

THE FAIR OF THE AMERICAN INSTITUTE.

We continue our notices of objects of interest:—  
 HOWE'S FIRST SEWING MACHINE.

Under a glass case is exhibited the first sewing machine invented and constructed by Elias Howe, Jr. It is a very neat working model, made to turn by hand, and quite different in general construction from those at present in use. It contains, however, that essential improvement—a device for passing a second thread through a loop in the first—which stops the thread from unraveling—the idea that made mechanical sewing a practical art.

CENTRIFUGAL PULVERIZERS.

The idea of crushing stones and other substances by dashing them violently against an unyielding surface, instead of letting a heavy body fall upon them, was suggested and tried some years since, and, though successful in their operation, the machines were found to wear out so rapidly that they went out of use. By employing Franklinite iron, however, they may be constructed to endure, it is said, longer than any other kind of pulverizer. The Boston Milling and Manufacturing Company have on exhibition a mill constructed of this material, with samples of bone flour pulverized by it from unburned bones. A short iron cylinder has a shaft passing through its axis, the shaft carrying arms, which, in their rapid revolutions, strike the pieces of bone, knocking them against the sides of the cylinder; the bone is repeatedly beaten till it is reduced to a fine powder.

ELECTRIC PACKAGE EXPRESS.

Dr. D. D. Parmalee, of this city, has one of his package carriages running constantly round a circular railway. The carriage is driven by an electromagnetic machine, the electricity being generated by a stationary battery, and conducted along the rail. We shall soon publish an illustration of this curious affair.

EXPANSION SADDLE ENGINE.

Messrs. J. Wyatt Reid & Co., No. 7 Old Slip, this city, have running a portable engine designed for oil wells, with the bed plate so bolted to the boiler as to make ample allowance for the unequal expansion of the boiler and bed plate in firing up. The bed plate rests upon three saddles, but is bolted to the middle one only, the ends resting upon the other two, and being held down by set screws under which they may slide. As an engine will last much longer than a boiler, it is desirable to have a bed plate even in the case of a portable engine.

ROTARY FAN BLOWER.

Charles C. Overton, No. 163 Maiden lane, has in operation a blower for furnaces, made by two fans inclosed in a case, and running in opposite directions, each blade of one fan coming between two blades of the other; gears upon the shafts keep the two fans in a constant position in relation to each other. This blower creates a powerful blast.

WOOD ENGRAVING.

In a case containing samples of wood engraving, we noticed some beautiful specimens of mechanical work by Richard Ten Eyck, Jr. Mr. Ten Eyck has worked on illustrations for the SCIENTIFIC AMERICAN during the last fifteen years, and has been pronounced by other artists to be the best engraver of machinery upon wood, in the world. His samples at the Fair are "proofs" from cuts engraved for this paper.

Interesting to Every One.

At the recent trial of breech-loading rifles, held by Government at Springfield, Mass., there were some forty different varieties presented. A photograph of these guns has been executed by Messrs. Milton, Bradley & Co., of Springfield, Mass., which shows very clearly the external parts of each one. The actual size of the plate is 12x17 inches, and it is mounted on a sheet 16x21, the names of the inventors being set opposite their weapons. This photograph is a very beautiful specimen of the art, and would be an ornament to any room.

As an evidence of the rapidity with which commerce in the South is reconstructing itself, we see it stated that the St. Louis and New Orleans tannage—now over 40,000 tuns—is 33 per cent in excess of the tannage of 1859. The Ohio River tannage has increased 50 per cent and the Missouri River 50 per cent since that time.



ISSUED FROM THE UNITED STATES PATENT-OFFICE  
 FOR THE WEEK ENDING OCTOBER 10, 1865.  
 Reported Officially for the Scientific American

Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying 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.

