

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week; the claims may be found in the official list:—

Port-monnaie, Pocket-book, Etc.—The object of this invention is to make a port-monnaie, pocket-book, etc., in such a manner that it cannot be abstracted from the pocket of the owner without his knowledge; and the invention consists in attaching to port-monnaies, pocket-books, memorandum books, etc., in a suitable manner, a serrated or roughened metallic strip or plate; and it consists in roughening or nicking the frame of a port-monnaie, or other like article, the effect being to cause the serrated or roughened surfaces to catch into the side of the pocket, so that an attempt to abstract it will attract the attention of the owner, but which, at the same time, will permit the article to be withdrawn by the owner without any difficulty. B. F. Cowan, of New York City, is the inventor.

Water Wheel.—This invention relates to a new and improved water wheel, of that class which is placed in a scroll, and are on a vertical shaft, and are commonly termed horizontal water wheels. The invention consists in a new form of bucket and its arrangement on the wheel, whereby it is believed that the direct force of the water, and also its reacting force, are obtained with a more favorable result than hitherto. Uriah H. Goble, of Dubuque, Iowa, is the inventor.

Pump for Oil and Other Deep Wells.—The object of this invention is to produce a pump for operating deep wells—such, for instance, as oil wells—and it consists, among other things, in securing the cylinder within and near the lower end of the ordinary well tube, which is usually carried down to, or nearly to, the bottom of the well. It also consists in extending the well tube, or that portion thereof into which the bottom of the pump cylinder is secured, some distance below the pump—the extended part being perforated with numerous holes, to admit oil or other liquid, as well as gas, to the valve in the bottom of the pump. The piston and piston rod are hollow, the piston being made of considerable length, and its diameter being reduced at two or more places intermediate of its extremities, to allow any liquid which finds its way between it and the sides of the cylinder to be collected in the annular spaces left at such reduced places, and so prevent any injurious effect upon the working of the piston. The piston is used without packing, being made, with the exception of the reduced places above mentioned, of a diameter sufficient to occupy the cylinder of the pump, and, at the same time, be capable of being moved freely up and down in it. The lower end of the piston is brought to a sharp edge by beveling its bottom on the inside, thereby making its bottom in its interior of a conical or funnel shape, the narrowest part forming the seat of the piston valve. S. Emilius Hewes, of Albany, N. Y., is the inventor.

Operating Oil Wells.—The usual method of operating oil wells is to sink a well of a diameter of four inches, more or less, and, after tubing the same, to raise the oil by suitable pumps. By this method only that oil is reached which is inclosed in crevices that are pierced by the well, and, in order to reach all the oil in a certain tract of land, it is necessary to sink a large number of wells. This invention consists in extending from a central vertical main well a series of radiating drills, in a horizontal or inclined position, in such a manner that a communication is effected between the several crevices situated outside the main well, and not otherwise in communication therewith, and all the oil contained in a certain tract of land can be collected in the main well and raised by one and the same pump, without the necessity of sinking a large number of wells and removing the pump from one well to another. Paul Casamajor, of New York City, is the inventor.

Operating Oil Wells.—This invention relates to an oil well composed of a vertical main shaft with a series of horizontal or oblique galleries and a series of drills extending from said galleries in a vertical or oblique direction. The main shaft terminates above the rock which contains the oil, and is provided at its bottom with a reservoir in which all the oil rising through the drills collects, and whence it can be

easily raised to the surface by a suitable pump. By these means all the oil contained in a large tract of land can be collected in one and the same reservoir, and all the secondary wells pierced by the vertical or oblique drills can be converted into flowing wells, their depths being comparatively small, so that the labor of pumping is materially reduced, by having one large pump to raise the oil from the reservoir. Paul Casamajor, of New York City, is the inventor.

Trace Buckles.—This invention consists in the use of a buckle frame hung by a center cross bar within a loop of the inner end of the hame tug, the outer end of which frame has a swinging bar, bent into a circular shape, or nearly so, and provided with a center tongue or pin, which tongue, when the outer end of the trace tug has been drawn sufficiently through and under both ends of the frame, securely holds the same in position, by inserting it within the proper aperture thereof, and of the hame tug. H. S. Woodruff, of Janesville, Wis., is the inventor.

