27,594.—L. W. Langdon (assignor to himself, Hiram Wells and D. G. Littlefield), of Northampton, Mass., for an Improvement in Sewing Machines:

I claim, first, Operating a four-motion feed by means of a loose and a friction joint, substantially in the manner and for the purpose specified.

Second, I claim the revolving take-up, L, operating as set forth, for the purpose of governing the needle thread, as described.

Third, I claim the hook, T, or other equivalent device, for the purpose of keeping the shuttle thread tight, as described, when used in combination with a needle driven by a crank, as set forth.

Fourth, And, in combination with a needle driveu by a crank, I claim the rib, h2, in the shuttle race, with its notch or shoulder, 3, for the purpose of preventing the loop from being carried forward by the shuttle, as set forth.

27,595.—E. A. Leland (assignor to himself and Stephenson & Tompkins), of Jacksonville, Ill., for an Improvement in Gas Stoves:

I claim the combination with the base, B, and cylinder, A, of the gas box, a b c, and supply pipe, E, as shown and described, so that the device may be used as a cooking or air-heating stove at pleasure, as set forth.

27,596.—Daniel Minthon (assignor to John A. Green), of Beverly, Mass., for an Improvement in Enema Syringes:

I claim the hollow valve constructed with a hemispherical end, and having apertures or throats formed in its sides for the fluid to pass through, substantially as set forth.

27,597.—Wm. H. Noyes (assignor to Gideon S. Palmer), of Gardiner, Maine, for an Improved Machine for Reducing Wood to Slivers:

I claim the combination, in a sliding stock. O, of the cutter, B, and splitter, C, made up of a series of knives in rows, so arranged that the posterior rows shall score the spaces left by the foremost row, substantially in the manner and for the pu pose specified.

27,598.—Elizabeth Keagg, of Mineral Point, Pa., administratrix of the estate of Samuel Keagg, deceased, late of Mineral Point, aforesaid, for an Improved Centering Chuck for Lathes:

I claim the sliding thimble or sleeve, D, fitted on the mandrel, C, connected with a loaded lever, E, and provided with a flaring or funnel-shaped outer end concentric with the mandrel and its center points, a, to form a centering chuck for a lathe, as set forth.

[The object of this invention is to obtain a simple attachment that may be applied to any ordinary turning lathe, and serve as an efficient centering device therefor to admit of the very ready and proper adjustment of articles in the latter.]

27,599.—Hiram H. Scoville and D. R. Fraser (assignors to themselves and P. W. Gates), of Chicago, Ill., for an Improvement in Quartz-crushers:

We claim crushing quartz by the combined agency of a swinging concave trough, B, and a rising and falling roller, D, substantially as set forth.

27,600.—C. Edward Sneider (assignor to Wm. Poultney), of Baltimore, Md., for an Improvement in Breech-loading Fire-arms:

I claim, first, The combination with the locking spring, D, of the wedge, e, the spring, f, and the set screw, h; the whole applied and operating substantially as and for the purpose specified.

Second, The lever, F, applied in combination with the trigger guard and with the pin, j, substantially as and for the purpose specified.

[This invention relates to the locking spring that is used to secure the breech and barrel together in condition for firing in some kinds of fire-arms. It consists, first, in a certain contrivance applied to such locking spring for the purpose of constituting a means of adjustment to make the said spring lock the breech joint tightly and compensate for wear of the said spring and the projections on the breech and barrel upon which the said spring acts. It consists, secondly, in certain improved means of raising the locking spring from the projection on the breech to unlock it and permit it to be opened for loading.]

25,601.—John Stowell (assignor to himself and Daniel F. White), of Charlestown, Mass., for an Improved Feed-water Regulator for Steam Boilers:

I claim the combination with the float, B, and steam box, A, of the slotted rod, b, arm, I, valve, C, vessel, G, lever, H, or its equivalent, and a loaded lever, J; the whole applied and operating substantially as described.

[The object of this invention is to control the action of the feed pump, either by shifting a belt which drives it from a loose to a fast pulley, and vice versa, on one of the shafts by which it is driven, or by operating on any other means of starting and stopping the pumps; and it consists in a certain means employed, in combination with a float, whereby this result is produced very promptly and certainly at the instant of the water in the boiler falling or rising to certain levels.]

25,602.—Stephen Ustick, of Philadelphia, Pa., assignor to himself and Julius A. Pease, of New York City, for an Improvement in Clay Pipe Machines:

I claim, first, Constructing the die piece, J, with perforations or openings, t, to be filled with cotton, wool or other equivalent substance, in combination with the band or wrapper Y, substantially as and for the purpose described.

Second, The grooves or channels, u, in the die pieces, G and H, to be filled with cotton or other suitable fibrous substance, or an equivalent, in combination with the sheaths, v and w, for the purpose of lubricating the lips of the dies, as described and shown.

