The Canadian Engineer

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The Canadian Engineer.

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CONTENTS OF THIS NUMBER:

THE NEW POSTAL LAW.

The Hon. William Mulock comes within an ace of being a great postal reformer. Although not the originator of the Imperial penny postage, the ready co operation he has given to the plans of the Imperial Government is appreciated throughout all the British Empire, he has brought about many economies in the administration of his department, and last of all, the domestic two cent rate, which has just come into force in Canada, is the consummation that thousands have long devoutly wished. In order to cover up in part the deficiency which this reduction creates, he has framed a law imposing postage upon newspapers. With such a law in itself we have no fault to find. In fact, the publishers of this journal advocated such a law several years ago, before the present Postmaster General came into office, but it is just in this law that the Hon. Mr. Mulock fails to be a great man, and discloses either the weakness or shadiness of his public career. The new law is in fact a deception, in that it allows one class of papers to get the benefit of postal service free as before, while it imposes the whole burden of the tax on another class of papers. Whether, as some suppose, the Postmaster General was moved by a craven fear of the country Press, which forms, in numbers at least, the largest section of the newspapers of the Dominion, or whether he was moved by another motive, we cannot say, but the fact remains that this new law, by creating a zone of forty miles from the office of publication, within which all newspaper matter is free, relieves ninety-nine out of every hundred local papers from the payment of postage, while the newspapers that have a general circulation benefit practically nothing by this exemption.

The Monetary Times shows up the injustice of this arrangement by the following concrete instance. "We know of one case where a journal having a circulation of 4,500 will, by the operation of this Act, benefit to the extent of only 110 copies. On the other hand, a paper having a local circulation of an equal number would pay no postage at all. Mr. Mulock, we are assured, will see the injustice of such an arrangement." We sincerely share in this hope, for a discrimination so unjust was never framed in the history of newspaper laws. As before stated, the whole burden of this tax falls upon one class of newspapers, while another class is permitted to escape altogether. A law founded upon injustice cannot, and should not, stand, and we believe the Postmaster-General has a sufficient sense of right to see that this discrimination is removed.

OILING UP.

BY J. W. WILLIAMS.

In the broad range of the art of mechanics there is no more engaging feature than that of the problem of the reduction of waste power caused by friction, and the extent of these efforts may be measured by comparing the shrieking ox-cart of India and Africa and the ball-bearing axle of the present, with this great extent of improvement in mechanical construction there still remains one feature which seems to have been understood by the wagon driver of a thousand years ago just as simply and as clearly as the engineer of to day, that is, lubrication. This is an item of knowledge as valuable as many of those which are incidental to machines of all kinds, and one which cannot be overlooked, both from a theoretical and practical value, as proper and improper lubrication raises and lowers the coal bill, and is an item of expense necessary to take into account. The main features of the operation of lubricating may be considered, the conditions and the material.

Attention may be given to the elements which constitute a plant. There is a source of power, a machine possessed of limited force usually in excess of the call or requirement, this may be an engine (steam, gas, or oil), water-wheel, motor, etc., and this machine has to exert its strength in moving the working parts of the plant, the machinery, and execute a varying amount of work. In the effort to overcome the resistance of this work is produced the friction referred to, this friction exists from two causes, the actual weight of the material of the machinery and the pull or stress due to the effort of the motive power to do the work, this latter is the main part of all the friction, the amount due to weight of machinery material becoming less in the ratio of motion at ordinary speeds. The possible loss of power may be imagined from the results of experiments which were tried with a cast iron shaft on a dry bell-metal bearing with the result of a loss of one fifth of the power, with a wrought iron shaft a loss of one fourth, these proportions were reduced by lubrication to six per cent. in the first instance and nine per cent.