

MUNICIPAL DEPARTMENT

THE ROAD ROLLER.*

A number of townships in Ontario report the use of horse road rollers in constructing their roads. Counties having county road systems either have steam rollers or are about to purchase them. Numerous towns and cities of which a list is given use this, the most valuable of modern roadmaking implements.

For economical, durable and serviceable roadmaking, a heavy roller is indispensable. A road should be sufficiently smooth and compact to shed the water readily to

*From the Eighth Annual Report of the Commissioner of Highways for Ontario.

the side gutters. If the gravel or other road metal is dropped from the wagon loosely on a soft earth foundation, water passes into the subsoil as through a sieve. Wheels passing over the road when in such a condition at once sink into and rut not only the gravel, but the earth beneath. Water is held in the ruts, and each succeeding vehicle renders their condition worse. The road is less durable, since the gravel, being mixed with the earth from beneath it, contains, when finely consolidated, a dusty, easily-worn surface.

The consolidation of loosely spread stone or gravel by traffic is a slow process, causing much inconvenience to travel, during which the earth of the subsoil becomes mixed with the stone. Earth intermixed with stone prevents the strong mechanical bond which clean metal will assume when the stones are wedged one against the other by a roller. The particles of earth, when wet, have a lubricating influence on the stone, and, under the

action of wheels the surface is more readily broken up. By the use of a roller the earth subsoil should be first thoroughly consolidated. The stone should be placed on this foundation in layers, and each layer well compacted. In this way a smooth, durable, waterproof coating of stone, free from earthy material, can be laid over a firm foundation. A road should be made for traffic, not by it. To leave loose gravel and stone in the roadway is neither an agreeable method of constructing a road, nor will it produce the most durable road.

Among the benefits to be derived from

Notice to Contractors.

The Niagara Falls Machine & Foundry Co., Limited,

Niagara Falls, Ont.,

are making a specialty of improved

HOISTING AND BUILDING ENGINES.
Write for Prices.

THE CANADIAN INSPECTION COMPANY, LIMITED

Main Office and Laboratories:

146 St. James Street, MONTREAL
SPECIALTIES: Inspection of RAILS and all material for BRIDGES, BUILDINGS, and other structures, cast iron pipe, wood and steel railroad cars.

MANUFACTURE AND ERECTION.
Expert examination and reports, chemical analyses and physical tests of all kinds.
Cement Testing.

FIREMEN'S LADDERS —AND— LADDER TRUCKS

We make the lightest, quickest, strongest and cheapest. Every Town and Village needs them and can afford them. They will save 50 times their price in insurance premiums. Write for circulars and quotations.

THE WAGGONER LADDER CO., Limited
LONDON ONT.

PORTLAND CEMENT

SEWER PIPES

FIRE BRICKS

FIRE CLAY

ALEX. BREMNER

50 Bleury Street, MONTREAL



An Unreasonable Request

To Ask a Man to Sign his Name to a Personal Bond. Insist on

**THE UNITED STATES FIDELITY
& GUARANTY CO.**

A. E. KIRKPATRICK, Manager for Canada.
6 COLBORNE STREET, TORONTO, ONT.

THE OFFICIAL PRACTICAL TEST OF CONCRETE VAULT LIGHT CONSTRUCTION

UNDER THE PERSONAL DIRECTION
OF

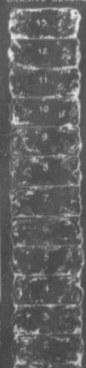
WM. BARCLAY PARSONS, C.E., M.A.M. Soc. C.E.
CHIEF ENGINEER R. T. COMMISSION

AND

S. L. F. DEVO, C.E., M.A.M. Soc. C.E.
CHIEF ENG. R. T. SUBWAY CONSTRUCTION CO.

ALSEN'S HAS BEEN SELECTED IN PREFERENCE
TO ALL OTHER BRANDS FOR THE SUBWAY
RAPID TRANSIT STATIONS OF THE ENTIRE
SYSTEM REACHING FROM THE BATTERY
TO THE BRONX

GRANITE BLOCKS



MERELY SUSPENDED BETWEEN 1-BEAMS
A SLAB OF

ALSEN CONCRETE

2 INCHES THICK
5 FEET WIDE
12 1-2 FEET LONG

30 DAYS CURED

SUSTAINED 11,882 POUNDS OF
CONCENTRATED WEIGHT

ON AN IRON DISC 8 1-2 IN. IN DIAMETER

THOUGH HIGHEST IN PRICE, ALSEN'S IS BEING
USED IN THIS VERY IMPORTANT CONSTRUCTION,

NOT ONLY BECAUSE OF ITS

GREATER STRENGTH, BUT

CHIEFLY BECAUSE OF ITS

ABSOLUTE SAFETY

IN ACTUAL WORK

MADE BY TUCKER & DUNTON, INC., NEW YORK CITY
PATENTED

WILLIS

Hon. G.
M. Can. Soc. C.
Men
WATERWORKS,
WORKS, P.
Reports, Surveys,
103 BAY ST.

R. E. SHAW

CONSULTING

Waterworks, S.
Municipal Improvements,
Transit, Electric Light,
Drainage and
Coal Handling
Plans, Specific
Construction

Canada Life Insurance

E. VON DER

Consulting

Industrial F.
Lighting and
Sewerage and
Garbage Re.
Municipal I.

9 Toronto Street

J. J. O'NEILL

B.A.S.,

Consulting

Ottawa

EDWARD

ELECTRIC

16 KING ST.

RODERICK

A.M. Can. Soc.

CONSULTING

Electrical Lig.
Steam Plants
Power Plant
Estimates

52-53 James B.

Long Distance Tel.

Cable Address

WELLS

MAN

At

Syracuse Sme

Manufacturers of

DERRICKS

and Derrick
Iron, Sheaves,
Hooks and
Chains, Stump
Pullers, Wire
and Cable
Stretchers,
Tackle Blocks
Material Ho-
ists, and
Dealers in
HOISTING
ENGINES
and Con-
tractors' Sup-
plies.

National Ho

405 West