

AMERICAN ENGINEERS' ASSOCIATION.

[Reported expressly for the Scientific American.]

On Wednesday evening, Nov. 6th, the usual monthly meeting of this association was held at its room, No. 24 Cooper Institute, this city—Thomas B. Stillman, President, in the chair; Benjamin Garvey, Secretary.

The customary miscellaneous business having been transacted, the election of members was proceeded with: the names published in this journal, as those proposed at the last meeting, were taken up. A member present objecting to the name of one person upon that list, as being unfit to become a member of this society, it was resolved that each be singly ballotted for. This was done, and all, with one exception, were unanimously elected. The subjoined were proposed for the same object:—Robert Simpson and Abraham B. Davies.

Mr. Louis Koch, in behalf of the Committee on Science and New Inventions, gave the society, by request, a verbal report of their decisions in relation to the articles lately submitted to them. As this report was referred back for the purpose of having it properly presented in writing at a subsequent meeting, it will be better to defer its publication until that period.

The Board of Managers have in progress the revision of the constitution, by-laws, &c., but not being in such a state of forwardness as to admit of report at this time, it was resolved, in order to facilitate the accomplishment of this essential business, that, when the association adjourns, it do so till Wednesday evening next, that the above work might be acted upon, and finished, if possible.

At this period the society were pleased to inspect and listen to an explanation of the annexed

NEW INVENTION.

Oscillating Piston Engine.—Mr. Mark Runkel exhibited his new oscillating piston engine. This engine consists of a short cylinder, the central portion of which is occupied by a wheel performing the office of a piston, which makes about half a revolution in one direction, and then stops and turns back in the other direction—thus oscillating back and forth. The wheel is made with two wings fastened securely upon it, extending to the inner surface of the cylinder, and packed steam tight on their sides and ends. Two abutments are secured rigidly to the cylinder, and project inward to the wheel or piston, being packed at their ends so that the piston may revolve against them steam tight. Steam is admitted and discharged through ports which communicate with an ordinary steam chest, and are opened and closed by the common D-valve, or any valve of suitable form. The crank or arm on the end of the axle is made of a proper length in relation to the length of the crank on the flywheel shaft, to cause a revolution of the latter at each oscillation of the former. The pressure on the axle of the piston is balanced as it acts on both sides, thus reducing the friction to a low point and obviating all tendency of the piston to get out of place by wearing its bearings. The inventor, among other points, claims simplicity, durability, compactness and economy of space and great effective power. This engine dispenses with slides, and renders high-pressure velocities of piston practicable of attainment.

This invention was referred to the appropriate committee, who will duly report thereon.

After a few unimportant remarks on other subjects, the meeting adjourned.

A NOVEL YACHT.

The London *Illustrated Times* contains the engraving of a beautiful yacht in the form of a white swan. Its length is 17 feet 6 inches, its greatest breadth of beam 7 feet 6 inches, and its height from the keel to the top of the back, 7 feet 3 inches. Even in detail the proportions of a swan on a large scale are strictly adhered to. Its neck and head, beautifully carved, rise gracefully 16 feet above the water line. The wings of the bird are represented by the sails. The vessel is a perfect life-boat. Beside the wings, a propelling force is given by means of two powerful steel-webbed and feathering feet, placed in their natural position between the keels. The seats are covered with green morocco, and stuffed with granulated cork and cocoa-nut fiber. The ceiling is lined with a 3-inch air casing to exclude

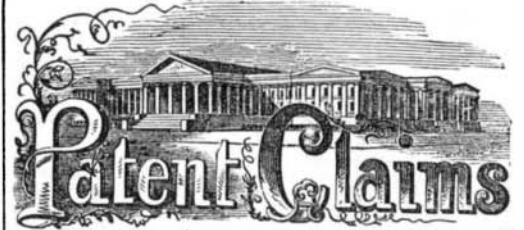
the heat. There are Venetian blinds at the sides, with oval plate glass windows, which can be lifted or lowered at pleasure. In the center is a table, and there are small apertures which open to the water underneath, and thus afford the opportunity of fishing while sitting at table. Any aquatic prey thus obtained may be dressed in a miltum in parvo cooking apparatus on board, the smoke from which is conveyed through the bird's neck and out at its nostrils, the woodwork being protected by a safe water casing round the flue. In the breast of the bird is a ladies' cabin, fitted up as a boudoir. The fittings also include a pumping apparatus, a fresh water tank, and lockers innumerable for the storing of every necessary. The whole interior is either covered with morocco or delicately painted. The steerer sits high in the tail of the bird, and, with halyards in hand, controls the vessel as easily as the driver does his horse. Behind the neck is an aperture large enough for a man to get out of when the sails require reefing or the anchor lowering. The Swan's register is about five tons, its internal capacity 500 cubic feet. When fully stored, and carrying 15 persons, its draft of water is only 17 inches.

POISON IN FINGER RINGS.—All visitors to Paris will have noticed the shops of *bric-à-brac*, or objects of curiosity and *vertu*, so numerous and tempting in that capital. At one of these establishments, in the Rue St. Honore, a gentleman was engaged a short time ago in examining an ancient ring for sale there, when he accidentally gave himself a slight scratch in the hand with a sharp point of it. He continued talking with the dealer for a short time, when he felt an indescribable numbness and torpor taking possession of him, and paralyzing all his faculties, and soon became so ill that the people in the shop hastened to call in a physician. The doctor immediately declared that the gentleman had been poisoned by some powerful mineral substance, applied strong antidotes, and was fortunate enough to relieve the symptoms which had caused so much alarm. The ring was then examined by the medical man, who had spent some time in Venice, and who found that this old jewel was what is there called a "death ring," a class of ornaments in frequent use in Italy during the seventeenth century, when the habit of poisoning was all but universal. Attached to the part of the ring intended to be worn inside the finger are two minute lion's claws, of the sharpest steel, and having clefts in them filled with a violent poison. In a ball or other crowded assembly, the wearer of this fatal ring, wishing to exercise revenge on any one present, would take the victim's hand, and when pressing it ever so gently the sharp claw would be sure to inflict a slight scratch on the skin, and the victim would be equally sure to be dead before the next morning. Notwithstanding the length of time which must have elapsed since the poison was secreted in the ring in question, it was still powerful enough to cause great danger, as has been seen, to the gentleman who had so unwarily touched it.

