safety rules should be issued applying to the work or particular job in hand, which are set up after due analysis of the conditions which are to be met. The third is, of course, the enforcement and application of these safety rules.

First of all, any job employing 125 men or more, dependent, of course, on character of the work and location, should have a first aid attendant and small field hospital. We find it pays decidedly by eliminating lost time.

Second, the job organization should appreciate thoroughly the meaning of this safety work and they will in the end discover that lower unit costs will result from the observance of the safety rules.

To educate the workmen themselves can be done in different ways, and first of all, I believe they should be taught to observe safety rules provided as a precaution against the first or possibly the second classifications, which are most liable to happen. Their education in this respect should be gradual or progressive as the work goes on, and the foreman, of course, should see that the rules are observed.

Descriptive photographs are an immense help in avoiding accidents, and educational work, and should be in keeping with the class of work in hand.

Periodical bulletins help greatly, as do also signs which should be of such size and meaning as can be understood by all. A sign that can be read only a few feet distant is not of much use; it should be readable at a considerable distance-the farther the better.

Around the plant generally, guards should be built which will eliminate the possibility of employees coming in contact with the moving parts and lines, and the same consideration must be given to hoists and hoist lines. To operate plants efficiently requires good mechanics, and a contractor who maintains a staff of experienced operators in connection with his organization has done much toward the application of safe methods, for the accident, as a rule, happens to the green man, no matter whether he be mechanic, laborer, or machine operator, and it is necessary to observe such men very carefully, until such time as some experience has been gained.

Safety rules further will establish under what conditions a machine is to be operated and how, and will also establish signal codes to be observed, for very often the operator cannot see the other end of the line or the top of the hoist, as the case may be.

At any rate, common sense application tells us that above all else you must have experienced machine operators, and none other should be permitted to be employed, yet many times you will find some man out of the gang running a machine, the principles of which are entirely foreign to his understanding.

The whole work, however, as regards both employees and equipment is to be reviewed and inspected by the Safety Engineer, who will suggest precautions and safety rules that are to go hand in hand with the working methods decided upon for the handling of the job. This is further beneficial inasmuch as a man from general headquarters sees many things that a man on the job does not deem important.

## CONTRACTORSand SUB-CONTRACTORS

CONTRACTOR DEVELOPMENT, HALIFAX, N.S. General Contractors, Bate-MoMAhon Maritime Co., Halifax, N.S. General Contractors, Bate-MoMAhon Maritime Co., Halifax, N.S. General Contractors, J. R. McKenzie, Halifax, N.S. General Contractors, Bate-MoMAhon Maritime Co., Halifax, N.S. General Contractors, Bater McKenzie, Halifax, N.S. General Contractors, Thompson & Thealtston, Halifax, N.S. General Contractors, Thompson & Thealtston, Kalifax, N.S. General Contractors, Thompson & Thealtston, N.S. Hindbing, W. S. Craig, Halifax, N.S. Plumbing, Farquhar Bros, Halifax, N.S. Electrical Work, Yum, Stairs, Son & Co., Halifax, N.S. Electrical Work, Tongards, Ltd., Halifax, N.S. Electrical Work, John Starr, Son & Co., Halifax, N.S. Electrical Work, John Starr, Son & Co., Halifax, N.S. Hardware, A. M. Bell & Co., Halifax, N.S. Hardware, M. Robertson & Sons, Halifax, N.S. Hardware, A. M. Bell & Co., Halifax, N.S. Hardware, A. J. Grant Co., Halifax, N.S. Gravel, Dominion General Equipment Co., Halifax, N.S. Lumber, Rhodes, Curry & Co., Amherst, N.S. Lumber, Dunfield & Co., Halifax, N.S. Lumber, Dunfield & Co., Malifax, N.S. Lumber, Boyles, Piercy Supplex, A. Halifax, N.S. Buiders' Supplies, Pierd Supples, & Construction Co., Halifax, N.S. Buiders' Supplies, David Roche, Halifax, N.S. Buiders' Supplies, Baiders' Supplies & Construction Co., Halifax, N.S. Buiders' Supplies, Frank Reardon, Halifax, N.S. Buiders' Supplies, Frank A. Gillis, Ltd., Halifax, N.S. Buiders' Supplies, Frank A. Guilis, Ltd., Halifax, N.S. Buiders' Supplies, Frank A. Guil RE-HOUSING DEVELOPMENT, HALIFAX, N.S.