RECENT AMERICAN INVENTIONS.

The following inventions are among the most useful improvements patented this week. For the claims to these inventions, the reader is referred to the official list on another page:—

AIR ENGINE.

This invention consists in the arrangement of a flame space between the supply cylinder and the working cylinder, whereby a more intense and quicker heating of the air in said cylinder is effected, also in the arrangement of an eccectric frame suspended from a suitable pivot, and operated by an eccentric in such a manner, that the supply piston receives the desired motion in advance of the working piston, and that a reversing of the engine is rendered possible; also in the combination with the supply piston of the regenerator in such a manner that both move together, and that the air, in passing from one side of the piston to the other, is compelled to pass through said generator, where it takes up the heat stored up therein, so that when it arrives in the center of heat, it takes but little time to heat it to the desired temperature; and it further consists in the arrangement of a reversible eccentric, in combination with a spring bar, for the purpose of opening and closing the exhaust valve instantaneously as the crank passes its center. The credit of this invention is due to Dr. A. A. Henderson, of Portsmouth, N. H.

REVOLVER.

This invention consists in the employment, in combination with a cylinder having its chambers opening into its rear face, of a recoil shield made separate from the frame of the arm, and moveable transversely thereto, in such a manner as to expose the rear openings of the chamber to permit the insertion of cartridges thereat, the object being to make an arm of cheap construction, and to obviate the necessity of either taking out the cylinder, or opening the frame to insert the charge. This invention was designed by A. J. Gibson, of Worcester, Mass.

STEAM ENGINE.

The principal objects of this invention are, first, to enable a steam engine having a long cylinder, and consequently a long stroke of piston, to be brought within a comparatively small space; and second, to enable two complete revolutions of the crank shaft to be produced by the stroke of the piston back and forth. The invention consists in connecting the piston rod and crank of an engine by means of a system of toggles and connecting rods applied and arranged in a peculiar manner, whereby the above objects are accomplished, and an engine possessing superior qualities for driving the screw propeller is obtained. The patentee of this invention is R. C. Barton, of Troy, N. Y.

PEN CLEANER.

With pens, especially with pens made of metal, such as steel or gold it is of the greatest importance that the same should be kept clean, because the ink, when left on the pen, is liable to cause the same to corrode, and to diminish its proper elasticity and smoothness, and because the ink, when not cleaned off from the pen, becomes thick and causes the pen to write bad. It is obvious that the cleaning of the pen can be accomplished with the greatest ease and perfection in liquid which dissolves the ink. To effect this purpose is the object of this invention, which consists in the arrangement of a bottle of peculiar form, and provided with a brush which is firmly sprung into the bottle in such a manner that some suitable fluid may be introduced into the bottle, and the pen may be thoroughly cleaned. The inventor of this ingenious device is Jonathan Warren, of Brooklyn, N. Y.

THE LAST COTTON CROP.

The New York *Shipping List* makes up the account of the cotton crop annually on the 31st of August. It appears that the crop ending August 31, 1860, amounted to 4,675,770 bales, distributed as follows:—

	Bales.
New Orleans	2,139,425
Alabama	843,019
Texas	352,424
Florida	192,724
Georgia	531,219
South Carolina	510,109
North Carolina	41,194
Virginia	56,987
Tennessee	108,676
Total	4,675,770
Taken for home use north of Virginia, bales	792,621
Taken for home use in Virginia and south and west of Virginia, bales	185,522
Total consumed in the United States, including burned at the ports, bales	978,043

ISSUED FROM THE UNITED STATES PATENT OFFICE
FOR THE WEEK ENDING OCTOBER 9, 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.

30,282.—F. B. Abbott, of St. Louis, Mo., for an Improved Quartz Crusher and Amalgamator:

I claim, first, The use of the heater, R, in combination with the boiler and crusher, when arranged in the manner described for the purpose specified.

Second, I claim constructing, arranging and operating the amalgamator, substantially in the manner described for the purpose specified.

Third, I claim arranging the engine and boiler with the crusher and amalgamator, substantially in the manner described, for the purpose of economizing in the room, weight and cost of quartz crushing apparatus.

30,283.—A. L. Adams, of Philadelphia, Pa., for an Apparatus for Copying Letters:

I claim the employment of the retaining hooks, d d, or their equivalents, in combination with the roller, B, and its apron, C, whether the said roller and apron are used in connection with the board, A, or are applied directly to a copying-book, as set forth.

30,284.—Josiah Ashenfelder, of Philadelphia, Pa., for an Improvement in Transferring Railroad Cars from one Track to Another:

I claim the employment, in connection with the siddings or turnouts of railroads, of a supplementary inclined rail, in combination with car wheels, so constructed in respect to said supplementary rail, which is so arranged in respect to the rails of the straight and of the deviating line of road that the wheels are moved from the influence of the rails of the one line of road to that of the other, as described.