AMUSING EXPLOSION OF A BARREL.—The following funny incident occurred on the 30th ult. at the railroad engine house at Springfield, Mass. One of the engineers, not having the fear of the constable before his eyes, had wickedly purloined an oil barrel which he designed to fill with cider; but how to remove the smell and taste of the oil, to fit it for such a purpose, rather puzzled him. In this momentous emergency he took counsel from a friend, who mischievously advised him to fill it nearly full with unslacked lime and water. This was done, when lo!, the barrel was soon at high pressure and exploded, throwing the engineer some distance into the air, and landing him astride of an engine smoke stack with a hoop in each hand. No further harm resulted.

The Philadelphia papers employ glowing terms in describing a new steam fire engine built for that city by the Portland (Maine) Locomotive Company. It weighs only 3,100 lbs., has a steam cylinder of 8-inch bore and 9-inch stroke.

ANCIENT CHURNING PROCESS.—The mode of churning in Fayal, one of the Azores, is to tie the cream up in a goat skin, and kick it about till the butter comes.



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING NOVEMBER 6, 1860.

[Reported Officially for the Scientific American.]

. Pamphlets giving full particulars of the mode of applying for patents, size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

30,555.—F. C. Adams and Joseph Peckover, of Cincinnati, Ohio, for an Improved Hinge:

We claim forming a hinge by the combined use of the large cut under recess on one part, and the projection b c d, or its equivalent, on the other part, and the molten zinc, or other easily fused metal, run in between them, substantially as and for the purpose set forth.

30,556.—C. E. Atherton, of Paterson, N. J., for an Improvement in Vapor Lamps:

I claim the combination and arrangement of the gas receiver, the self-acting valve or gage at the top of the generating tube, with the use of the metal rod and beveled pin, substantially as and for the purpose set forth.

30,557.—M. H. Bacon, of Mystic, Conn., for an Improvement in Machines for Dressing Stone:

I claim, first, The arrangement of the vibrating frame, G, with the lever, M, and the spring, K, for increasing the force of the blows at pleasure beyond that due to gravity alone.

Second, The employment of the checking spring, J, in combination with the vibrating frame, G, and lever, M, or their equivalents substantially as described, for diminishing the force of the blows at pleasure below that due to gravity.

Third, The arrangement of the recess, r, in the vibrating frame, G, the stop, B, on the sliding frame, C, and of the gearing, H and O, substantially as and for the purpose set forth.

Fourth, The employment of the sieves, T, operated by the screws U, or their equivalents, for adjusting the height of the cutters, S, in the cutter frame, F, in combination with the means for adjusting the inclination of the several cutters, S, in their respective sleeves, T, substantially as set forth.

30,558.—Wm. B. Barnes, of Forestville, Conn., for an Improvement in Clocks:

I claim the arrangement of the verge, g, detent, k, triangular shaped escape wheel tooth, o, in combination with a pendulum, n, substantially as and for the purpose described.

I claim, in combination with the arrangement above described, the arrangement of the pointer spindles and gearing attached thereto, substantially as and for the purpose described.

30,559.—John Beaumont, of Hartford, Conn., for an Improvement in Coffee-pots:

I claim the arrangement, in the manner and for the purpose specified, of the coffee-pot, a, provided with the liquid joint, f, the receptacle, b, having the perforated bottom, c, and perforated cover, e, and the condenser, d, provided with the cavity, i.

30,560.—N. Brittan, of Lockport, N. Y., for an Improvement in Lightning Rods:

I claim the construction of lightning conductors with parallel continuous strips or tubes of metal held at a distance apart and united by intervening washers or blocks, substantially in the manner and for the purposes specified.

30,651.—M. A. Butler, of Mariana, Florida, for an Improvement in Compositions for Soap:

I claim the described soap composed of the ingredients specified, and mixed together in about the proportion described, for the purposes set forth.

[The object of this invention is to produce a cheap soap which can be used in water containing mineral or metallic substances equally well as in ordinary soft or pure water.]

30,562.—C. F. Chambers, of Chambersburg, Ind., for an Improved Washing Machine:

I claim the combination of upper rubber, D, adapted to reciprocate on stationary ways, C, and the swinging lower rubber or board, E, adapted to be elevated from the tub, and to hold the clothes stationary for the upper rubber to act upon, or to be depressed at will, as and for the objects set forth.

30,563.—A. B. Colton, of Athens, Ga., for an Improved Spike for Threshing Machines:

I claim the combination of reversible spike, A A s, flanged and shouldered plates or rings, C a g h d, and screw bolts B, substantially in the manner and for the purposes described.

30,564.—James Davies, of Schnylkill Haven, Pa., for an Improvement in Canal and River Locks:

I claim, in combination with a lock-chamber, a passage or passages through which the water may flow back into the upper level, when a boat enters the lock from above, and through which water may flow into the chamber from the level below when the boat is leaving the lock, substantially in the manner and for the purpose set forth.

