

Improved Platform Weighing Scale? of Messrs Strong & Ross, Vergennes, Vt. Patented Jan. 15, 1856. Also patented in Europe.

In this invention, the long under bracing and levers generally required for platform scales, are dispensed with, rendering the pit in the ground unnecessary. The construction is also greatly simplified and cheapened. At each end of the platform there is a shaft, A. which is provided with short cranks, C. B B are the beams of the platform which rest upon the ends of the cranks, C, and consequently the weight upon the platform tend to turn shaft A. levers, D, extend from the shafts, A, and terminate in a sling, E, which connects with the scale beam, F, so that when A turns, no matter how slight its movement, the short end of time the piston has got to the lower end of the scale beam E will be depressed; by putting on weights at the opposite end, the proper counterpoise will be obtained, and the correct weight of all articles placed on the platform indicated.

> Fig. 2 is an enlarged view of the connection between the ends of the platform beams, B, and cranks, C. The end of beam B rests upon balls which are contained in a double cup-shaped piece, G; the latter has a vertical projection, G', which rests upon a knife edge, con crank C. H are studs projecting from of any load, viz., to slide the poise, M, until information.

the side frames, I; the studs support shafts, the proper balance is obtained. L is a screw Our engravings illustrate the platform scales A, upon knife edges, a. The ends of these studs, H', are swiveled and turn on pivots, e, at right angles to the knife edges a; this arrangement permits the knife edges to adjust

themselves by partial rotation upon the swivels, H', and thus a perfect bearing is insured ; perfect accuracy in the fit and finish is also rendered unnecessary, expense reduced, &c. J are pins in frames, I, to prevent the ends of beams, B, from lifting out of place.

This method of connection gives free movement to the parts, in all directions, without friction, and yet keeps them all in proper place; the use of check rods is also unnecessary, for the platform does not rest rigidly upon the knife edges, and therefore there can be no direct shock or wear upon them.

When a very heavy load is placed upon the platform, its beams are likely to bend, and in common scales this bending pulls the levers, causing them to vibrate more than the true weight. The use of balls under the ends of the platform beams, totally obviates this objection.

The beam, F, has a sliding poise, K, of the vernier kind, graduated so that the fractions indicated by the beam may be easily read. This is very convenient in use, for only one notice. operation is necessary to determine the weight

weight for the finer divisions of fractionssuch as ounces, half ounces, &c.

We saw the accuracy of this invention put to a severe test not long since. The capacity of the scales on trial was six tuns, a load consisting of a tun and a half of iron was rolled upon one corner, and then changed from place to place; at all points in which it was placed, the scale exhibited the same weight with scarce a variation of half an ounce; a copper penny thrown upon the platform, when thus balanced, would destroy the poise, so accurate was the apparatus.

The principles of this weighing machine are adapted to the construction of scales of the largest and longest description. For railroad purposes it may be arranged in elongated form, extending several hundred feet, so as to weigh a number of cars, with their burdens, at once.

It is extremely portable, rests flat on the ground, may be taken up and put down any where, or packed in small compass for distant transportation. Its construction is quite simple, and its manufacture very economical. The invention contains other points of interest, but Our limited space prevents their special

Address theinventors, as above, for further

Convenient Railroad State,

masonry of the cylinder pedestal, lever wall, and engine house, and obtaining any desira-

ble length of stroke by merely adding to the

length of the cylinder and piston-rod, thereby

increasing the efficiency of the pumps, and

making smaller ones do the same work. The

second kind of engine is also inverted over

the shaft, and secured and attached to its

work in precisely the same way. It also uses

high pressure steam expansively; but its pe-

culiarity consists in there being a constant

vacuum above the piston, both during the de-

scent and ascent of the load. During a por-

tion of the descent the piston is nearly in

equilibrio, having a vacuum on both sides; that

under being a partial, and the one above be-

ing about 121-2 lb. per square inch, or the

common condenser vacuum. As the piston

and load continue to descend against this

vacuum, a self-acting valve shuts toward the

piston, and a full vacuum is acquired by the

cylinder, thus giving a tension or extra pres-

sure equal to 4 tuns on the 70-inch cylinder

at the moment when it was most required to

overcome the vis inertia. The steam valve is

then opened, and high steam admitted for the

up-stroke. There are only two double beat valves worked by the engine. The vacuum

valve is self-acting, oblong, and hinged, work-

ing on the upper port of the cylinder.

