

age Act, for the term of one year, commencing on the first day of September next. Tenders close at noon on the 29th day of August next, tenders by mail must, however, be in the clerk's hands not later than the 28th on account of mail service. Address all communications to William Stewart, township clerk, Pelee Island, Ont.

MARKHAM.—The range of the Independent Telephones in this district will shortly be still further extended by connection with the Uxbridge and Scott Company's line, and the extension of the Bethesda and Stouffville Company's line to Richmond Hill.

TORONTO.—Dr. Sheard reports on his visit to Cleveland that the reduction of garbage by cooking to grease and fertilizer gives that city a profit of \$128,000 a year. Dr. Sheard thinks the plan might prove profitable in Toronto, but will take careful working out, as Cleveland has the advantage of natural gas, and a better market for fertilizer than Toronto.

#### Manitoba.

WINNIPEG.—It is expected that the Provincial Government will be in readiness to create a new drainage district in the Big Grass marsh by Lake Manitoba early this fall. There is a corps of surveyors at work laying out the ground at present. The area to be drained will be about 250,000 acres. It is not yet known which will be the most feasible direction for drainage. To drain into the lake will necessitate a 30-foot cut through the Kinosota ridge near the lake. It is possible that a large portion of the district will be drained into the White Mud river. All will be ready for construction work next spring.

### RECENT FIRES.

#### New Brunswick.

SACKVILLE.—The lower end of this town was completely swept by fire early this morning. Among the structures burned was the Enterprise Foundry plant, owned by Emerson & Fisher, St. John, and consisting of warehouse, office building, mill room, pattern shop, moulding shop, fitting shops, new power house, and store-room. The loss on the foundry plant will be \$80,000 or more. The net insurance is about \$52,000. The fire started by lightning striking the mill room in the foundry.

#### Ontario.

HAGERSVILLE.—An explosion of gasoline, which was being poured into a brazier, caused a destructive fire. The blaze originated in J. Head's repair shop, and was confined to that block by the fire walls. The places destroyed are: Head's repair shop, photo gallery, bicycle store, music store, and the Erie Telephone central office; loss \$25,000; insurance about \$1,500.

### PERSONAL.

MR. SAMUEL WALKER, late of the G.T.R., has been engaged as superintendent of the installation of the new pumps, and inspector of filtration for Verdun, Que.

MR. ORMOND HIGMAN, chief electrical engineer of the Dominion Government, with headquarters at Electrical Standards Laboratory, Ottawa, is spending the day in Winnipeg. He is making a month's inspection trip through Canada and leaves for the Pacific coast to-night.

### MAGNALIUM.

Magnalium is an alloy of aluminum and magnesium, manufactured in Germany (90 to 98 per cent. aluminum). And now that this new alloy is being used in America the following notes may be of interest.

It is imported in pigs or ingots for castings or forgings, and can be handled by the ordinary foundryman or blacksmith. It forges about like Swedish steel. It can be delivered in plates, bars, rods, wire, tubing, etc., and in any form it shows a far greater strength than aluminum in spite of its being lighter, its specific gravity being about 2.5 while that of pure aluminum 2.64.

It can be worked or machined about like brass, giving a smooth surface of silvery color. Clean, sharp holes can be bored and perfect screw threads can be cut in the metal. The finest files can be used on its successfully. The tool speed is about twice that of aluminum.

It attains and maintains a high polish, resists oxydization, is unaffected by dry or damp air, water, gaseous ammonia, carbonic acid, sulphurate of hydrogen and most organic acids. It is very slightly affected by saltpeter or sulphuric acid and more rapidly by alkalies or strong alkaline solutions. It is slightly attacked by salt water and should be lacquered where it is exposed to sea water.

It is very close grained and can be polished, etched, engraved, pickled, etc., without any trouble. It is very ductile and can be forged, rolled, annealed, drawn, etc.

Magnalium, unlike aluminum, can be soldered by any ordinary workman with magnalium solder after a little practice.

Its electric conductivity is 56 per cent. of that of pure copper.

The melting-point is 1,185°-1,250°F., the specific heat 0.2185.

The following table gives the qualities of various well-known metals as determined in reputable German engineering laboratories and added is a column, showing the comparison of strength of various metals, weight for weight. This is done by dividing the strength in pounds per square inch. By the specific gravity in each case, which gives the strength in pounds per square inch for a unit specific gravity. For instance if one metal is three times as heavy and three times as strong as another, dividing the tensile strength in each case by the specific gravity, the factors resulting would be equal and weight for weight the metals are equally strong.

Metals.	Specific gravity.	Strength in lbs. per sq. in.	Per cent. reduction of sectional area.	Strength in lbs. per sq. in. divided by specific gravity.
Siemen Martin Steel plus 2 per cent. aluminum .....	7.9	113,794	12.5	14,404
Soft steel .....	7.7	71,121	16.17	9,237
Rivet steel .....	7.	52,630	22.	7,518
Cast iron .....	7.	17,780	0.5	2,540
Manganese bronze ..	8.25	36,272	19.	4,400
Phosphor bronze ...	8.5	36,983	10.	4,351
Copper .....	8.8	31,293	42.	3,556
Brass .....	8.4	22,760	75.	2,709
Aluminum bronze, 5½ per cent. al. ....	8.37	56,897	64.	6,800
Aluminum bronze, 10 per cent. ....	7.3	90,324	11.	12,373
Pure aluminum (cast)	2.56	16,358	3.	6,390
Ordinary cast al....	2.7	10,383	1.175	3,846
Magnalium Class "X" sand castings ....	2.50	18,491 to 21,336	3.75	7,396 to 8,534
Magnalium Class "X" chilled castings ...	2.51	22,759 to 25,604	5. to 8.	9,067 to 10,206
Magnalium Class "X" 90 per cent. aluminum chilled castings .....	abt. 2.51	60,090	4.19	abt. 24,359
Aluminum (rolled) 20.1 red. ....	2.61	33,427	4.3	12,807
Magnalium "Z" annealed plates .....	2.49	42,246	17.8	16,966
Hard rolled aluminum 80.1 red. ....	2.7	38,405	4.2	14,224
Magnalium Class "Z" hard rolled plates.	2.51	52,203	3.7	20,798