30,565.—S. N. Davies, of Muskegon, Mich., for an Improved Clothes' Sprinkler:

I claim the combination with a suitable bellows of the syphon tube, C, and the barrel, G, with its perforated end orifice, b, and valve, H, arranged and operating as and for the purposes set forth.

30,566.—John Davis, of Elmira, N. Y., for an Improvement in Apparatus for Detaching Horses from Carriages:

I claim the arrangement of the whistle-tree as constructed with the thills provided with the hooks, H H, and springs, I I, substantially as and for the purpose specified.

30,567.—A. K. Eaton, of New York City, for an Improved Gold Amalgamator:

I claim, first, The use of an inferior amalgamated surface, substantially as specified, in contact with the superior surface of a body of mercury.

Second, I claim the combination of the rotary disk, with the hollow shaft and receiving bowl, substantially as described.

30,568.—M. W. Dillingham, of Charlestown, Mass., for an Improvement in Vapor Lamps:

I claim the application of the valve, O, and cup, E, to the wick tube, in such manner as to enable both valve and cup to turn together on the wick tube, and with respect to the lateral discharging orifice thereof, as described.

Also, The arrangement and combination of the cup or thimble, E,

the gas heater, C, the wick tube, A, and its burner, the whole being as specified.

Also, The arrangement of the conduits or passages leading from the wick tube through the cap, B, the heater, C, and into the burner D, as described.

Also, The arrangement of the jet holes, ff, of the elit, e, of the burner, viz., at the termini of such slit, as and for the purpose described.

30,569.—Moses Dupuy, of Pittsburg, Pa., for an Improvement in Making Hoes:

I claim the combining and fastening of a steel or iron blade and a malleable wrought or cast iron tang, A, by means of the groove or furrow, b, and the flanges, c and e, and the rivet, k, substantially in the manner set forth and described.

30,570.—Sylvander Ellis, of New Britain, Conn., for an Improvement in Washing Machines:

I claim the combination of the conical cylinder, g, with the revolving plate, d, arranged within a tub, a, having the adjustable features described, arranged and operating together for the purpose specified.

30,571.—Jacob Friel, of Philadelphia, Pa., for an Improved Shutter Fastener:

I claim the bar, F, and the spring, d, with its projection, e, in combination with the plates, C and D, the latter having the recesses, h and f, and the projections, l and j, or their equivalents, and the whole being arranged and applied to the shutters as and for the purpose set forth.

30,572.—Franklin Getz, of Amherst, N. Y., for an Improvement in Drivers' Seats for Mowing and Reaping Machines:

I claim, first, Suspending the seat board, E, from the spring, F, by means of the swivel strap, G, and rod, G', the seat board having a free movement upon the bolt, J, so as to allow of a lateral swinging movement of the seat board, for the purpose and substantially as described.

Second, I claim the post, M, in combination with the "Kirby machine," for the purpose of supporting the rear end of the seat board in order to locate the driver's seat in front for reaping, substantially as described.

30,573.—A. J. Hardin, of Shelby, N. C., for an Improvement in Machines for Cleaning Cotton Seed:

I claim, first, The arrangement of the cylinder, E, provided with arms or pins, d, d', with the cylinder, C, composed of a series of square bars, c c', placed in the position represented, and with the external gauze casing, D, the same being used and operating in the manner and for the purpose specified.

Second, In combination with the subject of the first claim, I claim the inclined plane, J, spout, L, and revolving screen, I, when used as and for the purpose specified.

30,574.—G. C. Hinman, of Portageville, N. Y., for an Improvement in the Seats of Water Closets:

I claim the combination of the cord, G, pulley, D, and weight, E, with the seat, B, for the purpose of making the seat, B, self-elevating, substantially as described.

30,575.—J. M. Hunter, of New York City, for an Improvement in Apparatuses for Trying On:

I claim, first, The described arrangement and combination of the press and boiler, the former being placed within the latter, for the purpose of rendering oils or other fatty matters by thoroughly pressing the scraps while the same are exposed to the boiler heat or steam heat, substantially in the manner and for the purposes described.

Second, I claim the use of the crib for preventing the scraps from coming in contact with the boiler, substantially in the manner described.

Third, I claim the employment of the pressure heads and right and left hand screws, by means of which the oil may be separated from the scraps, substantially in the manner described.

30,576.—Warren Iddings, of Warren, Ohio, for an Improvement in Embalming Dead Bodies:

I claim the described process or mode of embalming the same, consisting of the three steps combined, the different compositions of matter being employed substantially in the manner and for the purposes set forth.

30,577.—J. L. Jones, of St. Louis, Mo., for an Improvement in Truss Bridges:

I claim, first, The flexible curved spine in the lower chord, when said spine is formed of broad flat plates, c c' b' b'', with lateral applied offsets or lugs, c'' b'', formed on their ends, said offsets pulling against one another and allowing a free independent movement of each plate in the path of a vertical circle, substantially as set forth.

Second, The combination of the convex or arched surface of blocks, d k, a d', c', with similarly convex or concave flanges, l, at the ends of the tubular braces, o and z, substantially as and for the purposes set forth.

Third, The metallic clamps or recessed blocks, d e d' e', for retaining and holding together the tension joints of the upper and lower chords or stringers, in the manner and for the purposes set forth.

Fourth, The grooved shoe, W, which connects and ties the lower chords and floor beams together, substantially as and for the purposes set forth.

Fifth, The septum or longitudinal partition, 2, and transverse tubes, B, combined within the bore of the tubular brace, o, in the manner and for the purposes set forth.

Sixth, The shoe, j, as constructed and combined with the lower end of the tubular diagonal brace and the extreme end, a a, of the lower chord, substantially as and for the purposes set forth.