It seems of the ninety-one counties in Indiana the inhabitants of eighty can leave home in the morning, go to Indianopolis by railroad, attend to business there from two to eight hours, and return home the same evening.

Polarized Light.

In the apparatus room of the Smithsonian Institution, there is exhibited an immense instrument for showing the colors of polarized light. The arrangement of this instrument is the invention of Dr. Edmundson, of Baltimore. who has long been known to the scientific world. The instrument presents on a larger scale than perhaps they were ever before exhibited, the gorgeous colors of light.

Uur Mechapics,

The Worcester (Mass.) Telegraph says :-Without intending to disparage in the least the capitalists of Worcester, we may truly say that our city owes its growth and present business prosperity to the intelligence and activity of her mechanics. In saying this we cannot be accused of slighting those of our citizens who are enabled to live in well arranged mansions and to fare sumptuously every day, because most of these built the foundation of their present affluence in the machine shops of our city; most of them have in their day, toiled with their own hands, and

others now laboring in our busy mechanical undations in that country to a sirocco from hives of industry will accomplish; and hun- Africa. He asserted that this sirocco passed dreds of young men who are now employed at over the sea, causing rapid evaporation, and the bench or vise, will, at no distant day, become the proprietors of the shops where they are now employed, and reside, perhaps, in the mountains in heavy showers, melting the very mansions now occupied by their employers. Such is "manifest destiny," and such is down upon the plains, thus swelling the rivers the inevitable result of well-applied industry, to overflowing. and honest, upright conduct. So much for the mechanics of Worcester."

Cause of the Inundations in France. started their fortunes by the sweat of their ences, in France, a member read a paper, in 4 hours and 7 minutes.

own brow. What they have accomplished | which he attributed the recent destructive inthat it carried the moist clouds to France, where they were condensed and fell on the snows, and causing heavy torrents to flow

Good Speed.

On the 10th ult., the morning train bound east on the New York Central Railroad, ran At a late meeting of the Academy of Sci- from Buffalo to Syracuse, nearly 150 miles in

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Scientific American.



[Reported Officially for the Scientific American.] LIST OF PATENT CLAIMS Issued from the United States Patent Office FOR THE WEEK ENDING JULY 22, 1856.

FOR THE WEEK ENDING JULY 22. 1856. Re.ACTING WATER WHEEL-A. MUNICO, of Worces-ter, Mais: I do not claim the scroll, A, nor the concave buckets, d, when separatery considered, for they have been previouly used. But I claim: The scroll, A, having the guide or deflecting plates, a, attached to it, the wheel, B, provided with the concave buckets, d, and the plates, e, attached to its arms, c, the parts being arranged and combined, as shown, for the purpose specified.

purpose specined. TAPFING FLUIDS UNDER PRESSURE-J. P. S. Otter son, of Nashua, N. H.: I claim, itrst, the employment of a chamber, C', ofsufficient capacity to contain the cock, r, together with the necessary tools for inserting the same in any pipe or vessel containing water under pressure. Second, the employment of the rotary plate, C. or its equivalent, woorking in or forming part of the chamber, C, for the uses and purposes specified. I do not limit my claims to the particular form of plate stantially the same.

VALVE FOR TYPE CASTING MACHINES-Edward Pe-louze, Jr. of Philadelphia, Pa. : 1 am aware that a stop per operated by machinery has been used in connection with the nipple of type casting machines. This I do not claim. claim. l caim, in combination with the nipple, the self-acting valve and stopper, made and operating substantially in the manner and for the purpose set forth.

the manner and for the purpose set forth. SELF RAKER-S. G. Randall, of Rockford, Ill. : I claim the railway carriage. F, when constructed, arranged and operated in respect to the platform. B, substantially as and for the purpose set forth. Also, the described method of operating the rake, II, and giving it at once its traverse and its tilting actions, viz., by the combination with the bent rake shaft, G, and arm. h', of the endless belt. 1, and its eye, J, operating as and for the purpose set forth. Also, the combination of the traverse rake, H, the spring rods, k', and the pressing guard, M, substantially as and ior the purpose set forth.