50,320.—Cut-off Valve.—James M. Albertson, New London, Conn. Antedated Sept. 27, 1865:

First, I claim the placing of a valve below the valve-seat of a steam cylinder, and in the ports or passages leading to the interior of the cylinder, in combination with the auxiliary exhaust ports, C, for the purpose substantially as described.  
 Second, The auxiliary parts, C, C, when used only as an exhaust part, and connected with the passage into the cylinder which contains the valve herein described, and when used in combination with this valve, substantially as set forth.

50,321.—Window-sash Lock.—Alonzo C. Arnold, Norwalk, Conn.:

I claim the construction and arrangement of a window-sash lock, in the manner and for the purpose substantially as herein set forth and described.

50,322.—Machine for Kneading Dough.—George R. Baker, Brooklyn, N. Y.:

First, I claim the machine for kneading dough, constructed and operating substantially as herein described.  
 Second, I also claim the combination of the shaft, a, with its pivoted arm, a', the slot, e, and spring, f, arranged and operating substantially as and for the purpose herein described.

50,323.—Dryer Felts for Paper-making Machines.—Seth W. Baker, Providence, R. I. Patented in England May 9, 1863:

I claim the use of the peculiar fabric, hereinbefore described, for a dryer felt in paper-making machines, the ends being united so as to make an endless belt or band, as set forth.

50,324.—Torpedo for Oil Wells, Etc.—A. T. Ballantine, Morristown, N. J.:

First, I claim an apparatus to be exploded in oil or other deep wells, constructed and operated substantially as above described.  
 Second, I also claim securing a friction primer within a cylinder for holding powder or other explosive substance by means of a loose slotted bar placed in such cylinder, substantially as shown.

50,325.—Shears for Cutting Metal.—Henry Barth, Cincinnati, Ohio:

I claim the combination of the many-sided nuts, F, F, with the stationary and movable jaws, substantially as and for the purposes described.

[This invention consists in the employment or use in shears for cutting metal or other materials of many-sided cutters, the edges of which are grooved or hollowed out in such a manner that each edge presents two cutting edges, and if one of the cutting edges has become dull, the cutter can be turned or reversed, and a new cutting edge can be brought into play without loss of time.]

50,326.—Ore-crushing Stamp.—Henry J. Behrens, New York City:

I claim giving to the cross-bar, D, an eccentric motion to the motion of the pulley and its nose by means of the levers, G, which carry said cross-bar, D, and whose centers of motion are placed some distance from the center of motion of the driving shaft or pulley, and operating in the manner and for the purpose substantially as described.

50,327.—Grate Bar for Steam Generators.—E. G. Blakelee and A. Manser, Sing Sing, N. Y.:

We claim the tubular water heaters, g, in combination with the pipes, k and m, and dried-water pipe, e, arranged and operating substantially as specified.

50,328.—Screw Driver.—Wm. G. A. Bomwill, Dover, Del. Antedated Aug. 27, 1865:

I claim combining a countersink or other tool which can be operated by a straight handle, with a screw driver, by means of a socket, D, and a sliding joint, substantially as and for the purpose above described.

[This invention consists in combining with a screw driver any other tools which are commonly used in connection therewith, such as a countersink, gimlet, reamer, etc., by means of a sliding socket and joint, the socket being made removable or fixed.]

50,329.—Centering Chuck.—Thomas Brooks, Middletown, Conn.:

I claim the pivoted levers, d, with the sliding jaws, e, and conical screw spindle, c, b, all constructed substantially as and for the purpose described.

50,330.—Bistoury.—Charles C. Brown, Washington, D. C.:

I claim the construction of the director, A, provided with a groove, for the reception of a ligature, C, as and for the purpose herein set forth.

50,331.—Slide Valve.—Alexander Buchanan, New York City. Antedated Sept. 30, 1865:

First, I claim the attachment of the flexible valve cover to the inflexible cover of the steam chest by standing bolts G, G, and flanged nuts, H, H, which are fitted to form steam tight bearings on seats, m, m, outside of the latter cover, substantially as herein specified.  
 Second, The clamping piece, J, and bolts, J, J, in combination with the flanged nuts, H, H, standing bolts G, G, valve-chest cover, B, and flexible valve cover, substantially as and for the purpose herein specified.

