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We have a request for a number of copies of the "Canadian Engineer" of December 20th, 1907. Our supply is exhausted, and to each subscriber sending in a copy of this issue we will grant one month's extension of subscription.

THE PLAN—ITS USEFULNESS.

It is not a new story, that of the roadmaster, who, when asked if he had seen the plan of the new bridge, said: "No; I have not seen the paper—but I have built the bridge." We all admire the practical man—his resourcefulness, his ingenious methods, his power of planning and remembering details. But with all his good qualities, the purely practical man is often wasteful when he refuses to recognize the value of a good sketch plan, a well-devised general scheme worked out on paper, or the economy that may be secured by the use of proper drawings.

It is true many important construction works have been completed without the use of the scale and drawing-board, but the wisdom of such methods is doubtful. The haphazard placing of machinery foundations and interior walls and passages does not meet the demand for economy of space, such as is, or should be, required in all buildings.

When the work is done by contract, complete plans are necessary to prevent misunderstanding, avoid disputes, and to make possible a fair estimate of cost. It is when the work is being carried on by day labor, or cost plus a fixed sum, that the careful preparation of plans is neglected. In fact, too often extensive field work is undertaken without even first preparing a general plan. This is never economy, and the pressure for early completion is misdirected when it compels such procedure.

It is not by any means necessary that construction be delayed until every detail is worked out. Usually, as soon as the general plan is decided upon, work may commence and the detail sheets prepared as work progresses; but every consulting engineer of standing will insist that no work be done until the drawings indicate the nature of the work. A plan may be of very little value because of too much detail, just as it may be worthless for want of detail. The draftsman is a better office man if he has had field experience. He will understand that certain annoying and costly details may be well omitted and understand the dimensions and design that are necessary.

Plans should also be a record of work done. A new engineer taking charge of work should have at his disposal a correct and clear set of plans. He will thus become quickly familiar with the layout and be able to judge of the work as a whole. Personal inspection will also be necessary, but a set of plans will make this easier.

ELECTRIC THEORY OF MATTER.

The London "Times" has lately been flooded with criticisms by chemists and others adverse to the "Electric Theory of Matter." This is to be expected, for, without failing to recognize the value of the research work of Sir Oliver Lodge, Professor Rutherford, Dr. Thompson and others, it must be remembered that their work simply consists of original methods in the chemical analysis of rare metals.

Mr. J. Stanley Richmond, who as far back as August, 1904, remorselessly criticized the "Electric Theory of Matter" in the "Electrical Review," of New York, informs us that he placed before the American