REPEATING FIRE ARMS-C. S. Pettengill, of New Haven, Conn. 1 ciaim, first, in combination with the ar-rangement of the main spring, to work on a pivot, s as to be capable of relief 'from all strain, except at the time of firing, t claim the application to the said spring, of a spring, F, operating upon it as described, to draw back and effect the cocking of the hammer, substantially as descrited.

and effect the cocking of the hammer, substantially as described. Second, in combination with the arrangement of the main apring to work on a pivot, as described, I claim the lever, II, and the cam, G', on the trigger, operating to gether and upon the main spring, sub-tantially as speci-hed, to strain as ad develops the elasticity of the main spring by the actor drawing the trigger to fire. Thicd, the serce, D, as arranged, entirely disconnected from the trigger and operated upon to set free the tum-bler, by mans of a can, C', on the trigger, substantially as described.

as described. Fourth, the attachment of the dog which operates in the raichetnytches, as, on the cy inder, to the same lev-er, it, by which the strain is thrown on the main sprinx. Fitch, the arrangement of the slot, p, in the recoil shield and the house, as, at the end of the ratchet notches on the cylinder, whereby the cylinder is locked so as to te incapable or rotation, in e ther direction, before the ham-mer is let off, substantially as set forth.

GLASS FURNACES-Samuel Richards, of Philadelphia Pa. 1 claim. first, the employment of a series of interior tubes, h h, arranged and operating a det ribed. Se and the employment in c nection with said tubes of vibrating or rotating agilators, J J

SCAFFOLD FOR SHINGLING ROOTS-J. W. Rodefer, cf Abingdon, Va.: I claim censt ucting the scaffold as shown, viz.. having the platform, A. hinged to the sleepers or string pieces, b, and having segment traces. B. attached to the sleeper or string pieces: the braces having ho es, d. made through them and passing through the bars, a, of the platform, whereasy the platform, by means of pins passing through the holes, d, in the braces, may always be adjucted in a holes; d, in the braces, may always or rinclination of the roof may be.

LIQUID'USED AS A MATIVE POWER-John C. Fr Salom), of Galtimore. Md. I claimthe sulphoil carbon-is acid liquid, prepared in the manner substantially as described, and in combination wish carbonic acid gener-ated in any known wy, or other equivalent liquifiable gas as a motive power.

RUDING $S \wedge p p p s - J$. C. fr. Salomon and G. E. Cooper of saltimore, Md.: We claim the movable volute spring seat chair, c. with its guiding rods, d d, and the guides, e e. in which the same is moved on the upper sides of the pads, in combination with the supporting rod, f, attached to the under side of the metallic riding seat, in the man-ner and for the purpose set orth.

FRICTION MATCH MACHTYE.—C. D. Smith and H. Patt-raon, of Baldwinsville, Mass.: Wedo not claim any particular form or arrangement of parts or number of splints male or carried at once. But, first, we claim the table, B, with its plate, G, and pieces, i I or their equivalents, to carry the splints from the dies and piace them in the rack, substantially as set forth.

from the dues an appace \dots set forth. Second, we claim the poculiar construction of the rack pieces, L L, to facilitate their receiving the splints, and for the better control of them, as described.

PENDULUM PUMPS FOR SHIPS-J. Stever, of Bristol. Conn,: I claim attaching a series of pumps, C, to a hol-low shaft. A, which is allowed to turn freely in its bear-ing, and connecting the weighted bars, J J, to the plung-er rodt. F, of the pumps by means of the grared sectors, 11 I, and levers, G, substantially as shown for the purpose spacified

specified.

SEWING MACHINES—A. Swingle, of Boston, Mass. as-signow to Elmer Townsend : I claim the employment of a hook in connection with the looping needle, and ar-ranging aid hook so that it shall pass into the cloth or matrial from the same side of it, on which the looping needle weekle weighted needle works or is situated.

TAIGGER PROFECTOR FOR FIRE ARMS-B. H. Wes-terhood, of Philadelphia. Pa. : I claim the employmen: in connection with fire arms, of a protector, J, which can b. locked so as to entirely enclose the trigger, and opened so as to expose the same, the said guard being ar-ranged and constructed substantially in the manner, and for the purpose set forth.

Riving Suppose set for the e^c Oneida Castle, N. Y. : I claim traversing the block to peoplit by means of devices, substantially as are deact-bed or their equivalents, so that the free will strike the pieces to be split, in the center successively to split them, substantially as set forth. I also claim the springs, X X, so applied as to yield when the free enters the block and react to close the split when the free is withdrawn, as described.

