

BUSINESS EAST. ONTARIO.

Jas. Kelly, grocer, Sarnia, has sold out.
 Jas. Kelly, grocer, Sarnia, has sold out.
 Thos. Johnson, grocer, Seaton Village, is dead.
 G. G. Cruickshank, hotelkeeper, London, has sold out.
 A. Brockie, grocer, Paisley, has sold out to D. Shanks.
 E. B. Reid, baker, Alliston, has sold out to John Bryce.
 Mrs. M. A. Graham, milliner, Toronto; stock damaged by fire.
 Geo. Offord, Jr. shoemaker, Port Arthur, has assigned in trust.
 Thos. Mossop, hotelkeeper, Toronto, has sold out to Wm. Boyd.
 S. Zoelinsky, druggist, Kleinberg, advertises his business for sale.
 J. C. Smith, hotelkeeper, Oshawa, has sold out to S. G. Bennett.
 James Scanlan, shoe maker, Stratford; stock sold to Thos. Lawson.
 R. J. McGill, general storekeeper, Greenock, has removed to Blyth.
 David Shanks, general storekeeper, Turner's has removed to Paisley.
 W. H. Watson, general storekeeper, Blyth, has sold out to J. McGill.
 George Gander, of the Ridgetown Grist Mill, Ridgetown, has assigned.
 Alex. McFarlane, general storekeeper, Sutton, is removing to Clarendon.
 Michael Sullivan, hotelkeeper, Markdale, has sold out to D. McLean.
 L. N. Morrison, carriage maker, Blymer, advertises his business for sale.
 B. H. Rothwell, bookseller, Brantford, has sold out to H. R. Blackwood.
 A. J. Arnold, hotelkeeper, Port Elgin, has sold out to Sparling & Milkie.
 S. Ostrander, stove dealer, Tilsonburg, is selling out to R. T. Williams.
 Barton, Thompson & Co., coffee and spice manufacturers, Toronto, have dissolved; style now Barton, Son & Co.

QUEBEC.

E. C. McKay, hotelkeeper, Gould, has assigned.
 E. Shutan, tobacconist, Montreal, has assigned.
 Thos. Webster, tailor, Montreal, has assigned.
 H. Cromwell, confectionery dealer, Montreal, has assigned.
 Thos. J. Samson, hotelkeeper, Victoriaville, has assigned.
 M. Feiner, clothing manufacturer, Montreal, has compromised.
 Vezina & Guyon, general storekeeper, Vercheres, have assigned.
 Thos. E. Mahoney, hotelkeeper, Parrishoro', is giving up business.
 J. A. Gadoue & Frere, confectionery dealers, Montreal, have assigned.

NOVA SCOTIA.

Joseph Dobson, grocer and hotelkeeper, Sydney, is dead.

Peter Campbell, general storekeeper, Port Hastings, has assigned.

NEW BRUNSWICK.

Josephus Howard, grocer, Moncton, has assigned.
 Wm. Davidson, general storekeeper, Tracadie, has gone out of business.

PRINCE EDWARD ISLAND.

Bartholemew Pickard, grocer, Charlottetown, is dead.

Are All Hand Fire Grenades Hamburgs?

Mr. P. G. Tower, B. S. of the agricultural college at Lansing, Mich., has made some experiments regarding conditions of inflammability and efficacy of fire extinguishers. A Harden hand grenade was opened, and the solution contained qualitatively analyzed. It consisted of common salt, sulphate of lime, and a small amount of acetate of soda. The principal ingredient was common salt. Upon trying a number of these grenades upon a bonfire, no effect was visible. Very fortunately at this time a general agent for the company was in the vicinity and consented to give an exhibition of the fire-extinguishing qualities before the students of the institution. Being provided with a vertical platform of pine boards, six by eight feet in size, he poured kerosene on the wood and then coated the surface with pitch. Setting this on fire he allowed it to get well to burning, and then throwing in rapid succession six of the pint grenades, he succeeded in nearly extinguishing the fire. Taking the exhibition as a fair example of what the grenades could do in skilled hands, the effort was made to determine (1) whether the solution in the grenades had any more extinguishing power than water; (2) if the solution had extinguishing power greater than water, what was the essential ingredient in the solution.

The question that first arose regarding the composition of the grenades was: Did they contain carbon di-oxide gas, or any substance that would give up the gas when heated? Opening the grenades under water and collecting the gas that escaped, it was found that the average amount of carbon di-oxide contained was about one cubic inch per grenade. Boiling the solution liberated a slight amount of gas in addition; but altogether the gas was not enough to be of any practical benefit in extinguishing the fire. It was then certain that the extinguishing power was in the solution itself. Replacing the solution in the grenade with pure water the extinguishing power, while greater than water thrown from a dish upon the flaming boards, was still much less than the power exerted by the solution.

By a careful series of trials we found that the essential ingredient is common salt. From a number of experiments it was found that when a grenade, or bottle containing a strong brine, was broken, in the midst of the burning kerosene, the flames were almost instantly extinguished. A vapor seemed to spread in all directions from where the salt solution struck the board, extinguishing the flame as it went. Strong solutions were also made of sulphate of soda, hyposulphite of soda, borax (bi-borate of

soda), and bi-carbonate of soda and tried as extinguishers. Some worked as well, but none any better than salt in extinguishing fire. The experiment was then tried of charging bottles with brine and generating carbon di-oxide by adding lime dust and sulphuric acid and corking tightly. No practical increase in extinguishing power from their addition was noticed. In most instances, the carbon di-oxide gas escaped from the bottle inside of four days, proving that it is impracticable to attempt to use glass vessels with corks as a means of storing CO₂, under pressure for fire extinguishing purposes.

The conclusion arrived at from these and many more experiments, was that the Harden grenade solution possessed much greater extinguishing power than water alone, and that it owed this power to common salt held in solution. We then constructed some home-made grenades, using flat bottles, bound together side by side with wire. Using two bottles in this way insures their being broken on striking the burning body, which would not always occur when only one bottle was used. Bottles thus charged with brine and bound together were broken side by side with the Harden grenades and found equally valuable. It thus appears from the experiments that any person can construct as good and effective grenades as those offered on the market at \$7 and \$10 per dozen. Bottles filled with brine and placed around the premises, will afford considerable protection, especially when used on the flames when the fire just begins. Salt solutions have the further advantage of not being easily frozen, never enough to burst the containing bottle.

The Lewis hand fire extinguisher was next investigated. This instrument consists of a tin tube about two feet long, containing 34 fluid ounces of a solution consisting of a sulphate of soda in weak caustic ammonia. From the trials made we could not notice any appreciable superiority over the salt solution, as used in the Harden grenade. It has the disadvantage of not being made to break by being thrown, but must be opened by having a cork extracted from one end of a tin tube, requiring a smart jerk. The solution is then sprinkled on the fire by the operator. The principal value of this form of extinguisher must consist in the advice to the consumer printed upon the outside of the instrument, to "keep cool—not get excited, &c., which, seeing that he holds the tin case in his hand while distributing the contents on the flames, allows him to consult and follow this most excellent advice.—U.S. Miller.

Rooms are now being decorated completely in leather. Walls, ceiling and furniture are alike covered with stamped imitations of famous old Spanish tapestries.

A NATURAL ink is found at the bottom of a copper mine at the foot of Kenesaw Mountain, Cobb County, Ga. It is a peculiar liquid of a deep wine-color, and when a few drops of nut-gall are added it turns jet black, and at once becomes ink of the best quality. The records of the country have for years been kept in this natural ink, which neither freezes, fades, nor corrodes.