30,578.—Henry Johnson, of Washington, D. C., for an Improvement in Vapor Burners:

I claim so placing the reservoir or fountain in relation to the burner that the lowest point of the fluid shall be at or about the level of the burner, and the highest point below the level of the top of the generator or gas pipes, bc, in the manner and for the purposes set forth.

I claim covering the upper ends of the gas pipes, b and c, by the screw cap, e', constructed as set forth, so as to embrace the open ends of these pipes in one open common cavity in the cap and screw over them, in the manner set forth.

I claim the elevated conductor, n n', rising above the highest level of the fluid in the fountain, as set forth.

30,579.—Wm. Kearney, of Union, N. J., for an Improvement in Wrenches:

I claim the jointed jaw, C D, with its rule joint foot, when combined with the spring, E, and the inclined plane, f, and constructed substantially in the manner and for the purpose set forth.

30,580.—Wm. S. Kirkham, of Brantford, Conn., for an Improvement in Locks:

I claim the arrangement of the sliding yoke, F, lever, G, spring, H, and slide or latch, C, essentially as and for the purpose set forth.

[The object of this invention is to obtain an equal action of the knob hub upon the slide of a lock when the knob is turned in either direction; that is to say, having the parts which connect the knob with the slide or latch so arranged that the slide will be actuated or drawn back within the lock case with the same facility and application as when the knob is turned in either direction.]

30,581.—Wm. S. Kirkham, of Brantford, Conn., for an Improved Blind Fastener:

I claim the tube or socket, B, having the bar, D, and spring, f, secured within it and provided with the lapped flanges, c c', in connection with the plate, G, provided with lugs or projections, e, and screws, d, all being arranged essentially as and for the purpose set forth.

[This invention relates to an improvement in the ordinary shutter and blind catches or fastenings which are employed for securing

shutters and blinds in both an open and closed state. The object of the invention is to facilitate the application of the fastening to the shutter or blind, provision being made for its adaptation to the varying thicknesses of shutters and blinds, as also to insure a firm and durable connection of the fastening thereto.]

30,582.—John Lewis, of Elizabeth, N. J., for an Improvement in Attaching Sails to Ships' Yards:

I claim, first, The clamps, c, c', fitted and acting substantially as set forth, to retain the sail to their yard or spar, or allow of its being disconnected, as specified.

Second, I claim the ear ring, formed of the chain, f, fork, h, and screw, m, to firmly clamp or grasp the yard or spar, regardless of the size, as set forth.

Third, I claim the hoop, ff', in combination with the ear ring, in the manner and for the purposes specified.

30,583.—Levi Loring, of Saco, Maine, for an Improved Milking Stool:

I claim the application to a milking stool of the platform or stand provided with a spring for fastening when closed, constructed as described and for the purpose specified.

30,584.—Wm. H. Livingston, of New York City, for an Improved Device for Sustaining Trees:

I claim the segmental tree supporter, b, constructed and operating substantially as specified.

I also claim the hook, e, formed with the loop, B, by which said hook and the wire or brace connected thereto may be lifted on to or off a limb or branch, for the purposes and as set forth.

30,585.—W. W. Paddock, of Cincinnati, Ohio, for an Improvement in Sealing Preserve Cans:

I claim the combination of the automatic valve, C, exhaust chamber, D, and permanent sealing cup, E, constructed and arranged to operate substantially as and for the purposes set forth.

30,586.—J. E. Parker, of West Meriden, Conn., for an Improved Door Lock:

I claim the described mode of constructing a reversible door lock—that is to say, by so making the head of the latch bolt in a separate piece and connecting it with the follower, that the said head may be taken out and reversed at pleasure without disturbing any of the other parts, substantially as set forth.

30,587.—Henry Pennie, of Buffalo, N. Y., for an Improved Stop Hinge:

I claim the combination of the compound hinge, J, with an ordinary hinge, D, both being arranged and operating substantially in the manner and for the purpose set forth.

[The nature of this invention consists in the combination of a compound hinge for carriage and other doors, with an ordinary hinge; thereby constituting a stop hinge, which prevents the door from being opened beyond a certain angle.]

30,588.—J. M. Pitts, of Sumter, S. C., for an Improvement in Apparatuses for Fractured Limbs:

I claim one or two pairs of staples secured to the bed frame—one pair at the sides of the mattress and the other pair at the sides of the head pillow—in combination with straps and a shoe or gaiter, or its equivalent, fastened to an adjustable foot-board, and with bandages for securing the upper part of the patient's body to the said staples, substantially as set forth.

Second, In combination with the staples, straps, shoe and bandages, making the mattress of a bed for the treatment of invalids in four parts, when the two central parts are secured to two slides, movable in lateral ways in the bed frame and over an evacuation aperture, substantially as and for the purpose set forth.

30,589.—H. H. Robertson, of C. G. Carr, of Kingston, Missouri, for an Improvement in Cultivators:

I claim the arrangement for united operation, in a cultivator of two L-shaped G, or scraper, N, a series of cross bars, L L', a series of adjustable buttons, I, perforated loops, E, and stop pins, I, substantially in the manner and for the purposes described.

30,590.—Joseph Rolls, of New York City, for an Improved Carpet Duster:

I claim the combination of the beaters, A A', brushes, G G', and take-up roller, F, substantially as described, so that, while the carpet is drawn through between the beaters and the brushes, both sides of the same are first exposed to the action of the beaters and afterwards to the action of the brushes, and a thorough dusting of the carpet is effected.

[The object of this invention is to effect the dusting of a carpet simultaneously on both sides by exposing it to the action of alternately acting rotary hinged beaters, and of alternately acting revolving brushes, in such a manner that both sides of the carpets are first well beaten and afterwards brushed off perfectly clean, each of the beaters and of the brushes acting as a point of resistance during the action of the other beaters or brushes.]

