

New Inventions.

Self-Lighting Segars.

A patent has been taken out in England, by a Mr. Jarvis Palmer, of Camberwell, in the County of Surry, for the following way of making self-igniting segars, without any offensive odour. Take 18 parts, by weight, of charcoal, 32 parts of salt prunella, 8 parts Venetian red, 10 parts cascarilla bark, 1 part of oxymuriate of potash, and 14 parts of water, in which is dissolved some gum-arabic, or glue will answer. When this is in a fluid state round pine splinters are dipped two or three times in it, when they are dried, and the dipped parts are then broken off and inserted in the ends of segars. The segars thus furnished are lighted by simply rubbing this nib against any suitable substance, such as a hard wall.

It has often puzzled us to account for the number of patents that are taken out in England, especially when we see so many that are apparently of so trifling an interest and nature. But we have been told by a foreign patent agent, that the majority of them pay well. Here we have, in the above patented self-igniting-segar, an example of what is done there. The sum which the inventor paid was about \$500, as much as is paid for 16 patents in our country.

Improved Wagon Spring.

Mr. E. B. Rounds, of Swanton Centre, Vt., has made a good improvement on Maxson's Patent Wagon Spring, which will make it altogether a superior article. The Maxson Spring was a helix with a fork passing through it connected to the shoulder or lever. This arrangement made a great noise by the spring touching the fork, and its employment on that account was objected to by many. The improvement of Mr. Rounds, and for which he has taken measures to secure a patent, has no fork passing through the helix or coil, but the coil spring has one end made with a socket to receive a small arm that clasps with the lever on which the wagon box rests, and the whole is enclosed in a neat cast iron box. This improvement, on an otherwise first rate spring, makes it a perfect article for the purpose to which it is applied.

Improved Cloth Folding Machine.

Messrs. Carey & Bagley, of Amesbury, Mass., have invented a new cloth-folding machine, which embraces new features from others in use, and for which they have instituted measures to secure a patent. The cloth table is in the middle of the machine, upon which the cloth descends vertically from a roller above, when it is folded by two rocking square-sided friskets, which alternately fold down the cloth neatly on the table, like a man folding it down with one arm after the other, right and left, while there are small catch-jaws below, that retain each fold snugly down until the other fold is ready to be laid down, when each jaw alternately rises to receive the fold, and then closes on it, and so on continually.

Discoveries in Art.

A French paper states that Mons. Jauron has just discovered the famous Naiad, all trace of which has been lost for so many years. It was discovered pure and unimpaired in the subterranean vaults of the Louvre, where it has lain ever since 1824. What is perhaps, equally curious, although perhaps, less valuable is the discovery, in the same hiding-place of the famous apparatus for lighting the statue gallery at night, which was executed by order of Napoleon, and of which all trace has been lost ever since the Restoration. This discovery was hailed with delight by all lovers of art, and the apparatus is to be applied immediately to its original purpose. A grand soiree will be given in the course of the month to artists of all denominations who may be at the time in Paris; all nations are to be invited, and the experiment tried for lighting the gallery. The apparatus is said to have cost the government under the Empire more than 100,000 francs, and to be the result of the united efforts of all the great physicians of that day.

Water Telescope, or Sub-Marine Examiner.

Mr. Willard Day, of Brooklyn, N. Y., has invented a new and beautiful improvement on Telescopes for submarine examinations, which will make the instrument of real utility and one of the most useful to every vessel that sails on the ocean. The instrument is a telescopic tube, with a mirror in a small water-tight chamber at its bottom. This mirror can be moved through ninety degrees, to receive the images of objects in the water, and which can be perceived by the person looking down. There are lamps in small side chambers (water-tight) which are fed with fresh air through a small auxiliary tube, the smoke escaping by another, which thus enables explorations to be made at night, as well as through the day. There are a number of little essential contrivances to render it a

perfect instrument, which we will try and describe by an engraving, at some other time not far distant. The instrument could be used to examine the whole bottom of a vessel at sea, if it leaks, in order to ascertain the extent of the damage, and provide a remedy in the most suitable manner.

Revolving Road Scraper.

