NEW INVENTIONS.

The following are some of the most prominent of the patents issued on the 29th inst., with the names of the patentees :—

FORCE PUMP.—J. H. A. GERICKE, New Orleans La.—This is a force pump operating on the principle of a turbine wheel, designed for raising great bodies of water in short periods of time, as when draining low lands, pumping water out of ships, mines, and other low places.

STEAM BOILER.—A. J. SMITH, Greenville, Ohio.—This is a boiler in which the steam is formed in small quantities as required. It consists in combining a perforated interior boiler and induction water pipes with each other and with the outer boiler

SWIVEL SHACKLE.—T B. ROCHE, Folsom, Cal.—This shackle possesses many advantages over the ordinary swivel blocks—being much cheaper, works better, and the rope cannot possibly be twisted.

SELF-SEALING FRUIT CAN.—J. R. and N. E. LUPTON, Stafford, O.—By means of this invention fruit can be sealed air-tight by an improved stopper, so that the fruit can be kept sound and sweet for any length of time, and the stopper can be removed without injuring it.

LAMP-LIGHTER'S TORCH.—C. D. WALTERS and JOHN WILSON, Harrisburgh, Pa.—This is a convenient apparatus for lamp-lighters' use; and consists of a torch formed by combining a lamp, a system of wrenches, and a match box with each other and with a handle.

ROLLS FOR WASHING AND WRINGING MACHINES.—S. F EMERSON, Seville, Ohio.—This invention consists of a hollow slotted cylinder of wood, on which the roller is made, the rubber being secured to the cylinder by wedges, bands, and ferrules, so that the rolls may be removed from, and attached to, the shaft of the machine when required.

LOWERING SHIPS' BOATS.—SAMUEL BROWN AND LEON LEVEL, San Francisco, Cal.—This invention is to provide a means whereby both the hauling parts of the tackles may be under the control of one person instead of two, as heretofore, and in such a manner that a friction brake may be employed to lower the boat fast or slow.

STEAM TRAP.—WM. FUZZARD, Chelsea, Mass.—This device consists in the arrangement of a buoyant stopper made of cork and placed in the exhaust chamber, which is provided with a suitable seat at its bottom, so that when steam passes into the exhaust chamber the buoyant stopper is depressed on its seat by its own gravity assisted by the pressure of the steam, but if water accumulates in the exhaust chamber, the buoyant stopper begins to float, and the water has a chance to escape.

SEWING MACHINE.—ALBIN WARTH, Stapleton, N. Y.—This sewing machine, by a single change in the mechanism, can be adapted so as to produce the loop or the chain stitch.

CUT-OFF FOR RAIN-WATER PIPES.—L. W. DOTY, Aurora, Ill.—This invention consists in the construction of a box of metal or other suitable material, with a partition extending up for a certain distance from the base, at the top of which there is pivoted or hinged a swinging gate, so arranged in regard to an induction pipe opening into the top of the box that the water entering the box may be thrown into either of two eduction pipes emanating from the bottom of the said box, and thus the water may be directed into different receptacles.

TURNING BOILER FLANGES.—EDWARD PAYE, New York City.—This invention consists in the use of a series of hammers in combination with cams or other suitable mechanism by which a reciprocating motion can be imparted to them, and with a suitable device for supporting the flue sheet in the required position so that by a succession of blows of the hammer the flange of the flue sheet is turned with little trouble and in a comparatively short time.

ATMOSPHERIC GOVERNOR.—BENJAMIN MACKERLEY, Paint, Ohio.—This governor by the compression of the atmospheric air in a cylinder or suitable receiver, a brake is applied, and by these means the speed of a motor of any desired description, but particularly such driven by animal power, can be regulated with the greatest care and accuracy.

COMBINED SCREW WRENCH AND HAMMER.—L. S. and E. G. HOYT, Croton Falls, N. Y.—This is an arrangement of a stationary and a hinged adjustable spring jaw on one end of a handle, to the other end of which a hammer is rigidly attached, so that a tool is obtained which serves the double purpose of a hammer and a screw wrench, and is cheap and very convenient.

CYLINDER BRUSH.—SILAS STUART, Sterling, Mass.—This brush relates to that class used in lathes for polishing metals; it consists in forming the holder for the bristles in sections but so that when joined together the bristles will present an unbrokon periphery, while a brush of any desired length may be formed by simply using more or less of the said holder sections.

WATER INDICATOR.—GEORGE LUTZ, of Lancaster, Ohio.—This invention is to simplify the construction and arrangement of the parts of a water indicator for steam boilers, to render it more effective in operation.

SKIRT SUPPORTER.—WILLIAM BACHELLER, West Newbury, Mass.—This skirt supporter is worn around the waist just above the hips over which the skirts are placed and so supported as to be free from the hips, and so as to accommodate itself to their movement when the person wearing it is walking.