SAWING COOPER'S HOOPS-J. O. Woodward, of Taun-ton, Mass : I claim the new arrangement and operation of two circular saws for sawing irregular or crocked hoop poles, and the two shafts with the saws attached, at the inner ends thereof, being placed on an angle so that two edges of said saws run or operate near together, and the two opposite edges of said saws, will run or operate wide anart. apart.

RELIEVING STEAM SLIDE VALVES FROM PRESSURE. H. R. Worthington, of Brooklyn, N.Y., 1 claim trans-ferring steam pressure from the back of a steam slide valve to a fixed point, by mean sof a pislon and vibrating link, substantially as described and for the purposes set forth.

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VALVES OF ACCORDEONS.—C. M. Zimmerman, of Phil-adelphia, Pa.: I clrim the arrangement of the valves of accordeons in connection with sliding rollers, acted upon by the keys and regulated by stops, substantially in the manner set forth, for the purpose of producing from the actuating of one key, a variety of different tones by the simple pressure of the stops.

simple pressure of the stops. FOLDING GUIDES OF SEWING MACHINES-B. C. Boyes, (assignor to himself and H. Dercum.) of Philadelphia, Pa. 1 do not confine myself to the precise stape of the metal plate, B, asshown, to the precise strangement of the guard, b b', in respect to the plate, or to the humber of helical or slit rings shown. Nor do I claim a device for which patent was granted to Seth P. Chapin, and in which hems are formed on the edges of flexible materials, by means of folding guides made to turn the edge E0 deg, or more. But I claim the employment of one or more helical or slir logs for the purpose of forming plaits in the middle offabrics previous to the said hems or plaits being submit: et a to the action of the needle and thread of sewing ma-chines. PLANNE, MACUNE-Asabel Lockwood of Chicage

chines. PLANING MACHINE—Asahel Lockwood, of Chicago, II., assignor to L. B. Flanders, of Cleveland, O. : I claim the support, I I, with its circular dovetail grooves, a a or their equivalents attached to the bed piece, B, together with the vibrating table. K. turning upon the center pin or king bolt, L. and in combination therewith the adjust-able guide. M, and the sliding head, N. so adjusted and combined that a greater or less vibratory motion can be secured to the table. K. by means of the adjustable guide. M. by bringing it out of a parallelism with the ways, C C, and the bed, B, in the manner and for the purpse set forth.

SEWING PINS UPON PAPER, &c.-E. S. Wood/ord, of Winchester, Conn., assignor to J. R. Keeler, of New York City: I claim lhe roller or separator, marked B, made of india rubber or other leastic substance. Also, the turn table, marked C, for receiving and changing the pin from one place or position to another; or their mehanical equivalents. Labso claim the combinaton of one or a series of conequivalents. I also claim the combinaton of one or a series of con-ductors for supplying pins in any desirable rossition and a sewing machine of any suitable adaptai illiy ior sew-ing pins upon paper or any other material, but I do not make claim to either of these elements of the combina-tion by itself.

CHAIRS-James Fernald, of Boston, Mass.: I claim the oval back rest, D, or its equivalent, when made to rotate in manner and for the purpose essentially as described. CUTTER HEADS FOR PLANING MACHINES—Lewis M. Berry, of Boston, Mass. : I claim the application and use of the pieces, land m, substantially in the manner and for the purposes set forth.

ATTACHING SLEIGH BELLS TO STRAPS-Abner G Bevin, of Chatham, Conn. I claim making the bells b, without sharks, and having holes. e, made through them to receive the staples, b, which hass through the strap. A, and cover, c, substantially as described for the purpose set forth.

Door KNOBS-Jeremy W. Bliss, of Hartford, Conn. ; I claim the employment of the intermediate piece, c, hav-ing a cut or rucked surface corresponding to and secured upon the spindle ty the set screw, d, at any desired point, in the manner described.

DRIVING CHOULDER SAWS-John Broughton, of Chi-cago, Ill.: 1 claim the sliding traine, C, placed and workingle tween the horizonia and segment guides or ways, be, in the frame, A, the traine, C, having the saw, E, placed within n and driven by the beits, f g, from the shaft J, a trainaged relatively with the frame, C, as shown and described, for the purpose specified.

and described, for the purpose specified. FIXED CARTRIDGES-George Buckel and Edward Dorsch, of Monroe, Alich. . we do not claim troady the use of two or more balls or a tail and shot in the same carridge. But we claim, first, the arrangement, side by side, in the same carridge, and with the traxes in the same cir-cie, of a number of balls of cylindro-conidal or other partly cylindrical form, said balls teing of a size to fit each to a separate groove of a circular grooved barrel, as de-wribed. Second, the employment of a single partition piece, B, to separate each and all of the talls, substantially as de-scribed. Descussion TAPE PRIMERS_James Chatlaway of

PERCUSSION TAPE PRIMERS—James Chattaway, of Springfield. Mass. ; I claim the improvement of substitut ng tor paper, metal, hermetically sealed and soldered of the continuous band so as to make it impervious to wa-ter, weather, or climate.