Mr. Elisha Randall, of Edmeston, N. Y., has invented a new Road Scraper, which revolves on an axis, and is retained firmly between the arms or brakes, while scraping, but when it is full by scraping up the earth or mud, by slightly elevating the arms the scraper revolves, throwing out the mud and allowing the scoop on the upper side of the axis to take the place of what was before the lower scoop. The whole apparatus is very simple—no extra springs nor anything of that kind is used. Measures have been taken to secure a patent.

IMPROVED SPARK ARRESTERS FOR LOCOMOTIVES AND STEAMBOATS.

Figure 1.

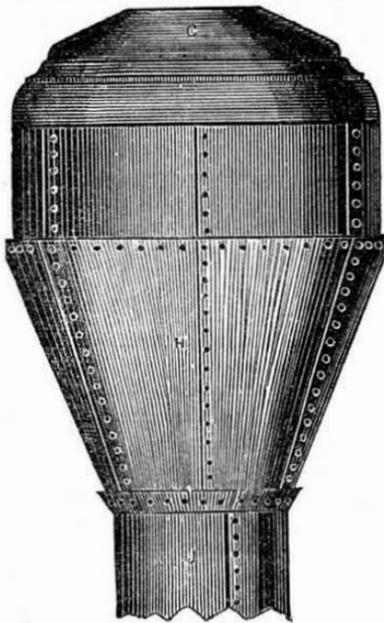
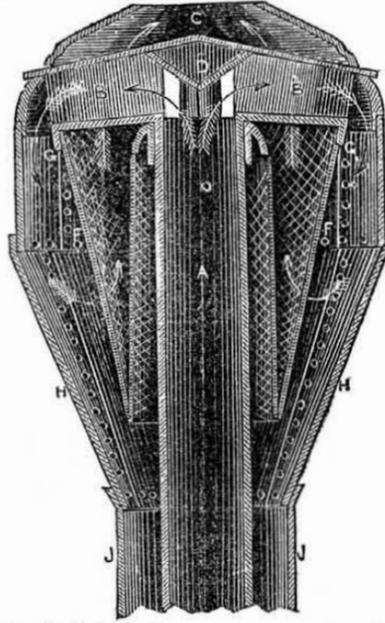


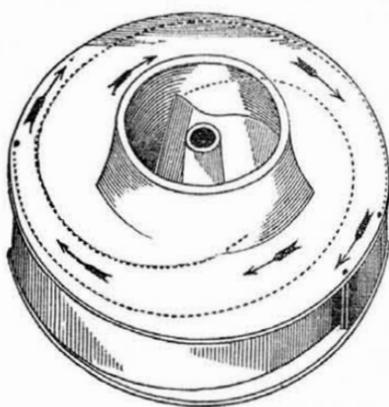
Figure 2.



This apparatus, as improved, is the invention of Messrs. Z. C. Ladd & Edward Ivers, of Boston, Mass. Figure 1 is the outside of the apparatus, and figure 2 is a vertical section cut down through the middle. J is the part attached to the main smoke pipe; H is the case and C is the cap, as represented in fig. 1. The same letters in fig. 2 refer to like parts. The arrows indicate the course of the smoke. A is a central pipe through which the smoke comes direct from the boiler furnace. B B are a series of small chambers extending around, with openings between them, communicating with the vent of the cap; D is an inverted conical bonnet, which deflects the sparks to the sides, through the chambers, B, into a large chamber or receptacle, G G, formed between

the tube, A, and the outside casing. The sparks fall down here, and can be easily cleaned out by a door below. F F is a wire gauze screen; it is formed and attached to the case, as represented, forming a chamber between its sides, inside. Through this the smoke must pass to escape, and it is now represented as doing so by the arrows. It escapes to the outside through a series of small openings arranged around between the chambers, B B, from thence the smoke escapes at the top through the cap, C. By this apparatus the sparks are completely sifted from the smoke. Measures have been taken to secure it by patent; and more information about rights, &c., may be obtained by letter (p. p.) addressed to the inventors.

American Turbine Water Wheel.