STRETCHING AND TACKING CARPETS.—F. M. OSBORN, Dover Plains, N. Y.—This is a novel combination of a carpet stretcher and a hammer for driving the tacks; they are so arranged with regard to each other and operated by a common lever handle, that when the carpet has been stretched the hammer will be brought down with sufficient force to drive the tack through the carpet into the floor.

SCREW-CUTTING MACHINE.—A. B. SIMONDS, Youngstown, Ohio.—By the combination and arrangement of the different parts of this machine, screws may be cut accurately and of any required length without changing gages or stopping it.

LEATHER-DRESSING MACHINE.—TYLER C. LORD, Portland, Oregon.—This invention relates principally to an adjustable table for scouring, finishing, and doing general table-work in dressing leather, together with other machinery, to be used for similar purposes, in connection with such table.

FRUIT GATHERER.—ELIZA H. NEWCOMB, New York City.—By the construction and arrangement of the several parts of this gatherer the operator is enabled to produce a shearcut by the resistance only of the stem of the fruit upon withdrawing the gatherer, thereby avoiding the necessity of great exertion on the part of the operator.

BEER PITCHER.—W. P. AYRES, Nashua, N.H.—This invention consists in constructing a pitcher, or other vessel into which brewed liquors are drawn from the cask, with a partition plate dividing off a chamber in front of the spout, and in placing transversely across this chamber as well as across the main portion of the pitcher, perforated plates which serve as strainers or condensers, whereby the liquid may be poured out clear of foam; the pitcher is also provided with a tunnel-like mouth for the better guidance of the liquor into the pitcher.

CHURN POWER.—DAVID J. KNAPP, Fallsburgh, N. Y.—This is a means for operating churns with rising and falling dashers; it consists of a train of wheels having a spring for a motor, driving a pitman passing through a guide and connected with the dasher rods.

SHAFT COUPLING.—GEORGE L. BARRON, Bethlehem, Pa.—This is a shaft coupling, simple and easy of adjustment, which will hold the shaft securely coupled, It combines a shell, key, and set screws with the ends of the shaft to be coupled.

WEIGHING SCALES.—JACOB KING, Fort Wayne, Ind.—This invention consists in pivoting the scale pan to the short arm of a curved lever, the long arm of which is weighted. The lever is pivoted to the scale frame by a knife-edged pivoting pin, the latter also operates the index finger.

WATER COOLER.—J. M. BAIRD, Wheeling, West Va.—This invention consists of a tank with a cone-shaped bottom, set vertically in the ground a few feet below the surface. Its top is connected with a water pipe, and the apex of the cone-shaped bottom with the discharge pipe of the hydrant.

HORSE HAY FORK.—T. H. ARNOLD, Troy, Pa.—This invention consists of bars, levers, and hooks or prongs, so arranged as to take nearly a vertical position when thrust into the hay, which may then be opened into the form of a harpoon to lift the hay, and which may be again closed to drop the hay where required.

TRACE BUCKLE.—ADAM HAGNY, Keokuk, Iowa.—This is a double-tongued trace buckle, so constructed that the trace itself may keep both tongues closed, and the two tongues may divide the draft strain of the trace.

GRAIN CLEANER.—JOHN STEVENSON, Lionville, Ind., and JOHN J. CRIDER, Greenfield, Ind.—This invention consists in so constructing the screen that by its revolution the grain can be thoroughly cleaned from cockle, cheat grass, etc., which seed find their way through the meshes of the screen.

HAY LOADER.—CHAS. GIBBS, Pittsfield, Vt.—This invention consists of a hay loader or fork pivoted to the side of the wagon frame, and so arranged with ropes, pulleys, levers, ratchet wheel and pawl that, by the advance of the wagon the hay will be raised from the ground and deposited on the wagon.

REAPER.—SEWELL GILLAM, New York City.—This improvement consists in dividing an ordinary sickle or cutter into the two sections, one working outside of the other, and each having a cutting front distinct and separate from the other, so that the weight of the sickle is divided, and then driving the different cutters or sections by different cranks placed at right angles to each other, so that the cutting labor is also divided—one crank being at its dead point when the other is at the center of its stroke.

STEAM BATHING APPARATUS.—J. YOUNG, M. D., Williamsburgh, N.Y.—This invention relates to an apparatus which enables persons to take a steam bath in their room without requiring a cumbersome mechanism, steam being generated in an ordinary tea kettle or any other suitable vessel, and injected into an annular chamber, which is placed under the chair occupied by the patient, said chair being situated within a light frame of wire or other suitable material, on which a sheet is hung so as to concentrate the steam escaping from the annular chamber on the body of the patient.

Notes and Queries

W. G., of Pa.—We thank you for your suggestion in regard to the proposed bill for taxing inventors. Remonstrances signed by inventors will do good—but inasmuch as they are much scattered as to locality it will not be easy to procure their signatures. We advise them to write letters of remonstrance to their U. S. Senators.

S. P. C., of N. Y.—Salt, heated with coal in a gas retort to a dull-red heat for five or six hours, is volatilized to the extent of about 60 per cent.