30,285.—H. Beamer, of Smithburg, Pa., for an Improvement in Fruit-driers:

I claim, first, In combination with the drawers or trays, E, the double inclined hinged covers, B B, and hinged gables, C C, arranged as represented, so as to protect or expose said trays, in the manner and for the purpose set forth.

I also claim, in combination with the drying chamber, the hinged frames, E, that may be swung into or out of said chamber, for the purpose of protecting or drying by artificial heat inside, or exposing the fruit to the air or sun as circumstances may require, and as set forth.

30,286.—Aaron Bechtol, of Berkley Springs, Va., for an Improved Bedstead Fastening:

I claim the bed posts mortised as described, in combination with a bed frame mortised in a corresponding manner, as that the two ends of the frame may be supported across their entire width by means of transverse rails and the posts and frame held together by means of adjustable dogs or buttons, substantially as and for the purposes set forth.

30,287.—James A. Bennet, of King's County, N. Y., for an Improvement in Propelling Cars on Railroads:

I claim the combination and arrangement of the entire machine for propelling machinery, cars on railroads, and other vehicles, as described in this specification, consisting of springs, cog wheels, ratchets and levers.

30,288.—J. A. Berrill, of Waterville. N. Y., for an Improved Paint Mill:

I claim forming the periphery of the rotating grinding plate, A, with a recess, a, to provide a ledge, b, as and for the purpose set forth.

[The object of this invention is to prevent the paint as it is ground from flying off from the runner or revolving grinding plate as it is discharged from between said plate and the upper stationary one.]

30,289.—P. I. Biderman, of Philadelphia, Pa., for an Improvement in Conveying City Railroad Cars over Obstructions:

I claim raising and lowering the forward and rear trucks of the car, substantially in the manner specified, whereby the car wheels are elevated so as to pass over obstructions upon the track, as and for the purpose set forth.

30,290.—W. O. Bourne, of New York City, for an Improvement in Ore Separators:

I claim, first, A bed for separating ores or similar substances, composed of layers of fibrous or woven materials, secured by stitches or equivalent means for maintaining a fixed and firm support to said bed, and preventing unevenness and bagging, as set forth.

Second, In combination with a bed, constructed as set forth, I claim the adjustable plate or rim, f, for regulating the depth of the ore on the bed, as described.

30,291.—Wm. Breitenstein, of New York City, for a Fire-escape:

I claim, first, The construction of the ladder, consisting of several sections joined and hinged, substantially as described.

Second, The secure folding and unfolding of the ladder, by means of the windlass, H, the reel or drum, D, and the ropes, H, substantially as specified.

Third, The manner of attaching the escape box, N, to the ladder, and of sliding it on the same, substantially as set forth.

Fourth, The manner of adjusting the carriage and frame, A, to any position required, by means of the division of the frame, and the insertion of lever screw and handle, P P, substantially as specified.

Fifth, The general construction of the machine, in the manner and for the purpose substantially as described.

30,292.—Frederick Brubach, of Lancaster, Pa., for an Improvement in Wooden Coffins:

I claim the combined framework of the coffin lid, A B C D, and pins, d, with the glass plates, E, inserted, the loose panels, G H, with their pins, K, and lock button, I, when made substantially as specified, for the purpose set forth.

30,293.—I. C. Bryant, of Philadelphia, Pa., for an Improvement in Casting Embossed Type:

I claim, first, The combination of the bottom and top letter or letters in a frame made of iron, brass, copper, or any other metal, suitable for the purpose.

Second, I claim the arrangement of the openings in the top letters, for putting in the steel, iron, or brass wire, forming the points or projections on the face of the type.

Third, I claim the combination of one or more guide letters at the top, with one or more letters at the bottom, formed so as to give the desired shape in points or projections to the letters or designs to be cast.

Fourth, I claim the combination of separate pieces of steel, iron, or brass wire, round, square, or any other shape suitable, in connection with frame and guide and bottom letters or designs.

Fifth, I claim the combination of points, so as to form a letter or letters, and solidifying them by casting type or other metal around them in a mold and double matrice, as described.

Sixth, I claim the mold, in connection with the matrice, slide and pin, as described.

30,294.—Patrick Burke, of Helena, N. Y., for an Improvement in Stabling Cows:

I claim the arrangement of the perforated floor, G, and rollers, E, with the tight floor, D, and manger, A, as and for the purposes set forth and described.

[The object of this invention is to stable cattle in a more cleanly and healthy manner than has heretofore been done; at the same time to offer many advantages in the removing of manure from the stable, the saving of urine, and the cleaning out of the stable both before and after milking.]

30,295.—N. C. Carter, of Union City, Ind., for an Improvement in Cultivators:

I claim the arrangement of rods, c c, rods, e e, with the looped heads, e' e', and terminal screw bolt, d', in connection with rods, g and h, and screw link, i, all constructed and operated in the manner as and for the purpose set forth.