30,591.—J. G. Ross, of New York City, for an Improved Arrangement of Gates for Directing the Flow of Water Upon Tide Wheels:

I claim the arrangement of the gates, b d d', for directing the flow of water, in combination with the swinging gates, h h' and i i', for regulating the filling or emptying of the pond, and with the gates, ff', to regulate the supply to the wheel, in the manner and for the purpose specified.

30,592.—C. A. Shaw, of Biddeford, Maine, for an Improved Pie Crimper:

I claim the knife and wheel, when combined to crimp and trim a pie at one operation, constructed substantially in the manner set forth and specified.

30,593.—Louis Simonet, of New York City, for an Improvement in Waterproof Fabrics:

I claim the varnished waterproof cloth, as described.

30,594.—Thomas Slaight, of Newark, N. J., for an Improvement in Door Latches:

I claim, first, The segment, F, attached to the end piece, d, of the case, A, and connected to the slide, B, essentially as and for the purpose set forth.

Second, Having the end, a, of the slide, B, fitted in the segment, F, so as to prevent any play of the latch consequent on a shrinking of the door or jamb, as described.

[The object of this invention is to facilitate the operation of the slide so that the same may, when its outer end comes in contact with the nosing in shutting the door, be readily forced back into its case; due provision being also made for the shrinking of the door and jamb, so that all play of the former will be avoided in consequence of any shrinkage of the parts aforesaid.]

30,595.—W. G. Smith, of Elizabethport, N. J., for an Improvement in the Cutting Apparatus of Harvesters:

I claim the slotted bar, B, and adjustable securing blocks, C, in combination with the securing wedge or key, D, and the remarkable sections, A, with the tail pieces, a, the whole constructed and operating substantially as described, for the purpose set forth.

30,596.—G. D. Trumpore, of Newark, N. J., for an Improved Clothes' Squeezer:

I claim the arrangement of the tub, B, platform, C, press tub, E, perforated in its circumference with holes, movable bar, D, screw, H, plungers, K, straps, F E, elbow rods, r, and elbow screw, p, when used as and for the purposes specified.

30,597.—T. H. Willson and D. T. Willson, of Harrisburg, Pa., far an Improvement in Machines for Cutting Hay, &c.:

We claim, first, Casting a cutter head composed of two sets of radial arms united by a cleave, all in one piece, and around a weight iron axle, substantially as described, for the purpose set forth.

Second, The combination of the cutter head with adjustable knees when arranged on the face of both sets of arms, substantially as described, for the purpose set forth.

Third, Constructing the lower feed roller with transverse and longitudinal ribs upon its surface, for the purpose set forth.

Fourth, Attaching the stud carrying the intermediate pinion, K, to the side plate, G, substantially in the manner described, for the purpose set forth.

Fifth, Constructing the guides of the feed roller shaft with a curved slot, as described, in connection with the stud plate, arranged as described.

Sixth, Arranging the intermediate double pinion, q, on an adjustable stud, and supporting said stud by means of a radius bar, W, pivoted to the shaft of the feed roller, substantially as described, for the purpose set forth.

Seventh, The combination of the slotted stud plate with the double pinion, arranged as described, for the purpose set forth.

30,598.—J. S. Wheat, of Wheeling, Va., for an Improvement in Apparatus for Tanning:

I claim, first, The relative arrangement of the suction pipes, A A', force pumps, C, supply pipes, D D', communication pipes, D2 D3 D4 F F1 F2 F3, exit pipes, D5 D6 D7 D8 D9 D10, and emptying pipes, G1 G2 G3 G4, in combination with reservoirs, E E1 E2 E3 E4 E5, valves, X1 X2 X3 X4, and weighted valve, Y, for the double purpose, of effecting a complete circulation of the tanning liquid and pressure upon the hides through all the vats, and allowing any of the vats to be shut off from the circulation going on through the other vats and to be emptied if desired, substantially as set forth.

Second, The frames H, in the vats, in combination with two eccentrics, I I, and connecting rods, L L1 L2 L3 L4 L5, so arranged that all of the frames may vibrate simultaneously, or any one of them remain at rest, if desired, while the others vibrate, substantially as set forth.

30,599.—D. C. Wilkinson, of Sidney, Ohio, for an Improved Flood Fence:

I claim the combination of the alternate zigzag panels, B C and B', gudgeons, J, oblong bearings, F, and cylindrical bearings, F', the said parts being so constructed and arranged as to operate in connection, substantially in the manner and for the purposes set forth.

30,600.—David Wadsworth, Jr., of Nashua, N. H., for an Improved Gate Hinge:

I claim the described combination and arrangement of the fastening plates, A B, the cam, C, the stud, D, the rod, E, and the spring, G, the whole constituting an improved gate hinge, as explained.

I also claim the combination and arrangement of the groove, F, with the said fastening plates, the cam, stud, rod and spring applied and made to operate together, substantially as specified.

30,601.—L. B. Wright, of New York City, for an Improvement in Spinal Braces:

I claim, first, The combination of the spring cleps, A and B, with the head rest, composed of the parts, E F and O, when the same shall be combined and operated as set forth, and for the purpose specified.

Second, In combination with the same, the plates, Q and R, arranged and operated as set forth and for the purpose described.

30,602.—John Adams, of Dalston, England, assignor to Thomas Poulney, of Baltimore, Md., for an Improvement in Revolver Fire-arms. Patented in England, Nov. 7, 1857:

I claim, first, The construction of the body of a revolver of two pieces of the form described, fitted and secured together substantially as specified.