A. R. C., of S. C.—We are not acquainted with any machine for pressing Sea Island cotton in round bales, though we do not doubt that cotton presses can be modified to meet your wishes.

H. H., of Ohio.—You did not sign your name to your letter, therefore, we are unable to address you by mail. We prefer to give opinions respecting the novelty of inventions by mail, as such questions are not usually of general interest.

W. H., of Ill.—Your communication in regard to perpetual motion is received, but inasmuch as it does not contain any thing useful we decline to publish it. We say to you candidly that you are hunting a needle in the hay mow, and all your time and money will be wasted, and you will be a disappointed adventurer. We have said the same thing before hundreds of times

E. T., of Ohio.—We are not aware that any reward is offered for the discovery of the principle of the Giffard's Injector

T. C. K., of Pa.—The boiler you describe, if properly set and having a good draft, ought to be sufficient to drive your engine. Much depends, however, on the construction of the boiler as to fire surface.

W. H. S., of N. J.—Many persons who are ignorant of the practical working of patented inventions, will insist that not one in a hundred is worth a farthing. There are thousands of inventors who are successfully engaged in the manufacture o their improvements, and the records of the Patent Office show that the sale and assignment of patents are very numerous.

H. H., of La.—Otis Tufts, of Boston, has secured patents for vertical railways or elevators for hotels. They are used in some of our largest hotels.

H. G. B., of N. Y.—We know of no better way to start rusty nuts than to put a few drops of kerosene in the end of the bolts, so that it will penetrate the threads, and the screw will immediately loosen.

J. H. P., of Ill.—The question you ask involves a complicated mathematical problem, and would require a good deal of time to prepare it.

T. P., Jr., of Me.—Byrnes's statement is as nearly correct as can be. Our correspondent must recollect that if the facts do not square with his theory, it is not seldom that a wide difference is detected between theory and practice. For all practical purposes the indicator card will exhibit the amount of friction in the steam engine.

A. G. C., of Ill.—The present issue of our paper contains a communication on filing saws, which, we think, has some good points. We have heretofore published considerable on this subject and can do no more than to refer our correspondent to our columns. We know of no better manual on the subject, than the one referred to by you. Your ideas on manuals for mechanics are sound and sensible. Next to personal instruction and practice, a plainly written manual by a practical man, is the best means of correcting false notions and reforming bad habits, These books cannot be too plainly written. Scientific verbiage, for the use of mechanics generally, necessitates a glossary.

Sub. of Pa.—Crude petroleum is utterly unfit for an unguent, and no preparation from it has yet been made that did not contain substances and elements very injurious to the hair.

A. B., of Md.—Queen Anne's "pocket-piece" is about twenty-five feet long and carries a ball (spherical,) of only eighteen pounds. We do not know the diameter at the breech, but from the style of guns made when this was cast, and the weight of the ball, it cannot be three feet. We have many guns much larger every way except in length. This nation has the largest guns in use in the world. There can be no question on this point.

F. B., of Pa.—Undoubtedly sufficient light for reading or observing objects could be concentrated from phosphoric vegetation, insects, etc., but *cui bono?* The cost of apparatus would be more than the benefit gained. The gigantic glow worm of the torrid zone is sometimes inclosed in a glass bottle and made to do duty as a lantern, and the sugar bugs, it is said, will light up a cane field at night so that a person can read.

A MOST extraordinary occurrence took place along the line of the Nashville and Decatur Railroad, between Columbia and Pulaski, lately, during a thunder storm. A full mile of the telegraph wires were melted, and divided over that whole distance into small fragments, irregular in shape, and many of them no longer than a buck shot or a small rifle ball. The fragments found along the whole distance, would not, if put together consecutively, make more than thirty feet in length. The glass insulators were bursted, and the poles shivered into fragments.

THE most curious work at present going forward in Paris is the leveling the hill of the Trocadero, on the right bank of the Seine, opposite the bridge of Jena. One-fourth of the work is already completed. The ground is mined, and four mines are fired simultaneously by means of an electric battery. A surface of more than two acres is raised by each explosion, and wagons are ready on a temporary railway to carry away the earth thus loosened.

THE Lansingburg (N. Y.) Gas Works has recently made some interesting experiments in the manufacture of gas from peat taken from a bed in this State. The peat used was air-dried without pressing, and then thrown into the retort. The gas was pronounced to be in every way equal to that made from the best coal. It gave a clear, white, and strong light, and stood the chemical tests well.

NEARLY twenty-five hundred pounds of wax are now required yearly in sealing patents for inventions in Great Britain. This relic of barbarism is about the size of a large Dutch turnip and, is suspended to the parchment by a stout silk cord, and boxed in a tin case.

THE Richmond *Republic* urges, as a practical measure of reconstruction, that the people of the South bend their energies to restore the waste places of the land, to build up agriculture, manufactures and commerce, and to unite themselves by railroads with all parts of the country.

PROFESSOR AGASSIZ, in a recent letter, reports the discovery of 1,400 new species of fish and animals, a number far greater than he had any reason to expect.