

through which the vapour of alcohol can pass, but not its impurities.

354. W. MACNAB. *Improvements in steam engines.* Dated Feb. 11, 1862.

The patentee claims: 1. The causing of the fresh steam in combined high and low pressure engines to give up a portion of its heat to the partly-used steam, substantially as described. 2. The combining together of two pairs of high and low pressure cylinders, with the individuals of each pair acting at right angles, as described.

384. T. DAVISON. *Improved means for preventing the corroding of steam boilers.* Feb. 13, 1862.

This consists in introducing into the water a salt or salts, such as the carbonate of soda, potash, or lime, capable of neutralising the corrosive action of the injurious agent present in the water.

435. C. T. MARZETTI and J. WATSON. *Machinery or apparatus for raising, lowering, and otherwise moving or disposing casks and other heavy bodies.* Dated Feb. 19, 1862.

This consists in using a tangent wheel and screw, or worm and worm-wheel movement, in combination with a winding barrel or shaft, upon which is wound the chain or rope, to the one end of which the cask or other body, or the object to be raised, is attached by a sling and hook or other means, whereby a considerable economy both of labour and space is effected.

460. R. H. SKELLERN. *An improved self-inking hand-stamp or press.* Dated Feb. 21, 1862.

This invention comprises various improvements (the details of which we cannot here give space to) in that class of hand-stamp or press consisting of two side frames mounted together at or near the top by a cross piece, through which slides vertically a hollow plunger, which is raised by a spiral spring in the interior.

461. H. WARD. *An improvement or improvements in ladies' saddles.* Dated Feb. 21, 1862.

The patentee claims making the third or leaping crutch of ladies' saddles movable, without detaching it from the saddle, so that it may be adjusted and fixed to suit the convenience of the rider.

471. W. H. ROSS. *Improvements in the manufacture of sugar.* (A communication.) Feb. 22, 1862.

This consists principally in using, in the manufacturing or refining of sugar, the phosphates of ammonia in conjunction with sulphurous acid, either gas or liquid, or with any of the sulphates or bisulphates.

472. J. KIRKWOOD. *Improvements in looms for weaving.* Dated Feb. 22, 1862.

This comprises various improvements in looms, the object being to admit of the application of steam or other mechanical power, and in one modification of loom embodying them are combined with jacquard pattern mechanism of the single lift class.

473. A. BORNEMANN. *Improvements in the mode of constructing fountains.* Dated Feb. 22, 1862.

This relates to fountains adapted not only for pleasure grounds, but for drawing-rooms conservatories, &c., and consists in constructing such fountains so as to work by atmospheric pressure, without the aid of clockwork or other mechanism for producing and maintaining the requisite pressure.

Canadian Items.

PETROLEUM GAS—STEVENSON HOUSE.

The *Toronto Globe* of October 3rd, contains the following card from Mr. E. W. Stevenson, the proprietor of the Stevenson House, St. Catharines:—

Thomson's Patent Petroleum Gas Works.

Stevenson House, St. Catharines, C.W.,
Sept. 26th, 1862.

I have much pleasure in giving public testimony to the excellence, cheapness, and freedom from all kinds of annoyance from smoke or smell of the Petroleum Gas, made at my establishment, in the Patented Works erected by Mr. James E. Thomson. The works have now been in operation for six weeks, and have given uniform satisfaction in every respect. They supply my establishment, the Stevenson House, St. Catharines, C. W., with 180 burners, at a cost of 86 cents a night.

I most cordially recommend Thomson's Petroleum Gas to the general public.

(Signed,) E. W. STEVENSON.

To James E. Thomson, Toronto and Buffalo.

This is a most satisfactory testimonial respecting the extraordinary cheapness, purity, and excellence of Petroleum gas. The importance of the new process for gas illumination will soon be appreciated, when such establishments as the Stevenson House find it economical and agreeable. It seems almost incredible that one hundred and eighty burners can be fed for the trifling sum of eighty-six cents a night. Under the old system of burning coal gas, one hundred and eighty burners lighted on an average four hours per diem, and burning three feet an hour, would consume 2,160 feet of gas, which, at \$2 50 a thousand, would cost \$5 40 per night. The difference in favour of Petroleum gas, according to Mr. Stevenson's statement, is four dollars fifty-four cents, or upwards of \$1,600 a year. Where four feet burners were formerly used with coal gas, instead of the one foot burner with Petroleum gas, and assuming that the average time of the gas being lighted at 5 hours a day, the saving is proportionately greater. When the works at the Rossin House are completed, which will be at the close of this month, the citizens of Toronto will have an opportunity of daily witnessing this beautiful light, and satisfying themselves by personal inspection of its extraordinary cheapness, brilliancy and purity.

"THE OIL SPRINGS CHRONICLE"—OIL SPRINGS.

This is the title of a paper which is published by Messrs. Edwin T. Solis and Hudson, at the new village of Oil Springs, in the county of Lambton, C. W. A couple of years ago, the township of