Third, The guard bolts, K, K, and jam nuts, U, U, in combination with the inflexible valve-chest cover and flexible valve cover, substantially as and for the purpose herein specified.

Fourth, The longitudinally adjusting stop bars, L, L, applied at the ends of the valve chest, and adjustable from the exterior thereof, in combination with the flexible valve cover, substantially as and for the purpose herein specified.

Fifth, The nuts, r, r, and elastic washers, s, s, in combination with the standing bolts, G, G, and adjusting nuts, H, H, substantially as and for the purpose herein specified.

50,332.—Sash Supporter.—Edward A. Campbell, Williams Bridge, N. Y.:

I claim the sash supporter formed with a hooked end to act against the outside of the sash, and with a thumb piece or projecting end to be let into the window casing and protrude therefrom as and for the purposes set forth.

50,333.—Machine for Pressing Brick.—Morgan Chittenden, Danbury, Conn. Antedated Sept. 25, 1865:

First, I claim in combination with the transversely sliding mold

box, and horizontally reciprocating pressing plungers arranged at one end with the toggle, B, B, connected with the said plungers, and with a fixed bearing or fulcrum at the other end of the machine, and operated by a crank or eccentric wrist, substantially as herein described.

Second, I claim the combination of the transversely sliding mold box containing two sets of molds, the single set of reciprocating pressing plungers, and the two sets of discharging plungers, substantially as and for the purpose herein specified.

Third, I claim the semi-rotating receiving table J, in combination with the transversely sliding mold box, containing two sets of molds, and the two sets of discharging plungers, substantially as and for the purpose herein specified.

Fourth, I claim so combining the semi-rotating receiving table, J, with the transversely sliding mold box, that the movement of the said box is obtained through the movement of the said table, substantially as herein specified.

Fifth, I claim operating the discharging plungers by means of the tripping cam, V, p, m, the notched rod D, and the springs, e, e, the whole combined and operating substantially as herein set forth.

50,334.—Breech-loading Fire-arm.—Nathan S. Clement, New York City. Antedated April 29, 1865:

First, I claim the spring, F, arranged relatively to the cartridge and to the retracting hook, N, or its equivalent, substantially in the manner and for the purposes herein set forth.

Second, I claim so arranging the locking bolt, G, relatively to the breech piece, F, and the tumbler, B, that the hammer cannot strike and discharge the cartridge when the breech piece, F, is finally locked, substantially as herein set forth.

Third, I claim the thumb piece, H, as arranged relatively to the breech piece, F, and locking bolt, G, for the purposes herein set forth.

Fourth, I claim the back bolt, I, arranged to operate in the same plane as the locking bolt, G, for the purpose herein set forth.

Fifth, I claim, in combination with the sliding breech piece, F, the within-described arrangement of a single spring, K, connecting lever, J, and bolts, G and I, for the purposes herein set forth.

50,335.—Manufacture of Aniline Red.—Charles Clemm, Philadelphia, Pa., and August Clemm, Manheim, Germany:

What we claim is the treatment of salts of aniline and its homologues by the arsenates of the alkalis, substantially as above described, for the production of aniline red.

50,336.—Manufacture of Detergents.—Samuel Coburn, Stamford, Conn. Antedated Sept. 30, 1865:

I claim the combination, for the purpose aforesaid, of soda with ammonia, by the means and in the manner substantially above stated.

50,337.—Buckle.—A. H. Cole, Sylvania, Ohio.

I claim the combination with the buckle frame, a, of the wedge-shaped piece or tongue, i, arranged together and operating substantially in the manner described.

[This invention relates more particularly to buckles used for securing the tugs or trace-ropes to the hames of harnesses for horses and consists in a novel construction of them, whereby the tugs can be buckled and unbuckled with great readiness, and, besides, it is not necessary to bend the straps in order to pass them through the buckles.]