Third, The combination of the springs with the core. M, for the pupose of holding the latter in its place during the formation of the bell end of the pipe, substantially as described.

Fourth, Combining and arranging the ring, c, with the mold, L, and core, M, substantially as and for the purposes set forth.

Fifth, The combination and arrangement of the bevel piecs, h, with the adjustable sliding frame, i, as and for the purposes described.

Sixth, The cut-off ring, O'', in combination with the shifting rod, O, or its equivalent, when arranged and operating in relation to the die, I, substantially in the manner and for the purposes set forth.

Seventh, The safety chamber, T, provided with the valve, U, arranged and operating in relation to the clay cylinder, B, substantially as and for the purpose set forth.

27,603.—C. J. Van Wyck (assignor to J. M. McCauley) of New York City, for an Improvement in Apparatuses for Distilling Oil from Coal:

I claim the construction of a retort, with a grate, c, in the bottom, and an inclined conductor, F, below such grate, as described, such conductor not being the outlet for the gaseous products of combustion of the fire by which the retort is heated.

[This invention consists in a certain construction of an apparatus for distilling coal or other substances with provision for the simultaneous extraction or solution and separation of oils or other products of two different qualities or specific gravities.]

27,604.—A. L. O. Wall, Geo. Roberts, and M. S. Carter, of Decatur, Ill., for an Improvement in Truck for Mole Plows:

We claim the combination or the crank axles, B B', link rods, G, traveling plate, F, and screwed spindle, C, substantially as described for the purposes set forth.

We also claim supporting the front axle in an adjustable bearing, when arranged and operating substantially as described for the purpose set forth.

27,605.—G. W. N. Yost (assignor to G. W. N. Yost & Co.), of Yellow Springs, Ohio, for an Improvement in Manufacture of Soap:

I claim the described new article of manufacture, namely, hard soap, prepared in a state of minute subdivision, instead of bars or cakes, substantially as set forth for the purposes described.

RE-ISSUES.

Louis Lefebore, of New Orleans, La., for an Improvement in Furnaces for Evaporating Sugar Juices. Patented Nov. 2, 1858; improvement added Jan. 24, 1860:

I claim, first, The hemispherical kettle, with alternate converging flutes, as and for the purpose described.

Second, In combination with the said kettle, fluting the surrounding brickwork, as described, so as to form an undulating flue around the kettle.

Third, Passing the connecting pipes of the kettles through the flues whereby they are utilized as evaporators, a s set forth.

Fourth, The inclined gutter, in combination with the gutters of the respective kettles, as described.

Fifth, The cylindrical flue enclosing the latter, connected with the exit flue, and communicating with the undulating flue at the top by graduated draft channels, substantially as set forth.

Wm. Mallerd, of Bridgeport, Conn., for an Improvement in Gas Regulators. Patented Oct. 8, 1858:

I claim arranging the graduated lever, 4, with the adjustable weight 17, in combination with the gasometer, 22, and the valve 10, in such a manner that by raising the gasometer the valve is closed, and the supply of gas is stopped, so that the pressure of the gas in the gasometer can be regulated by adjusting the weight, 17.

And in combination with the lever, gasometer, and reservoir, I claim admitting the gas direct against the gasometer by means of a small tube, 8, which is contracted towards its upper end, so that impurities carried up by the gas or any other deposit will fall outside of said tube without being able to interfere with the working part of the gas regulator.

I also claim arranging the stud, 21, in combination with the lever, 4, rod, 9, and valve 10, in such a manner that by depressing the stud, 21, the supply of gas may be ascertained, without raising the cover of the gas regulator.

ADDITIONAL IMPROVEMENT.

Alban Anderson, of Lancaster, Pa., for an Improved Governor for Steam Engines. Patented August 3, 1858:

I claim the change from a disk revolving on an extended arm to a disk revolving over the center of the moving frame, and the consequent change in the mode of generating and applying the resultant force which arises from the combined movements of the disk and frame; which change in the mode of production and application of the power, brings the machine within a smaller compass, gives it more simplicity of construction, renders it safe to increase the velocity of its movements, and thus increase its sensitiveness and power, and especially it renders the attraction of gravitation inoperative, so that it does not act at all as a disturbing power.

DESIGNS.

S. W. Gibbs (assignor to Ratbone & Co.), of Albany, N. Y., for a Design for the Plates of a Cook Stove.

S. W. Gibbs (assignor to Ransom & Co.), of Albany, N. Y., for a Design for the Tops and Bases of Stoves.

Francis Hovey, of New York City, for a Design for a Copying Press.

Samuel H. Ransom, of Albany, N. Y., for a Design for Stove Plates.