Improvements in Apparatus for Carbureting Air.—These improvements are embraced in two separate Letters Patent, the first of which consists in a novel and peculiarly constructed wheel, divided into a series of separate and similar-shaped compartments or chambers, extending its whole length, open at the periphery of the wheel, and communicating at their inner ends, and at one end or head plate of the wheel, with any suitable conducting pipe for the gas formed by it; which wheel is so arranged and hung within the receptacle containing the naphtha, that as it is revolved in any proper manner, and the open ends of the chambers at the periphery of the wheel are passing through the naphtha, the air contained in said chambers will be forced out thereof into the conducting pipe for the gaseous vapors so formed, the communicating ports of the chambers therewith then being above the naphtha; while, when the open outer ends of the chambers are passing through that portion of their plane of revolution above or outside of the naphtha, the said ports communicating with the conducting pipe are closed by the naphtha liquid itself, which naphtha, through suitable ports at the opposite end of the wheel to the conducting pipe, has free access at all times to the interior of those chambers below the naphtha at their inner ends. And the second in covering the wheel, and for its whole extent, both in its length and periphery, with a sheet or sheets of wire gauze, or other suitable open or perforated material, the object of which is to secure a more perfect combination of the atmospheric air with the naphtha, as it passes to the receiver. Also, in a novel arrangement of parts, for regulating the amount of gas generated in the apparatus, the same being connected with the gas receiver at one end, and with the driving shaft of the chambered wheel at the other, in such a manner that when the pressure of gas within the receiver exceeds the desired amount, either in a greater or lesser degree, the revolution of the said bucket wheel shall be, in direct proportion thereto, retarded in its movement, thus causing a greater or lesser quantity of gas to be formed and forced into the receiver, as the case may be—these regulating devices being self-operating. And, also, in interposing between the gas receiver or generator and the burners employed for consuming the gas, and in its conducting pipe, a double-chambered tube or vessel, formed by an inner and concentric tube made of wire gauze or other suitable open material or substance, through which gauze tube the gas in its passage to the burners is obliged to pass, whereby the gas is thus relieved from all impurities and other condensable products which may be contained in it, a result of much importance for the production of a clear and perfect light from the gas when consumed. John Chase, of Windsor Locks, Conn., is the inventor.

INTERESTING PATENT-LAW TRIALS.

In another column we copy from the New York Times reports of the recent trials in the U. S. Court, in this city, for alleged infringements of patents.

One of these trials took place before Judge Benedict, upon the question of the validity of a design patent. The Judge held, in effect, that in order to sustain such a patent the improvement must be novel, and that the mere adoption, or borrowing, by the patentee of an old form was not sufficient to support a claim.

The other trial related to the validity of the reissue patent of James Draper, for an improvement in hoop skirts, originally granted in 1859. In 1863 James J. West obtained a patent for improvements in hoop skirts, and became an extensive manufacturer thereof under his patent, without molestation from the plaintiff. But in August, 1865, the plaintiff obtained a reissue, with a new claim, under which he now comes to the Court, declares West to have been an infringer, and asks for an injunction.

Judge Nelson denies the motion for an injunction, and holds that the inference, *prima facie*, is against the plaintiff; that Draper's reissued patent was a suggestion taken from West's patent, as the latter contains the whole improvement of the reissued patent. But if the plaintiff can clearly show that he was the first original inventor previous to the date of the first patent, then the reissue must be upheld.

SPECIAL NOTICES.

Louisa R. Ketchum, executrix of the estate of William F. Ketchum, deceased, of Buffalo, N. Y., has petitioned for the extension of a patent granted to him on the 10th day of February, 1852, for an improvement in grain harvesters.

Parties wishing to oppose the above extension must appear and show cause on the 22d day of January next, at 12 o'clock, M., when the petition will be heard.

Robert T. Osgood, Orland, Maine, has petitioned for the extension of a patent granted to him on the 17th day of February, 1852, and reissued in three divisions, on the 13th day of August, 1860, and numbered 1,250, for an improvement in grain and grass harvesters.

Robert T. Osgood, Orland, Maine, has petitioned for the extension of a patent granted to him on the 17th day of February, 1852, and reissued in three divisions, on the 13th day of August, 1860, and numbered 1,251, for an improvement in grain and grass harvesters.

Robert T. Osgood, Orland, Maine, has petitioned for the extension of a patent granted to him on the 17th day of February, 1852, and reissued in three divisions, on the 13th day of August, 1860, and numbered 1,252, for an improvement in grain and grass harvesters.

Parties wishing to oppose the above extensions must appear and show cause on the 6th day of February next, at 12 o'clock, M., when the petition will be heard.

Seeing through Water.

The *Edinburgh Review* says:—"Currents in the very bed of a river, or beneath the surface of the sea, may be watched, as Mr. Campbell informs us, by an arrangement that smugglers used in the old days. They sank their contraband cargo when there was an alarm, and they searched for it again by the help of a so-called marine telescope. It was nothing more than a cask with a plate of strong glass at the bottom. The man plunged the closed end a few inches below the surface, and put his head into the other end, and then he saw clearly into the water. The glare and confused reflections and refractions from and through the rippled surface of the sea were entirely shut out by this contrivance. Seal hunters still use it. With this simple apparatus the stirring life of the sea bottom can be watched at leisure and with great distinctness. 'So far as this contrivance enables men to see the land under the waves, movements under water closely resemble movements under air. Sea weeds, like plants, bend before the gale; fish, like birds, keep their head to the stream, and hang poised on their fins; mud clouds take the shape of water clouds in air; impenetrable light cast shadows, and take shapes which point out the directions in which currents flow. It is strange, at first, to hang over a boat's side peering into a new world, and the interest grows. There is excitement in watching big fish swoop like hawks out of their sea-weed forest after a white fly sunk to the tree tops to tempt them, and the fight which follows is better fun when plainly seen.' Mr. Campbell suggested plate-glass windows in the bottom of a boat; it would bring men and fish face to face; and the habits of the latter could be leisurely watched."

PERKINS succeeded in making water red-hot.