

line or a mere fraction of a line. Where knowledge of a trade or industry is confined to but a few simple operations, be those operations never so deftly or swiftly accomplished, skilled, all-round mechanics cannot be produced. Work ceases to be an art and a joy forever. The zest of life is gone. Workmen become mere cogs in the machine, and all pride in their work vanishes. In this direction scientific management becomes eminently unscientific.

The system fails on another count. It does not include an adequate system for the education of apprentices from whom competent mechanics can be developed. It does not provide for the workmen's progress in mechanical knowledge, but tends to restrict him to the subdivision of a specialty. It keeps him endlessly performing the same operation. It disregards the fact that endless repetition, which

in time becomes semi-automatic, through its very monotony, numbs the mind. It can thus never inspire the workman to express himself and his individuality in his work.

Finally, it is unsafe as well as unscientific, because it emphasizes quantity in production, rather than quality. The number of bricks which can be laid in a day is one thing; the strength and durability of the wall is another. The number of steel rails which can be run through the rolls in a day may be an interesting and important item in production; but of far more interest and importance is the ability of those rails to stand the strain and burden of traffic. The automobile and railroad accidents that from time to time shock the public are a terrible indictment against this obsession of the mind for speed and output at any cost.

Makers of Big Industries in Small Towns

By AUGUSTUS BRIDLE

THE big man is not measured by the size of the town he inhabits. There are as many big men in the small towns and young cities of Canada as there are in the large centres of population. The difference is that though as a rule you don't find big financiers, newspaper magnates, and railway builders in small towns, you often do find the really big manufacturer, and when you do he is likely to be rather a bigger mentality than the man at the head of a big city business.

There are reasons. The greatest philosophers have usually lived in obscure places. A small-town, big manufacturer is likely to have a certain degree of philosophy and all-round culture in his make-up. He reflects more the life of his town; takes a keener personal interest in people, lives a saner life, and in many cases may become a humourist. At the same time he is likely to have a good deal to do with more than one business. He may not sit on a great many directorates, but he may have a personal connection with more than one business that keeps his particular town to the front and gives it character.

Preston, Ont., known to a large number of health-seekers as the home of mineral baths, might be overlooked by most of the tourist traffic if it were not so much of a manufacturing metropolis. Population is no measure of this. Estimates place that at 5,000. But the wage bill of Preston in one year runs into a million and a quarter dollars, which on a basis of population is one of the very highest in Canada. Building estimates for the same period run to about \$400,000. And though Preston was originally just as German as the rest of Waterloo county, it is now almost as cosmopolitan as Hamilton. On the street you may see Poles, Russians, Finlanders, Galicians, hundreds of Englishmen, some Scotch—

BUT not so many Scotch. Most of them live in Galt, which is part of the same industrial precinct mapped off by Preston, Galt, Waterloo, Berlin and Hespeler. These towns are all in a midland area no bigger than some large cities. Berlin and Waterloo are so close together that nothing but an earthquake can much longer keep them apart, for Berlin is growing clear around its neighbour. Galt and Preston are just about as close now as Fort William and Port Arthur; three miles apart only—with Hespeler but three miles away from Preston. Ten years from now this manufacturing district will be as famous in Ontario as any of the industrial areas of England. These are the small towns with the big industries. In these five young cities may be found a greater variety of industries than in most of the big cities of Canada. And the reasons why are in most cases dependent upon two things—power and people.

Of these two factors power is second. Berlin has no water power. Galt has the Grand River. Preston and Hespeler have the Speed. But Berlin has the diligent Germans, Galt the indefatigable and thrifty Scotch, Preston a little of everything, and Hespeler the same.

Preston has also the Clare Bros., and without them it would be a much different town. Subtract George Clare and his brother Fred from Preston and you have left a busy community, reaching out hungrily like a new western town for more sidewalks and more permits and more people and more railroads; but not the two most typical and interesting industries in the town, one of them the newest of all the big ones and the other just about the oldest.