Second, The link, L, constructed and applied in combination with the trigger, and operating in combination with the notch, o, of the hammer, substantially as set forth.

Third, In combination with the link, L, applied as described, I claim the arrangement of the cocking dog and the sear, substantially as described.

[This invention consists in a certain improved construction of the body of the arm, whereby great strength is attained and facility is afforded for slotting and drilling out for the reception of the lock and rammer. It also consists in a certain improved construction of, and mode of applying and combining the several parts of the lock for the purpose of enabling the hammer to be raised and let fall by one pull of the trigger for rapidly repeated firing, or to be cocked by hand and only let off by the trigger, as in the older kinds of fire-arms for firing more deliberately and with more accurate aim, the object of the improvement being more especially to bring the parts of the lock into such relation as to enable them to be brought within a parallel slot cut in the body of the arm, and to be inserted and taken out without difficulty.]

30,603.—Benjamin Douglas (assignor to W. & B. Douglas), of Middletown, Conn., for an Improvement in Pumps:

I claim the use of tube, a, for encasing the piston rod and preventing the escape of air through the stuffing box around the piston rod, when it also controls the upward movement of the check valve, substantially as set forth.

30,604.—Dyer Green (assignor to himself and J. H. W. Page), of Boston Mass., for an Improvement in Rice Hullers:

I claim my improved arrangement of the screw, C, the shaft, B, and the pivot and step, D, of the latter, with respect to the bottom, a, and the discharging valve or valves, F, of the mortar.

30,605.—Thomas King (assignor to I. A. Pulsipher), of Troy, N. Y., for an Improvement in Machines for Molding Candles:

I claim, first, The piston-like tip molds, D, made movable unequal distances on the sliding frame, F, and provided with the springs, v, or their equivalents, substantially as and for the purpose described.

Second, The clamp or clamps, G, or any equivalent thereof, applied to the projecting portion of the piston expelled candles, and elevated by means of a hoisting apparatus combined with the stand of molds, for the purpose of drawing the candles out of the molds, substantially as described.

Third, The combination and arrangement of the movable arms, M, on the tip mold frame, E, with the seats, k, and guides, l, on the stand of molds, and the seats, m, on the sliding frames, H H', as and for the purpose set forth.

Fourth, The wick holders, P, constructed and arranged upon the stand of molds, in the manner described.

30,606.—Lewis Layman (assignor to E. P. Whitney), of Westfield, N. Y., for an Improvement in Locks:

I claim the employment or use of a hub, E, provided with four arms, f, projecting in pairs from opposite sides of it, in connection with a reversible slide, C, having the prongs of its yoke or fork provided with heads or cross pieces, e, e, the hub being applied to the yoke and all arranged essentially as and for the purpose set forth.

[This invention relates to an improvement in that class of locks and latches which are provided with reversible slides, for the purpose of adapting one and the same lock to either a right or left-hand door without inverting the former.]

30,607.—S. P. Patten, of New York City, assignor to himself and S. A. Nickerson, of Brooklyn, N. Y., for an Improvement in Capstan Windlasses:

I claim combining the capstan with the barrel of the windlass by means of a worm wheel, F, on the said barrel and an endless screw, L, on shaft, G, which has the capstan barrel, J, and pawl rim, H, fitted to it substantially as described, the so-fitted pawl rim being furnished with one or more movable stops, K, to permit the operation in either of the modes specified.

REVIEWS.

Solomon E. Bolles, of Mattapoisett, Mass., for an Improved Machine for Raising and Transporting Stones. Patented April 10, 1855:

I claim my improved stone carriage or arrangement of derrick, C, open bed frame, A, and two separate or disconnected wheel axles or journals, substantially as specified.

I also claim the combination and arrangement of the auxiliary windlass, K, its line, L, pawl, H, and ratchet, I (or mechanical equivalents thereof), with the main windlass, J, the crank shaft, L, and their working gears, a—the whole being to enable the machine to be operated substantially as specified.

EXTENSIONS.

Alfred Judson, of Rochester, N. Y., and T. D. Jackson, late of New York City, deceased (Elizabeth N. Jackson, administratrix), for a Bell Telegraph. Patent dated October 17, 1846. Re-issued December 26, 1848:

We claim, first, The combination of the bell, pulling wires, and machinery of the enunciator or telegraph as described, or equivalents thereto, with a face or register for indicating signals, whereby we are enabled to represent, when needed, a plurality of such signals at the same moment and have them all remain permanent and visible until the object for which they are made is answered.

Second, We claim the combination and arrangement of the drops with the tumbler, drop levers and slide, substantially in the manner and for the purpose set forth.

B. F. Palmer, of Philadelphia, Pa., for an Improvement in Artificial Legs. Patent dated November 4, 1846:

I claim the long tender, E, the spring, K, and cord, J, respectively combining and acting upon the parts, a b c and d, substantially in the manner and for the purpose set forth.

I also claim the improved manner of forming the knee joint, uniting the parts, a and b to each other by means of the hemispherical at the lower end of a, the partial concave beveled to a thin edge on the front side of the upper end of b, and the pivot, g, combined and operating substantially in the manner set forth, for the purpose of obviating noise or friction in working.

I also claim the improved manner of forming the ankle joint, uniting the parts, b and c to each other, the rear side of the lower end of b being beveled to a thin edge passing over and inclosing the heel portion of that part of c in the rear of the front pivot, h, and the front upper part of c, at n, being brought to a thin edge and overlapping the lower end of the front side of b, substantially as set forth—thus forming a pliable joint that will work without noise and preserve its contour in all positions.