50,338.—Feathering Paddle Wheel.—M. Grier Collins, Cumberland, Md.

I claim the combination of the projections on the paddle stem with the stationary double cam, by means of which the paddles in their revolutions are feathered as they enter and leave the water, substantially as described.

50,339.—Cooking Stove.—J. D. Conner, Bloomington, Illinois.

First, I claim the pillar, C, with its forked arms, V, V, for supporting the grate, in combination with a dumping grate, substantially as described.

Second, I also claim the perforated throat, E, inclosed within an air chamber, F, substantially as described.

Third, I also claim the combination of the perforated throat, E, with the gas-combustion chamber, G, into which it discharges the masses of mixed gases and air, and with the lateral air passages, O, which deliver air into both from below the grate, substantially as described.

Fourth, I also claim the method, as above described, of securing to the closets the slats, R, to wit, by angular projections fitting into angular recesses made in the corners of the closet.

Fifth, I also claim the method, hereinafter described, of making the closet, A, to wit, forming an open frame or skeleton by casting, or otherwise, and securing the back and top and bottom plates or walls to the frame by means of bolts or equivalent devices, substantially as described.

Sixth, I also claim making the bottom and tube of the water reservoir, in one piece, by casting, or otherwise securing the top of the reservoir to the edges of the bottom, through bolt holes made therein for that purpose, substantially as described.

[This invention consists in a novel construction of a parlor or heating stove, intended especially for burning bituminous coal, although any kind of fuel can be used therein. The upper part of the fire chamber has provision for admitting air to the hot gases above the fuel, and above all is a gas-combustion chamber. The descending flue has a spiral course opening into an ash or soot receptacle from which the exit pipe ascends.]

50,340.—Casting Skeins of Wagon Boxes.—Thomas Considine, Chicago, Ill.:

First, I claim the screw, C, connected with a platform, F, and placed in a suitable framing, A, in connection with the rotary block, a, in the platform, F, arranged substantially as shown, for raising and lowering and for rotating the platform for the purpose specified.

Second, The mold, K, for the core of the skein and socket having a pattern, a', to form the mold for the inner end of the exterior of the socket, J, when used in combination with match board or box, K, and flask, L, as described.

50,341.—Box for Packing Eggs.—Eden M. Coombs, Memphis, Ind.

I claim the use of pads or cushions, C, applied to the bottom of the cases or shelves, for the purposes herein specified.

[In transporting eggs the breakage of the same is almost always caused by the weight of the layers of eggs, one upon another. The object, therefore, of this invention is to provide a packing box whose internal arrangement shall be such as to separate the several layers so that each layer shall be independent of the next; and to effect this a series of cases or shelves are arranged within a suitable box, at a sufficient distance apart to receive a layer of eggs, and the under side of said case or shelf (as well as the lid) are padded in by suitable material, so as to lie softly upon the eggs and prevent their jostling.]

50,342.—Ore-crushing Stamps.—Edward Dart, New York City:

First, I claim the arrangement of the pulley, C, with flanges, a, a, partly cut away to form a nose, b, in the manner and for the purpose described.

Second, In combination with the above described pulley, C, the cross bar, D, working loosely on said pulley, when constructed, arranged and operated in the manner and for the purpose set forth.

Third, I claim in combination with the pulley, C, the frame, G, constructed as specified, and operating on the cross bar, D, in the manner and for the purpose substantially as set forth.

Fourth, I claim the guard rods, N, in combination with the pulley, C, frame, G, and cross bar, D, arranged in the manner and for the purpose described.

50,343.—Pipes or Tubes for Wells.—Thomas Dutton and Thomas Maguire, Port Jervis, N. J.:

We claim the well pipe or tube composed of the interior non-perforated and the exterior perforated tubes, constructed and connected together substantially as described and herein set forth.

50,344.—Sheet-metal Can.—John C. Eiben, New York City:

I claim the head of the pail or can, composed of a ring, A, united