Motor Tanks in the War

Mr. Philip Gibb's thrilling description of the English Army's new motor aid to victory was one of the brightest bits in the recent war columns. It stirred our imagination: we turned our minds back to boyhood days, when we absorbed Jules Verne's wonderful imaginative efforts foreshadowing the submarine and other mechanical wonders which have nearly all come to pass. Once again we find truth stranger than fiction. The advent of a motor "tank" which could cross trenches, butt trees to pieces, and try conclusions successfully with brick walls, struck terror into the enemy and caused surprised delight to cable readers. Nothing on ordinary wheels could run such a remarkable obstacle-race, and we suspect that the British Military engineers have successfully adapted to their business the caterpillar principle of traction, which is well known in motor-engineering work. The system is of special value in connection with farm tractors, which have to travel over soft ground. Instead of being fitted with the usual large-diameter driving wheels with a broad tread, the "creeper" runs on an endless chain. There are two wheels on both sides at ground level, but they are toothed, and the chain runs between them and the ground surface. When the toothed wheels revolve, the chain is forced around, and as it has about four feet of contact with the ground, between the toothed wheels, the resultant motion is progressive, while the large area of ground contact prevents slipping or "bogging." "Creepers" have evidently been evolved with a longer ground contact enabling them, if necessary, to bridge a trench. In tractor practice, the height of the "creeper" can be varied, so that one side of the tractor runs in a furrow, and the other on the unbroken soil at a higher level. A large number of these "caterpillar" tractors are in use on English farms, and the principle is of course well known to the Germans. Our engineers, however, seem to have stolen a march on the Hun, though that "kultured" gentleman has a great capacity for profiting by other people's inventiveness. We trust that British brains and engineering experience and resource will provide a few more trump cards like the motor "tank."

A Modern Industrial Weakness

One of the worst results of our present-day competitive system is the eternal demand for cheapness. An architect is rarely given a free hand to design the best possible building of the most appropriate design and materials. Even if he had that privilege, the work would be tendered for, and the contract let to the lowest tenderer who would then proceed to carry out the work which he had secured at the lowest rate, in the quickest and cheapest fashion consistent with the minimums imposed under the specification. The system is here, and cannot be got rid of because it has obvious commercial advantages, if nothing else. But the serious disadvantage is that the workman has no real personal interest in his job. The only place where ideal working conditions prevail nowadays seems to be the technical school. We read in the latest report of the Education Department's technical school inspectors that excellent examples of woodcraft have been completed at most of the schools, largely due, it is considered, to the fact that the work has been carried out under somewhat similar conditions to those under which most of the old-time woodwork was produced, when the mechanic who constructed the piece of work was responsible for its design, the method of construction, the constructive and decorative details, and the actual manufacture of every part of it.

Sometimes we hear of a demand for "a good job," instead of the cheapest. Occasionally an architect is delighted to discover an enlightened and affluent client who studies results rather than cost. It is a pity such men are rare, but as New Zealand gets over its raw developmental stage, the architect, builder, and workman will more frequently obtain work to gladden the heart by completely satisfying their artistic yearnings.

The Architect's Certificate

Is the architect's certificate final and conclusive, and binding upon the owner? This important point was fully argued in the Auckland Supreme Court recently in the claim of Johns & Sons, builders, against Webster & Tonks, owners of the new Grand Theatre, Auckland. Certain general extras were ordered by the architect, and variations made in the specification on the same authority. The owners paid various sums totalling £12,350 on the architect's certificate, but the final certificate for £448 7s. was not followed by payment, the owners declining to recognise this as final and conclusive and binding upon them. The form of the contract had an important bearing on the question. It contained an arbitration clause founded on the form of contract sanctioned by the Royal Institute of British Architects some years ago. In his judgment, Mr. Justice Cooper held that the arbitration clause extended to all matters or things arising out of the conditions thereto, 'not otherwise distinctly provided for.' There was, said His Honour no provision in any of the clauses of these conditions which made the certificates issued by the architects final, nor was there any clause taking a dispute in reference to such certificates out of the ambit of the arbitration clauses. Under these conditions the employer was bound by many of the acts of his architect, for instance where the architect authorised extra works or deviations from the contract, but the question of the price to be paid was within the scope of the arbitration clause. This judgment is so important to architects and the building trade that we propose in next issue to publish it in full, with the arbitration clause which was included in the contract under review.