THE RISE AND PROGRESS OF INVENTIONS



During the period of Fourteen Years which has elapsed since the business of procuring patents for inventors was commenced by MUNN & Co., in connection with the publication of this paper, the number of applications for patents in this country and abroad has yearly increased until the number of patents issued at the United States Patent Office last year (1859) amounted to 4,538; while the number granted in the year 1845—fourteen years ago—numbered 502—only about one-third as many as were granted to our own clients last year; there being patented, through the Scientific American Patent Agency, 1,440 during the year 1859. The increasing activity among inventors has largely augmented the number of agencies for transacting such business.

In this profession, the publishers of this paper have become identified with the universal brotherhood of Inventors and Patentees at home and abroad, at the North and the South; and with the increased activity of these men of genius we have kept pace up to this time, when we find ourselves transacting a larger business in this profession than any other firm in the world.

We may safely assert that no concern has the combined talent and facilities that we possess for preparing carefully and correctly applications for patents, and attending to all business pertaining thereto.

FREE EXAMINATION OF INVENTIONS.

Persons having conceived an idea which they think may be patentable are advised to make a sketch or model of their invention, and submit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from our long experience, and the records in our Home Office. But for a fee of \$3, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a patent, &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh streets, Washington, by experienced and competent persons. Over 1,600 of these examinations were made last year through this office, and as a measure of prudence and economy, we usually advise inventors to have a preliminary examination made. Address MUNN & CO., No. 37 Park-row, New York.

CAVEATS.

Persons desiring to file a caveat can have the papers prepared on reasonable terms, by sending a sketch and description of the inven-

tion. The government fee for a caveat is \$20. A pamphlet of advice regarding applications for patents and caveats furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

HOW TO MAKE AN APPLICATION FOR A PATENT.

Every applicant for a patent must furnish a model of his invention, if susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition is composed for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the government fee, by express. The express charges should be prepaid. Small models, from a distance, can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to Munn & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & CO., No. 37 Park-row, New York.

REJECTED APPLICATIONS.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of their case, enclosing the official letters, &c.

FOREIGN PATENTS.

We are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business we have offices at Nos. 66 Chancery Lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that three-fourths of all the European patents secured to American citizens are procured through our Agency.

Inventors will do well to bear in mind that the English law does not limit the issue of patents to inventors. Anyone can take out a patent there.

Circulars of information concerning the proper course to be pursued in obtaining patents in foreign countries through our Agency the requirements of the different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our branch offices.

TESTIMONIALS.

The annexed letters, from the last three Commissioners of Patents, we commend to the perusal of all persons interested in obtaining Patents:—

Messrs. MUNN & Co.:—It affords me much pleasure in stating that while I held the office of Commissioner of Patents, MORE THAN ONE-FOURTH OF ALL THE BUSINESS OF THE OFFICE CAME THROUGH YOUR HANDS. I have no doubt that the public confidence thus indicated has been fully deserved as I have always observed, in all your intercourse with the Office, a marked degree of promptness, skill and fidelity to the interests of your employers. Yours, very truly,

CHAS. MASON.

Immediately after the appointment of Mr. Holt to the office of Postmaster-General of the United States, he addressed to us the following very gratifying testimonial:—

Messrs. MUNN & Co.:—It affords me much pleasure to hear testimony to the able and efficient manner in which you have discharged your duties of Solicitors of Patents while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and I doubt not, justly deserved) the reputation of energy, marked ability and uncompromising fidelity in performing your professional engagements. Very respectfully,
Your obedient servant, J. HOLT.

Messrs. MUNN & Co.:—Gentlemen: It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, a very large proportion of the business of inventors before the Patent Office was transacted through your agency, and that I have ever found you faithful and devoted to the interests of your clients, as well as eminently qualified to perform the duties of Patent Attorneys with skill and accuracy. Very respectfully,
Your obedient servant, WM. D. BISHOP.



J. A. C., of C. W.—Electricity from a galvanic battery can be accumulated by means of a Leyden jar if the battery is one of high intensity, that is, consisting of a considerable number of plates. Connect one pole with the inside of the jar and the other with the outside.

S. F., of Pa.—The reporter, doubtless, meant to say that, by raising the temperature of iron from 1,000° to 1,500°, the light emitted from it is increased forty fold.

R. S., of Mass.—You can reduce quartz to a liquid by grinding it to powder, then boiling it in a close vessel with a strong caustic alkali.

L. A. L., of N. Y.—A small portion of calcined alum in powder added to black lead, and mixed with some beer and a little asphalt varnish (made with turpentine and asphalt) should make a good stove polish to prevent the metal rusting in your laboratory.

M. S., Jr., of La.—The walls of the basements of houses in this city situated near the rivers, and exposed to tidal overflows, are usually laid in hot asphalt. The arches of cellars laid under the sidewalks in our streets are also usually covered with hot asphalt; no other cement seems to be as good for keeping out water from the surface. Cisterns made in the "bottoms of the Mississippi," subject to overflows, if coated inside with good hydraulic cement and outside with hot asphalt, should be perfectly tight. The hydraulic cement which you have used seems to have been of an inferior quality.

R. R. T., of N. Y.—The bill to amend the Canadian Patent Law did not pass at the last session of Parliament. American inventors are excluded from taking patents in Canada at present. It is a shame and disgrace.

W. H. H., of Tenn.—A large building in Paris which had one of its stone walls bulging outward was straightened by running an iron rod through the wall, on the outer end of which was a broad plate of metal placed inside of a nut working on the screw of the rod. By heating the rod inside of the building, the metal expanded; then the nut, with its broad plate, was screwed up close to the face of the wall against the bulged part. When the rod cooled, the force of contraction in the metal was so great that it straightened the wall in a very satisfactory manner. This plan you could employ for your brick house; but it may be too troublesome and expensive. We do not remember any other method that we could recommend. Probably your house may be able to stand for quite a number of years, with its uneven walls.