This is an engraving of T. R. Timby's Water Wheel. It is made with eccentric flanges, indicated by the dotted lines, and the arrows indicate the course of the water. This wheel receives the water at its centre, on a gradual curve, from a vertical to a horizontal. On this curve, the water is deflected so as to impinge with the greatest momentum, against two eccentric flanges, presenting surfaces gradually receding from the centre, and gradually diminishing in their eccentricity from the centre to

the circumference, running in an eccentric route entirely around the wheel; the water acting with a powerful centrifugal force, from the centre to the circumference, at which it is discharged in two tangent jets, after passing over a surface of nearly 25 feet.

The advantages of this wheel are briefly the following:—The small amount of water required for its use; its consequent unrivalled power; its uniformity of motion; its adaptation to different heads of water; it is unaffected by back water; the comparative small expense attending its erection.

This wheel has a very high character from those who have used it. W. P. Rathbone, Esq., of Valatie, Columbia Co., N. Y., certifies that he uses one 4 feet in diameter, venting 110 inches of water under 7 feet head, and that its expense is less than any wheel known to him.

Mr. R. Dederick, of Niverville, Columbia Co., N. Y., owns the rights of the States of Massachusetts and New Hampshire, and the Counties of Westchester, Putnam, Dutchess, Columbia, Rensselaer and Washington, in New York State.

All orders and communications addressed to them (p. p.) will be promptly attended to.

Page's Windmill at Washington.

On the Island at Washington there is erected a large and handsomely finished self-adjusting windmill, containing thirty-six sails, each twelve feet in length, and spreading over an area of fifteen square feet. The mill is capable of affording seventy-two horse power when propelled by a six mile breeze. This power is employed night and day, carrying on the various operations of a mill, and runs of stones, adapted to the grinding of all sorts of grain.

By this process about two hundred bushels of corn and rye meal, dyspepsia flour, shorts, bran, etc., are made ready for our market daily.

In addition to the grain mill, a portion of the power of the sails is expended in turning the machinery of a large workshop for the manufacture of the "self-adjusting windmills," five of which have been recently made and sent to farms, in Virginia and Maryland, where water power is not conveniently obtained.

New Plan of Reaping.

A trial has been made at Genlis, in France, on a new reaping instrument of the scythe kind. It is of the same form as the scythe blade, though a little smaller and more curved, and is fixed with a strap to a very short handle. The reaper makes use of it with his right hand by an easy movement, causing little fatigue. He has in his hand a hook fixed to the end of a small handle of very light wood, with which he holds the wheat while giving the cut with the scythe. This instrument cuts as close to the ground as may be desired, does not shake the ears, and consequently does not cause the grain to fall out. The reaper does not want (as is the case in using the rake scythe) an assistant to follow him to pick up what is left behind; his hook performs the office with the greatest facility, and allows nothing to fall, and collects the grain into bundles of the required size with surprising regularity.

It is said by foreign papers that this instrument completely surprised the agricultural laborers of France, by the quantity and quality of work which the laborer performed with it. With the exception of the hook for the left hand, however, it must be the same instrument that is named the scythe sickle, which is employed by the harvest laborers of Britain and Ireland, and apparently with as good effect as the new French scythe.

Improvement in Making Flour.

Mr. D. P. Bonall, of Tecumseh Michigan, has recently made some improvements in manufacturing flour which, in one sense, are valuable. The way it is effected is by placing an auxiliary run of stones so as to receive the entire body of the "offal," on its passage from the upper or first merchant bolts. The stones are fitted to run from 300 to 400 revolutions per minute, and the feeding of the stuffs made uniform and perfect by a very simple combination of machinery.

After the "offal" is thus ground or severely scoured, it is then passed into the lower bolts or dusters, when the flour is taken out and sent to the "cooler," or first bolts, to be uniformly mixed in regular proportions, with the superfine flour, and the remainder separated for feeds.

Oil Painting Daguerotype.

Portraits in oil, of any size, an English paper says, are now taken by a photographic process, in a sitting of half a minute. The process is called Photo-Prosopton, and is wonderfully doubtful to us.

Morse's Instruments on the O'Reilly Line.

The Tribune says that Mr. O'Reilly has made a contract for the Morse's Instrument, to be used on the line to Albany, on the west bank of the Hudson. The price paid is \$25 per mile.

Accounts from China state that the British have been making a close alliance by treaty with the Sultan of Borneo, by which they have the British title to Labuan confirmed, together with a number of other adjacent Isles. The British have also acquired many other advantages over the Sultan.