Notes & Queries

A. H., of Ill.—A solution of salt and alum is excellent for preserving the furs and skins of animals, but it will not keep them a sufficient length of time, as stuffed specimens of natural history. Such skins are treated with arsenical soap, which is a powerful antiseptic and preservative against the attacks of insects. We do not know where you can get Audubon's Natural History in monthly parts.

R. W., of Mass.—The whirling motion which water assumes in flowing from a hole in the bottom of a tub is not caused by electrical currents, as you suppose, for such currents do not move in spirals. This motion is caused by the resistance to the flow of water offered by the orifice, and it amounts to 27½ per cent of the power of the falling water. The co-efficient of discharge through an orifice is only 62½ per cent, therefore the resistance by the orifice to the free falling of the water communicates motion to the mass in the tub, and this must affect the motion of the effluent water. Water will fall down in a straight line, in vacuum, where its passage is unobstructed.

N. B. T., of Ohio.—Iron and steel are rendered a deep blue color, by first polishing the metal, then heating it up to 570° Fah., and cooling it at this point. The color of any polished piece of steel indicates its temper. A straw color, which is the temper of lancets, is obtained by heating the polished metal to 430° Fah. 450° Fah. is the heat for razors, and is a dark yellow. A light purple is obtained at 530° Fah., which is the temper for watch springs and swords. 290° Fah. is the temperheat for large saws and 570° Fah. for small ones.

E. C. Van D., of Miss.—Your subscription will expire with No. 10 of our next volume (in September). You ask a recipe for a good solder, and we will give you one. Take 1 lb. of pure Banca tin, and melt it, then add half a pound of clean lead, and when it is melted, stir the mixture gently with a stick or poker, and pour it out into solder strips. We gave Mr. J. Lathrop, of Middleton, Conn., this solder receipt some years ago, and he has informed us that it has been worth $50 to him. He has never failed to make good solder with it.

J. W. B., of Ala.—Professsor Faraday has certainly declared that the efficiency of a lightning conductor is due to the solid section of the metal. We know it has been generally supposed that most of the electricity in conductors is carried on the surface; but not "wholly" on the surface. It has always been held by us that the electric fluid permeated the whole conductor.

F. A. B., of Wis.—You can make the plate or cylinder of an electric machine with wood, covered with several coats of lac-varnish as a substitute for glass. You may also mount your plate on a metallic axis, and have perfect insulation, if supported on pillars of dry wood. You must insulate your rubbers on glass, if possible French glass is the best substance which you can use for the generating plate, and we must caution you not to expect much from the lac-covered plate as a substitute.

R. D. O. S., of Conn.—Small drills may be run at the rate of 3,000 revolutions per minutes, if kept cool with plenty of oil or water. A 54-inch circular saw may be driven at the speed of 4,500 feet per minute at the periphery. The proper speed for any saw depends upon the kind of wood that has to be cut. A good alloy for the lining of journal boxes is composed of copper, 24 ounces; tin, 24; antimony, 8. Melt all, and run into an ingot first; after which melt the ingot for the journal box, and pour it into the mold. In making alloys, melt the most fractious metals first, and the others according to their degree of fusibility.

M. F. V., of Vt.—The sketch which you have sent of an electro-magnetic engine represents one that is used as a toy somewhat extensively. It is of no practical value. If you desire to be a good engineer, we advise you to serve a full apprenticeship at the business, and commence first in a rather small country machine shop, where you will have an opportunity to try your skill upon all kinds of work. In large shops you would be too much confined to one specific kind of work, according to present custom.

W. H., of Md.—The recipe to which you refer for flavoring tobacco is to moisten it thoroughly with whiskey in which one pound of honey has been steeped to the gallon for two days, stirring it frequently during that period. This liquid imparts a pleasant flavor to the tobacco of cigars, and is used with success by some cigar manufacturers. Beeswax steeped in whiskey makes a good flavoring liquor for tobacco, also; and if the odor is desired to be hightened, add a little gum benzoin with the honey.

C. A. S., of Maine.—The conducting power of copper is 1.00; silver, .98; gold, 1.13; iron, 5.63; quicksilver, 50.00; zinc, 3.70. Silver is the best conductor of these metals; copper second, and mercury the worst—50 times. You will therefore perceive how unscientific it would be to employ cups containing mercury in any part of a line of telegraph. Pure rain-water is almost a non-conductor, in comparison with the metals. It is to copper as 40,653,723.00 to 1; salt water is about 14 times superior to fresh as a conductor.