F. D., of N. Y.—Mildew may be removed from white linen and cotton clothes by washing and bleaching, and especially by using a little chlorine water for the bleaching action. By placing a little salt on the mildew stains, then squeezing some lemon juice and hot water upon them, they will also be removed. Good brushing and a little alcohol rubbed on with a sponge afterward is the only treatment we recommend for mildew on woolen goods.

W. M. McA., of Pa.—You will find most of the facts known in regard to aluminum in back numbers of the SCIENTIFIC AMERICAN. It is a bluish-white metal, very light, its specific gravity being 2.56. It is easily worked, and can be hammered, rolled or cast; its melting point being about the same as that of silver, which is 1,773° Fah. It is nearly as strong and stiff as iron, and forms alloys with gold and other metals.

E. M. C., of R. I.—There are many plants which contain india-rubber in small quantities. The common milkweed is a specimen.

K. S. W., of Ga.—The stains made on fine linen with the oil from sewing machines are very difficult to remove; but this can be done with a little oxalic acid in solution after the oil is washed out. The color is due to the oxyd of iron in the oil, which cannot well be removed from light colored woolen without injury to the texture of the fabric.

S. D. T., of N. Y.—You may preserve your cider good and perfectly sweet for a long time by keeping it in close casks and placing a very small quantity of the bisulphide of lime in each.

D. C., of Va.—We are glad to know that you are doing well with your invention. We cannot advise you, however, to apply for a patent on the washing machine. A rollerswinging over a corrugated concave bottom is an old device. We hope you will succeed in procuring us a good club of subscribers to our paper for the new volume, which will commence on the first of January.

M. P. F., of N. Y.—The mauve dye is made of aniline and the bichromate of potash. The description for making the purple dye from coal tar you will find on page 68, Vol. II, of the SCIENTIFIC AMERICAN.

J. S., of N. Y.—Amber varnish for violins is thinned with refined turpentine to reduce it to a proper condition for application. In varnishing a violin, all the old varnish should be carefully scraped off before the new is applied, unless a very thin coat is required.

J. Y. H., of Pa.—We do not think your plan of a long canvas screw for a flying machine as good as a short spiral. There will be no difficulty, however, in arranging the apparatus, if an engine is produced of sufficient power in proportion to its weight to raise itself by turning fans.

C. L. P., of N. Y.—We hope you may be successful with your lath machine. It is a good plan to try experiments as you are doing, and thus settle the practical value of your invention at the outset.

C. C. P., of Texas.—You are evidently possessed of much inventive talent, and it only needs to be directed toward practical results to be crowned with success. It is not a part of our business to negotiate the sale of inventions, but we advise you to find a capitalist at home to aid you in developing your improvements. Do not get too many irons in the fire.

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Nov. 10, 1860:—

- B. T. B., of N. Y., \$30; T. N. R., of N. Y., \$110; G. A. D., of Cal., \$12; M. A. W., of Cal., \$50; G. S. K., of Wis., \$20; E. W. K., of Ill., \$30; S. A. Co., of N. Y., \$25; P. L., of N. Y., \$25; C. & E., of Ohio, \$10; J. G., of Ohio, \$25; J. G. W., of N. Y., \$300; E. G. D., of N. Y., \$30; A. L. B., of Mass., \$30; D. H. F., Jr., of Mo., \$30; H. & M., of Ohio, \$30; E. C. T., of N. Y., \$30; H. N., of N. Y., \$25; W. C., of N. Y., \$25; T. N. H., of Mo., \$35; J. C. T., of Ill., \$30; J. R. I., of N. Y., \$250; H. M. B., of Ohio, \$25; S. K. W., of Pa., \$20; E. D., of N. Y., \$25; S. N. C., of Md., \$250; S. W., of Ga., \$30; J. K., of N. Y., \$25; J. E. G., of Ill., \$250; H. & W., of Mass., \$55; G. P. R., of Mass., \$30; G. & S., of Mich., \$15; E. S., of N. Y., \$30; B. M., of N. Y., \$30; E. H. B., of N. Y., \$25; A. L. F., of Pa., \$30; P. H., of Mass., \$30; A. I. S., of S. C., \$30; T. K., of N. Y., \$30; N. J., of N. Y., \$25; J. S., of N. J., \$35; L. A. G., of N. Y., \$25; P. S., of N. Y., \$30; W. H. R., of N. Y., \$350; J. H. R., of Tenn., \$25; H. & S., of Pa., \$30; C. B. T., of Cal., \$20; D. M., of Ohio, \$20; B. D. T., of N. Y., \$25; J. B., of Germany, \$25; J. L., of N. Y., \$25; O. R. B., of N. Y., \$12; S. & S., of Pa., \$30; R. C. M., of S. C., \$25; H. F., of La., \$30; W. S., of Pa., \$25; J. S. R., of Iowa, \$10.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Nov. 10, 1860:—

- T. N. R., of N. Y. (3 cases); P. C., of N. Y.; F. W. R., of Ind.; H. C. A., of Ill.; G. W. C., of Texas; J. L., of N. Y.; M. & S., of Ky.; B. D. T., of N. Y.; A. L. F., of Pa.; E. P., of Mass.; J. G., of Ga.; R. C. B., of N. C.; C. W., of Ill.; P. M., of Mich.; T. E. B., of Fla.; O. R. B., of N. Y.; H. N., of N. Y.; R. C., of Texas (3 cases); E. H. B., of N. Y.; J. R. J., of Ky.; G. & S., of Pa.; W. C., of N. Y.; J. T. P., of Conn.