30,296.—Ezekiel Casner, of Penn Yan, N. Y., for an Improved Mill Bush:

I claim the combination of the case, A, bush blocks, E E E E, bottom plate, C, and bolts, F F, when made and used substantially as specified.

30,297.—Robert Cathcart, of Baltimore, Md., for an Improved Light for Cars:

I claim the arrangement in the manner specified of the conical reflector and lantern relatively to the lamp and roof of railway and other cars, for the purpose described.

30,298.—L. S. Chichester, of New York City, for an Improved Mill for Grinding Coffee:

I claim the adjustable cheek pieces, c c, formed with converging grooves, in combination with the oscillating or vibrating cylinder, h, as and for the purposes specified.

30,299.—D. W. Clark, of Stratford, Conn., for an Improvement in Stirrups:

I claim the making of the side pieces of stirrups adjustable in the manner and for the purposes substantially as shown and described.

I also claim the spring G, between the side pieces, when arranged and operating as set forth.

30,300.—T. C. Clarke, of Camden, N. J., for an Improved Filter:

I claim, first, In a filter for water, an opening or escape on the supply side of the filtering medium, controlled in the manner set forth and for the purposes specified.

Second, I claim the slide. I, in combination with the valve, h, for opening said valve to clean the filter or draw unfiltered water, as specified.

Third, I claim the construction of the divided case, c d, kept together by the turn buttons, e e, and provided with the ribs l l, forming the water channels, in the manner and for the purposes specified.

30,301.—C. P. Crossman and J. B. Brown, of Warren. Mass., for an Improvement in Stove Radiators:

We claim a heat radiating attachment for stoves, which is composed of an outer case, A, flanged opening, C, inner conical chamber B, filling, B', top plate, a' cold air pipe, D, smoke pipe E, oven above the chamber, B, with openings, b F, the whole being constructed as set forth and described, so as to be capable of application to the top-plates of common cooking and other stoves, all as set forth.

[The object of this invention is to obtain a portable and simple device that may be readily applied to ordinary stoves, and which will serve to retain the heat that usually passes up the flue, and render the same available for cooking purposes and also as a heat radiator.]

30,302.—Cyrus Debolt, of Ottawa, Ill., for an Improvement in Cultivators:

I claim the arrangement of the handles, C C, the joints, K K, the brackets, F, and the uprights, D D, for the purpose set forth and as described.

30,303.—Charles Doolittle, of Oswego, and Alfred Carson, of New York City, for a Fruit Case:

We claim the construction of the fruit case with a receptacle, B, springs, C, and an ice-chamber, f, the whole arranged and operating as and for the purposes set forth and described.

[This invention consists in placing the receptacle which is to contain the fruit, or other article or substance to be transported within a box or case, and connecting the former to the latter by means of springs, so as to admit of the receptacle having a certain degree of play or elastic movement within the box or case, and thereby protect the contents of the receptacle from concussions and sudden jars.]

30,304.—A. M. Dye, of Clinton, Ill., for an Improved Folding Bedstead:

I claim constructing the bed post in two sections, D and F, when made to be conjoined by the ring, C, or its equivalent, and secured in an upright position for use by the screw bolts, c c, and thumb nuts, g g', and when made to fold or turn upon said screw bolts, c c, for the purpose of making the whole bedstead compact and portable, substantially as described.

30,305.—Lewis Evans, of Morgantown, Va., for an Improvement in Breech-loading Ordnance:

I claim, first, Locking the breech-piece, F, in the breech end of the barrel, A, by means of a hinged lock bar, J; passing through a slot in the breech piece, and corresponding slots in the breech end of the barrel, as and for the purposes described.

Second, Operating the hammer, F', by means of a hinged dog, E, and crank shaft, B as and for the purposes described.

Third, Adjusting the breech-piece in line with the barrel, by means of toothed brackets, L, moving in vertical ways as and for the purposes described.

Fourth, The combination of the breech-piece, F, with a sliding standard, R, spring catch, O, pin, Q, incline, T, and rack gear, W V, for the purposes described.

30,306.—John Ericsson, of New York City, for an Improvement in Air Engines:

I claim, first, The combination of the equilibrium cylinders, a b, the equilibrium pistons, f g, and the working piston, c, when used substantially in the manner and for the purposes set forth.

Second, The combination of the equilibrium cylinders, a b, the equilibrium pistons, f g, the valves, 5 and 6, the vessel, k, and the tubes therein contained, when used substantially in the manner and for the purposes set forth.

Third, The combination of the equilibrium cylinders, a b, the equilibrium pistons, f g, the valves, 3 and 4, and the heat deposit vessel, h, when used substantially in the manner and for the purposes set forth.

Fourth, The combination of the equilibrium cylinders, a b, the