J. G., of Ind.—It is true that there has been great difficulty in distinguishing among the lower organizations, plants from animals. Ehrenberg fell into the error, common to all the early microscopists, of believing many plants, in certain stages of their growth, to be animalcules, and with a strange want of the true philosophical spirit, he obstinately maintains his false position after all the other eminent miscroscopists of the world have given it up. Many of the continental microscopists, who are now some years behind the English in this department of science, still follow Ehrenberg; and we have now lying on our table a report of some French savans, which says that yeast consists of a plant and an animal, The part, however, of the yeast plant which, from its independent motion, is mistaken for an animal, is so exceedingly minute as to be barely visible under a microscope which represents the plant as large as a grain of wheat. These minute organisms, even if they were animals, would not produce a 1,000th part of the carbonic acid that is given off in fermentation. The first time that we saw them, though we had long been aware of the dispute in regard to their nature, it was almost impossible to believe that they were not animals, so life-like were their motions. But Hassall, Carpenter and Edwards have, we think, pretty fully settled the question; and there is hardly room to doubt that they are simply the plant in one stage of its growth.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, March 24, 1860:—

P. M., of Mass., $30; W. T., of N. Y., $30; J. A. McC., of Ky., $25; W. McA., of Mich., $30; A. B., of N. J., $30; W. J. A., of Tenn., $30; H. E. W., of N. Y., $30; J. M. F., of N. C., $55; H. K., of Ill., $30; N. H. G., of Conn., $30; H. A. H., of N. J., $25; C. F. B., of R. I., $90; H. W. W., of Mass., $25; R. J. G., of Ind., $30; N. S. G., of N. Y., $25; D. C. J., of N. Y., $30; B. I., of N. Y., $30; J. D. M., of N. Y., $30; J. H. D. & Co., of Texas, $30; C. & B., of Iowa, $25; P. G. McC., of Pa., $30; J. S., of N. Y., $25; J. S., of Ill., $30; W. S. M., of N. Y., $30; J. C., of Mass., $30; M. M., of Mo., $10; J. E. E., of Pa., $50; J. P. K., of Wis., $25; B. W. B., of Wis., $25; C. P. G., of Ill., $30 W. T., of Ind., $25; T. H. W., of Mass., $30; E. F. R., of N. Y., $30; R. F. O'B., of Mo., $25; T. P., of Ind., $55; W. J. T., of Cal., $30; E., & D., of Mass., $10; G. W. B., of Mass., $25; A. H., of Ky., $25; W. C., of Iowa, $30; C. W. B., of Mass., $55; R P. A., of N. Y., $30; D. & S., of N. Y., $25; J. P. F., of N. Y., $30; F. B. B., of N. Y., $250; M. C., of N. Y., $30; A. H. R., of Pa., $30; C. W., of Mass., $25; I. N. W., of Ill., $25; C. S. I. of Ind., $25; A. K., of Ill., $15; G. W. W., of Ind., $30; H. A. M., of Ill., $30; P. & H., of Canada, $465; J. P. H., of La., $20; A. W. W., of Conn., $30; W. F., of Mass., $60; P. J., of N. Y., $25; J. S. H., of Ky., $25; J. M. C., of S. C., $30; J. B., of Mass., $25; G. & B., of Conn., $12; P. V. W., of Mich., $30; B. & B., of Mass., $55; H. C., of N. Y., $35; J. H. L., of N., $25; G. W. T., of N. Y., $25; J. R. T., of L. I., $25; D. E., of Ill., $55; A. H., of Ohio, $30; W. B. of N. Y., $275; J. B. J., of L. I., $30; S. T. McC., of Ga. $25; L. B., of Ill., $30; W. H., of Ohio, $25; J. M., Jr., of N. Y., $70; T. J. M., of Pa., $15; C. R. S., of Vt., $25.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, March 24, 1860:—

A. S., of N. Y.; C. W., of Mass.; W. W. H., of N. Y.; H. K. of Ill.; W. I. T., of Texas; N. S. G., of N. Y.; G. & B., of Conn.; C. R. S., of Vt.; J. R. T., of L. I.; G. W. T., of N. Y.; J. S., of N. Y.; R. F. O'B., of Mo.; S. McC., of Ill.; I. N. W., of Ill.; T. J. M., of Ind.; G. W. T., of N. Y.; W. H., of Ohio; D. E., of Ill.; A. H., of Ky.; D. & S., of N. Y.; J. B., of Mass.; H. A. H., of N. J.; H. W. W., of Mass.; B. W. B., of Wis.; J. B. J., of N. Y.; L. K. S., of Conn. (2 cases); H. C., of N. Y.; S. T. S., of Mass.; J. H. L., of N. Y.; G. W. B., of Mass.; W. T., of Mich.

Literary Notice.

MUSPRATT'S CHEMISTRY OF ARTS AND MANUFACTURES. Published by C. B. Russell & Bro., Boston, and No. 290 Broadway, this city.

This, the most full and complete chemical work yet published, has now reached part XLV., which contains a beautiful steel plate of Professor Gregory, the author of one of the best elementary works on chemistry ever published in our country.