VIBRATORY STEAM ENGINES-Wm. Darker, Jr., of West Philadelphia, Ya. I do not ciaim the interposi-tion of water between the steam and the working parts of a steam engine. But I chaim the oscillating piston, A, of the form sut-stantially as specified, arranged within a steam box, B, which is provided with a partition, e, and with suitable packing, all substantially as described, and with a suita-ble arrangement of a valve or valves and pas-ages, the whole operating as set forth, in connection with suitable means of converting the oscillating movement of the pis-ton into a continuous rotary motion.

ARTIFICIAL HANDS AND ARMS-John S. Drake, or Boston, Muss.: 1 claim the ratchet, 3, and pawl. 4, in block be elbow joint, to sustain the tore arm at the proper position relatively with the stump, substantially as speci-

All of the stamp, substantially as speci-fied. I also claim the construction of the wrist joint, f. with the stots and stops for allowing the necessary motion, sut-stantially as specified. I also claim forming the knuckle joints and joints te-tween the different parts of the fingers and thumb with ratchets and pawis, so as to secure said joints at the point to which they may be moved in adjusting the fingers or thumb to any given article or purpose, substantially as specified. I also claim disengaging the pawls, n and o, from their respective ratchets, by means of the sliding cross bar, p. (actuated by competent power) rods, t, and cam pieces, D, substantially as specified. And in connection wich this arrangement I also claim the cross lever, 22, for actuating the bar and pawl, u, of the thumb, substantially as specified.

SELT-ACTING ELECTRIC TELEGRAPHS-Moses Farmer, of Salem, Mass. I do not claim arresting

Farmer, of Salem, Mass. I do not claim arresting the motion of the type wheel by a positive stop upon the key which interrupts the motion of the wheel whenever a key is depressed, and at a moment when the circuit is broken as in the telegraph of Siemens and Halske's. But i claim the method described of arresting the mo-tion of the type wheel by means of the alternately open and closed keys, in combination with the circuit wheel, constructed and operating in the manner substantially as set forth.

constructed and operating in the set forth. Second, I claim the combination of a straight key-board with a circuit wheel, when the two are connected to gether by means of the wires, F and G, wherely the place of making and breaking the circuit may be trans-ferred to the immediate vicinity of the key-board for the

place of making and the vicinity of the key-board for the purpose set forth. Thirdly, the method described of putting the two ma-chines in correspondence with each other, the current being turned out of the operating magnet, M, of the re-ceiving machine by means of the regulating key, R g, the arm, b', insulated spring c2, and their connections, operating in the manner substantially as set forth.

MOLDING AND PRESSING BUILDING BLOCKS FROM CLAY, A_{C} —Ambrose Foster, of New York City, and George M. Foster, of Fairhaven, Conn.: We do not claim a sliding hopper; nor do we claim a core placed within a press box for the purpose of molding hollow bricks, for these devices have been previously used. But we claim, first, the sliding hopper, M, plunger, I, and vibrating press box, J, when the above parts are moved or operated relatively with each other, as shown, for the purpose specified. Second, we claim operating the hopper, M, press box, J, and plunger, I, by means of the cam, H, on the shaft, G, the above parts leing constructed and arranged sub-stantially as shown and described.

GAS STOP COCES-James Humphrey, of Bovton, Mass. I claim the mercurial gas cock, constructed with the adjustable slotted cylinder, and the reservoir of mer-cury, arranged and operating substantially as described.

FEITING HAT BODIES—Lansing E. Hopkins, of Brook-lyn, N. Y.: I claim, first, the combination of the beaters, the revolving lelt, and the beater heads, operating sub-stantially as descriled. Second, the adjustability of the beater heads, in combi-nation with beaters having a positive motion, substantial-ly as shown.