Beginning with the newest, the Canada Car and Coach Co., you get a curious sensation, even without meeting Mr. George Clare, the man behind it and one of the heaviest shareholders. It's a strange thing to step into one of the many big erecting

shops of this firm with its fourteen acres of space and find a large number of electric cars being built for the Edmonton Street Railway; a whole line-up



MR. GEORGE A. CLARE, M.P., P.C.,
of Preston, Ont.

of electrics for British Columbia; freights for the Canadian Northern; passenger cars for the Intercolonial; combined baggage and smokers for some other road, and nearly 400 men working every day at an industry which five or six years ago was only



LIEUT.-COL. J. W. WOODS, OTTAWA,
Ontario Vice-President, C.M.A., 1912-1913.

a cubbyhole of a shop engaged in repairing cars. This peculiar industry, backed by the personal prestige of Mr. George Clare, M.P., P.C., might never have been in Preston but for an accident.

With all their shortcomings—there are few human institutions free of them—the labour unions have at least proved their right to exist by steadfastly standing between the single, humble workman and the powerful corporation. Scientific management is ruthless in dealing with the individual workman; but it must come to terms with the union. As long as the union does not ask the public to tolerate inefficiency, "soldiering" and fraud, it will meet with support. It must not stand in the way of progress. But when it endeavours to safeguard the rights of humanity, in its pride of work and joy of service, it must command the public's co-operation and respect. And in confronting pseudo-scientific management it may surely count on every loyal and intelligent citizen to render whatever aid he can consistently with his convictions.

The present manager, Mr. D. M. Campbell, was having a chat with the manager of the Galt, Preston and Hespeler Railway in a smoker one evening and intimated that he had a notion to leave the Ottawa Car Co. to start a shop of his own. The hint was sufficient. Thanks to Mr. Campbell's knowledge of the business and the personal prestige of Mr. Clare the shop was started in May, 1907. To-day it is making a large percentage of the cars used in almost any part of Canada. Some of the best cars to be seen running on the electric roads through Preston are the work of the Canada Car and Coach Co. And the firm have been so overstocked with orders that they have been unable to accept large contracts from some of the biggest Canadian cities.

Cars are made as nearly as possible out and out on the premises. The motors are imported, as well as some of the fittings. But the trucks and the cars themselves are manufactured from the raw material in the shops of the company, which are almost as new as the cars just being painted up.

IT takes considerable courage to start under way in a town like Preston an industry that makes cars worth at least \$6,000 each, when you may count in the erecting shops at once not less than fifty cars in all stages of erection, some of them costing many times \$6,000 to build. It takes some imagination to realize that this modern mammoth industry is carried on in a town that a few years ago was known to most people as the home of mineral baths for ailing people, with a few factories along the main street to keep one end of it from running clear away from the other, nearly three miles distant.

For Preston has the longest main street of any town of its size in Canada, and it doesn't run directly along the banks of the Speed, that canters lazily down the flats to the Grand, but shoots sheer away towards Galt in a straight line dotted by stone houses the best part of a century old.

But Preston's main street is no longer for its size than the head of Mr. George Clare is long for his 200 pounds or more of energetic avoirdupois. Mr. Clare was born to be a manufacturer. His father, John Clare, a sturdy, thrifty German, planted the Clare industries in Preston in 1853. You can still see the old stone sill that held up the original foundry and show-room and engine-room of John Clare; but it's about the only part of the old outfit that seems to be plainly visible as you pass along the main street close to the banks of the Speed. Some of the rest of the shop is built around by new stone walls clambered already with ivies and housing 300 busy workers that make the Clare stoves and furnaces that go from one end of Canada to another.

A big stone house right next to the works is the old family mansion of the Clares. It is now the office; probably the only office of its kind in Canada. Drawing-room and dining-room and kitchen and bed-rooms are all occupied by the firm, both of the senior members of which were brought up in that old-fashioned stone mansion. It's as quiet as a home; but right next to it hundreds of men are making as much noise as is necessary to transform pig iron into a modern stove or a furnace, each with from forty to a hundred separate pattern pieces in its makeup, and from melting-furnace to box-car out on the siding a complete, progressive series of interesting operations.

George Clare, M.P., brought up in that house, perhaps never expected to see the day when it would be the office of such a place as that modern factory of iron-work. For some years, in fact, he was away from home, working for the Seagram interests in Waterloo town. In 1881 he came back, some years