

George Arthur Manneer, of the Township of Innisfil, in the County of Simcoe, Farmer, "A double Lever Power or an improvement to the Lever Power on Bull Wheels."—(Dated 28th February, 1862.)

Robert Kerr, of the Township of Waterloo, in the County of Waterloo, Yeoman, "An improved grain and seed broad-cast Sower."—(Dated 28th February, 1863.)

Austin Adams, of the City of Montreal, Match Manufacturer, "A new and useful machine for splitting sticks for matches."—(Dated 4th March, 1862.)

William Clouston Robertson, of Belleville, in the County of Hastings, Tailor, "An improved Garment Delineator."—(Dated 8th March, 1862.)

John Wedderburn Dunbar Moodie, of Belleville, in the County of Hastings, Sheriff, "A Rotary Interest Indicator."—(Dated 8th March, 1862.)

James Tomlinson, of the Township of Pickering, in the County of Ontario, Mechanic, "A Steam Coiled Hoop for all kinds of Coopers' work."—(Dated 8th March, 1862.)

Isaac Mills, of the Township of Flamboro' West, in the County of Wentworth, Farmer, "A double and single dash, hinge and crank Churn called 'Mills' Victoria Churn.'"—(Dated 8th March, 1862.)

Philip Cady Van Brocklin, of the Township of Brantford, in the County of Brant, Iron Founder, "A new and useful implement called 'Van Brocklin's two horse Wheel Cultivator.'"—(Dated 11th March, 1862.)

James W. Millar and John F. Millar of the Village of Morrisburg, in the County of Dundas, Iron Founders, "An improved Moulding Flask for making the Mould Boards of Ploughs without Sand."—(Dated 12th March, 1862.)

Reuben Watson, Carpenter, and John Overton, Blacksmith, both of the Township of Moore, County Lambton, An improved Plough called the "Lincolnshire Plough Boy."—(Dated 14th March, 1862.)

Jarret Smith Clendening, of the Township of Malahide, in the County of Elgin, Waggon Maker, "A portable Clothes Drier."—(Dated 17th March, 1862.)

Charles Boeckh, of the City of Toronto, in the County of York, Brush Manufacturer, "A Lamp Chimney Cleaner."—(Dated 17th March, 1862.)

Edward Trenholm, of Trenholmvile, in the Township of Kingsey, in the County of Drummond, Farmer and Miller, "An improved Snow Plough and Flange Cleaner."—(Dated 20th March, 1862.)

Alba Faunce, of the Town of Sherbrooke, in the District of St. Francis, Carpenter and Joiner, "A Vegetable Root Cutter."—(Dated 21st March, 1862.)

Edson York, of the Township of Stanstead, in the County of Stanstead, Carpenter and Joiner, A new and improved Vegetable Cutter called "York's Vegetable Cutter."—(Dated 2nd April, 1862.)

Edson York, of the Township of Stanstead, in the County of Stanstead, Carpenter and Joiner, A new and improved Churn called "York's Rotary Churn."—(Dated 2nd April, 1862.)

Common plumbago, according to recent researches of Dr. Calvert, is composed of 91 per cent. of a suboxide of iron, 8½ per cent. of a nitride of silicium, with traces of phosphorus and sulphur.

Selected Articles.

GREAT CANDLE MANUFACTORY—DESCRIPTION OF THE OPERATIONS.

A correspondent of the London *Chemist and Druggist* describes the Sherwood Works, at Battersea, England, belonging to the celebrated Price Patent Candle Company. We have condensed the most instructive and interesting portion of this description for the benefit of our readers:—

The manufacture of candles upon an enlarged scale embraces a range of high scientific information. The art has been completely revolutionised within the past thirty years, and for this the world is chiefly indebted to the French chemist, Chevreul, who has now charge of the Royal Dye Works, at the Gobelins manufactory of tapestry carpets, in Paris. Chevreul patiently investigated the nature of fatty bodies, with the view of determining their relative value for illuminating purposes. He found that every natural fat contained substances which ought not to be present in candles, because such substances reduced their illuminating power. Thus tallow is composed of at least two distinct solid bodies, namely, stearic and margaric acids; also a liquid oil—oleic acid and glycerine—a sirupy body, which serves as a base to the three acids. Each of these acids, when burned in the wick of a candle or lamp, gives a more brilliant flame than the tallow from which they are derived, but the glycerine gives a flame which is exceedingly feeble. To obtain a good candle material the latter body must be removed from the fat; and as the presence of oleic acid renders the material soft and greasy, this substance must also be got rid of. Chevreul, in the year 1823, described a process by which the hard acids might be separated. From that time candle making has advanced with rapid strides, and what was once a rude and noisome trade has become a first-class chemical manufacture. To appreciate the difference between the two phases of the art, we need only compare the common parlor candle of twenty years ago with that which now takes its place. The snuffy, guttering, feeble-flamed mold, formed of simple tallow, represents the mechanical stage of candle making, and is rapidly becoming a relic of the dark ages. Instead of it we find in general use, a hard, clean, polished cylinder, composed of beautiful chemical products, which burn away brightly by a slender and snuffless wick. Wax and sperm are still used as formerly, but to a limited extent. A new material, paraffine, has nearly superseded them.

At Price's Candle Works palm oil, cocoa-nut oil, and Rangoon petroleum are used extensively for candles. The palm oil is solid, and comes in casks from Africa. These are emptied in a most expeditious and simple manner. The casks are rolled to a large shed, the floor of which is traversed from end to end with an opening about a foot wide, which is in communication with an underground tank. Over this opening the bung-hole of each successive cask is brought, and a jet of steam is made to play upon the solid mass. The heat of the jet speedily melts the oil, which flows out of the bung-hole into the tank, whence it is pumped by steam