Iy as shown. II ARVESTERS-Stephen Hunter, of Cortiandt, N. Y.: I do not claim the rotary cutters working within or through the slotted fingers, separately, or in themselves conside-ed, for they have been previously used. But I claim the employment or use of the rotating cut-ters, formed of circular plates, L, with teeth, e', at their peripheries, said teeth working through or between slot-ted ingers, c, on the plates, J J, when said plates are connected by a hinge or joint, b, and attached to the frame, A, as shown and described, for the purpose set forth.

FLY TRAP-Joseph Hyler, of Kent, Ind.: I claim a trap for catching files having an opake front and bottom, a b, inclined transparent back, d, small front decoy pas-sage, B, grooved tait board, C, and trough, D, substantial ly as set forth.

If as set forth. CUTTER STOCK FOR METAL PLANERS-Joshua Ma-son. of Paterson, N. J. 1 do not claim a swinging or ad-justable cutter stock. Irrespective of the arrangement of the same, as shown and described. But I claim the cutter stock, C, placed within a ring or band, B, which is suspended ty journals. a, within the frame or box, A, the stock being provided with a sliding or adjustalle plate, L, provided with a slot, g, and the stock adjusted or operated at the end of each stroke of the bed by the pins, f f, on the side of the bed, and the levers, G H 1 K, the above parts being orranged asshown and described, for the purpose specified.

SAWING STONE OR MARRIE—Matthew J. McEird, of Logansport, Ind.: I claim the comtination of the turn table, D, and the lateral moving platform or ted, Ewhen connected and arranged substantially as shown, so that when the turn table, D, is revolved, the stone or marble. when the turn table. D. is revolved, the stone of marole, F will be brought in oblique position under parallel mov-ing saws, h, while the platform or bed, F, when that is given a lateral transverse movement to the parallel posi-tion of screws, h, the stone or marble, F, is given a corres-ponding movement and brought to the position required, for the purposes set forth.

Corrow GINS-James B. Miles, of Chicot, Ark. : I claim the arrangement of the swing board, L. in combina-tion with the mechanism descrited, so that the varying size of the roll of cotton in the gin shall govern the feed and keep it uniform, or nearly so.

POLISHING MACHINE-John Moore, of Gardiner, Me. : I claim the general construction of the machine substan-tially as descriled, having a rubler. R, revolving by pow-er, and so constructed as to be readily applied whilst in motion to all parts of the work as required.

MARDLE SAWING MACHINE John M. Mott Jr., of Lansinglurgh. N. Y. : I dynot claim the manner of sus-pending and driving the saw gate, nor the method used for raising the same, nor the mode of supplying water to the saws, nor the use of adjustable guide bars, guide rod-and slides, for these have been long known and much used. Jut I claim the use of adjustable guide bars, guide rods, and slides on, the guide bars, or their equivalents, substan-tially as described, in combination with the slides carry-ing the saws, and for the purpose specified.

RE-ISSUES. RE-ISUES. METALLIC PEN.—A. W. Rapp, of Philadelphia, Pa.: Patented Jan. 6, 1852, 1 claim reducing or thim.ing the sides of the pen at a, Letwen the shoulder, A, and split, c, whereby the advantages stated are free y attained, and the metallic pin made to possess the qualities of the quili

RAKING AND LOADING HAY-Joseph Smith, of Con dit, Ohio. Patented June 3, 1856 : 1 claim the combina

ar, Onio. Patented June 3, 1356; 1 claim the combina tion of rake. S, with spring guard plate S', and fork, P the whole being arranged and operated in the manner and for the purpose set forth. ADDITIONAL IMPROVEMENT.

ADDITIONAL IMPROVEMENT. GAS HEATER-WW. F. Shaw, of Roston, Mass. Pat-ented Jan. 23. 1555 I do not claim the application of a loiling chamler, to a h-ating apparatus, lut as an im-provement on the preculiar gas heater, patented by me as specified I claim the arrangement therein in manner, as described, of a separate or bolling chamler, G, that is attached to or between the flue pipe. R. and the re-verberating dome or space, F, substantially as described, in order that the apparatus may be made to perform lunctions, as stated.

The Pelson Strychnine.

This drug, which has lately become so notorious for destroying the lives of human beings-as in the case of the infamous Dr. Palmer, recently executed in England-is a most deadly organic poison. A dog has been killed with the sixth part of a grain of it, and a human being with less. When introduced into the stomach it acts with fearful energy, causing lock-jaw immediately, violent spasms, and death in a few minutes. It is odorless, but so intensely bitter as to be perceptible to the taste when one part is diluted in a million parts of water. The composition of strychnia is carbon 44, hydrogen 24, oxygen 4, nitrogen 2 equivalents. It is colorless, and forms soluble crystalizable salts. It is an alkaline base, and is extracted principally from the Strychnos nux vomica. The tree from which it is obtained is of moderate size, and grows in several parts of the East Indies and the island of Ceylon. Its fruit are large orange-colored berries, the pulp of which is the favorite of many birds. The seeds contain the deadly poison. They are flat and round, about an inch in diameter, and gray in color. These seeds were used as a medicine, and as a po'son, by the Hindoos, long before they were known in Europe. Many of the natives of Hindostan often use it as people use opium. They commence with taking the eighth of a nut a day, and gradually increase their allowance to an entire nut, which would be about twenty grains. If they eat it directly before or after food, no unpleasant effects are produced; but if they neglect this precaution, spasms are the result.

The bark of the tree is also poisonous, and from its resemblance to Angustura or Cusparia bark, a tonic medicine imported from South America, caused a great deal of alarm and excitement in Germany, in the early part of this century, by being mixed with that bark. No sure antidote has yet been discovered for this poison, but some chemists have attained to great skill in detecting it, when administered as a poison. The following is Dr. Thompson's method of detecting the one-thousandth part of a grain :-

Having placed a drop of strong sulphuric acid on a piece of glass, add to it a small quantity of the suspected substance, and stir the whole together, so as to favor solution ; then sprinkle over the mixture a little powdered bichromate of potash, and gently move a glass rod through the fluid. If strychnia be present, a violet color of considerable beauty will be almostimmediately produced which, after a few minutes, will fade into a reddish yellow, but may be renewed by the addition of more bichromate, so long as any strychnia remains undestroyed in the mixture. In this way the thousandth part of a grain of that alkaloid may be made to yield a very decisive indication. The points to be noticed are, that sulphuric acid alone produces no apparent effect, and that the action begins at once round each particle of the bichromate, so that if the glass be held in a vertical position, streams of a violet colored fluid may be seen to flow from each particle; and if at this time the whole be slowly stirred, the entire bulk of the fuid will speedily assume the same characteristic tint.

Railroad Accident.-The Verdict.

The Coroner's Jury, in the case of the terrible railroad accident on the North Pennsylvania Railroad, mentioned by us last week, is, that "the collision was caused by the criminal negligence of Alfred Hoppel, the conductor of the excursion train, who carelessly and negligently run his train beyond the sideling at Edgehill."

This conductor is now in jail. The total number of the dead by this accident is 66; wounded. over a hundred. Will any person be punished for the criminal negligence which caused this accident? Let the people of Pennsylvania answer.

More American Printing Presses for England. The Illustrated London News announces that it has contracted for one of Hoe's printing presses, and the London Times has also ordered a very large one.

At the Complimentary Supper given by the proprietor of the New York Sun, a few years ago, to Col. Hoe, when the first large press was put up in the Sun Establishment, James, the Novelist, who was present, said, "Westward Hoe" had become a byeword, but 'Eastward Hoe" would soon supersede it. He said this in reference to a demand that would yet arise for such presses in Europe. His prediction is now fulfilling.

Recovery of the Lost Telegraph Cable.

About 50 miles of the above cable has been recovered by the Telegraph Co. They fitted out a brig from Cape Breton, with fifty men and a powerful capstan, and they have fished up the above length of it, leaving thirty miles lying in the ocean. With \$50,000 of insurance recdived on it in London, the Company have recovered nearly all they had paid out for it.

Bust of Columbus.

Mr. A. Herbemont, U. S. Consul at Genoa, Italy, possesses the only bust of Columbus now in the native city of the great discoverer. Mr. Herbemont found a bust in the Campidoglio, at Rome, which was the only one in I ay, except one at Naples. From the former he procured two casts, one of which was sent to the South Carolina College Library, at Columbia, and the other is in the U.S. Consulate Office at Genoa

Death of an Artist.

Thomas Doughty, a distinguished American landscape painter, died in this city on the 23rd inst. His last days were passed in comparative poverty, and he has left a destitute family.

A portion of the rock over which the water falls at the Falls of St. Anthony, gave way for a distance of about fourteen feet from the Minneapolis side, on the 6th July. The break does not diminish the hight of the fall any, but removes that portion of it some distance further up stream.