



Reported Officially for the Scientific American  
**LIST OF PATENT CLAIMS**  
 Issued from the United States Patent Office  
 FOR THE WEEK ENDING MARCH 23, 1852

**OMNIBUS STEP**—By Josiah Ashenfelder, of Philadelphia, Pa.: I claim the application of the inclined covering or protector, to the outside of the omnibus door, as described, to prevent persons from standing, laying, or sitting on the steps, in combination with the brush, or broom, secured to the bottom of the covering, or protector, so as to open and shut therewith, for the purpose of cleansing the step or steps, each step, if more than one, requiring a brush or broom attached, together with a back board, to protect the inside of the step, as described.

**SHOP AWNINGS**—By W. H. Bakewell of New York, N. Y.: I claim the method of protecting the awning by the construction and arrangement of the cylindrical sheathing, or covering, in combination with the slat, in the manner and for the purpose as fully set forth.

**MACHINES FOR STAMPING ORES**—By Wm. Ball, of Chicopee, Mass.: I claim the combination of the washing basin, or contrivance, with the stamp rod and its bearing, so as to operate in the manner and for the purpose as specified.

I also claim the defective plate in the entrance spout or hopper, as combined with the same, and the mortar and stamper, and used for the purpose as specified.

I also claim the improvement in the stamp head, or the making of it with a greater stamping surface, on one side of its axis of rotation, than it is on the other, the same being for the purpose of preventing packing of the charge, as specified.

I also claim the mode of applying the stamp head to the stamp rod, viz., by means of the circular arcs, or curves, of the sides of the universal dovetail connection, with the wedge key, as described.

**PLOWS**—By E. Ball, of Greentown, O. (assignor to Isaac N. McAbee, of Canton, O.)—I claim connecting the beam to the plow irons, by means of a pivot and stay bolt, and adjustable standard, the whole being constructed and arranged as described, so that the front end of the beam can be set towards either side, or either extremity raised or lowered, without changing the height of the other, or both extremities raised simultaneously and equally, or unequally, substantially as set forth.

**FRICTION PRIMERS FOR CANNON**—By Wm. Ball, of Chicopee, Mass.: I claim the combining with the discharging string and tube of the primer, a cylinder or plug of leather, or other like substance, inserted and secured in the upper end of the primer, and having the exploding string passing through it, as set forth, the said plug or cylinder serving the purpose of a breech, to confine the charge; when exploded, as a protector of the sand paper and priming, against the absorption of humidity and as a bearing for the string to draw over, when pulled.

**MACHINES FOR FELTING CLOTH**—By George G. Bishop, of Norwalk, Ct. Ante-dated Sept. 23, 1851. I claim the method described of hardening the bat by alternate steaming and jiggering, substantially as set forth, whereby one section of the bat is jiggered while an adjoining section is steamed, preparatory to being jiggered.

I also claim the process of steaming and jiggering two or more bats simultaneously, whereby much labor and time are saved, and the texture of the cloth is improved.

I also claim constructing a machine for jiggering felt bats, in such manner that it will subject successive portions of the bats to equal amounts of jiggering and then stop, whereby a greater uniformity of texture is secured in the cloth.

I also claim the arrangement of the steam pipes and adjusters in the steam chamber, substantially in the manner and for the purpose set forth.

**MARINE SIGNALS**—By Thos. H. Dodge of Nashua, N. H.: I claim the employment for signaling or indicating the course of a vessel, of two lights of different colors, attached to or hung in a cylinder or disc, which is capable of revolving on a fixed axis, so as to change the position of the lights: the position of either light, relatively to the other, being made to point the course, in any manner substantially as described.

[This is a most excellent invention. See engraving on page 145 this Vol. Sci. Am.]

**PLANING MACHINES**—By John Howarth of Salem, Mass.: I claim the reciprocating plane, for scoring the face of the board transversely, and reducing it to a uniform thickness, arranged substantially as described, in a compound frame, which carries the plane back and forth across the board, by a regular and positive motion, and back and forth lengthwise of the board, by a motion dependent upon the reciprocal action of the board against the planes, in one direction, and of springs against the frame in the opposite direction, substantially as set forth.

I also claim the method of smoothing the surface of boards or other lumber, by plane irons, reciprocating endwise, and operated in such manner, that the tendency of one to draw the board towards the side of the machine to which it is moving is counteracted, in whole or in part, by the tendency of one or more of the others, to draw the board towards the opposite side of the machine, these several counter tendencies being thus made to neutralize each other, substantially as described.

**SWINGLE-TREES**—By Chas. Howard, of Madison, Ill.: I do not claim the ring and link; but I claim the flange, as set forth, wrought or cast, in combination with a ring and link, for the purpose of forming attachments, substantially in the mode set forth.

**MACHINES FOR MAKING CORDAGE**—By Wm. Joslin, of Waterford, N. Y.: I claim the application of the fan in combination with the pulleys, belt, gear, and bobbin, as a drag or take up, as described.

**FLOUR PACKERS**—Nathan Kinman, of Lewiston, N. Y.: I claim the friction roller clutch, constructed and arranged in the manner and for the purpose as set forth.

**SMUT MACHINES**—By Thos. H. McCray, of Madisonville, Tenn.: I claim the formation of a series of corrugated recesses within the periphery of the cylindrical casing of my improved smut machine, substantially of the forms represented, when the said cylindrical casing is combined with a rotating beat-

er which has its beating surfaces, &c., arranged in position which incline obliquely to the radii of the beater, for the purpose of throwing the smut and kernels of grain into the said series of corrugated recesses in such directions that they will, in entering and rebounding therefrom, be brought in contact with their active surfaces, and thereby produce so great an amount of friction action, as to break up the smut and white caps, and polish the kernels of grain, without breaking the same.

**CRACKER MACHINES**—By John McCollum, of New York City: I claim the use of the bed plate, resting upon or supported by springs, or their equivalent devices, so that a yielding or receding action is obtained in the bed plate, while under the pressure of the cutters; or while the cutters are pressing down, for the purposes and in principle of construction and operation, as set forth.

**ARTIFICIAL TEETH**—Wm. S. McIlhenny, of Philadelphia, Pa.: I claim the formation of an artificial tooth, or teeth, from spar, silex, clay, sand, glass, or any material used for the purpose, into a suitable condition for the finishing furnace, by the simple operation of moulding, thereby avoiding the tedious and uncertain process of enamelling.

**PAGING BOOKS**—By S. E. Parrish (assignor to E. B. Clayton & Sons), of New York City: I claim, first, the use of the type plates, having channel ways and springs in their faces, and holes in them corresponding to the ten subdivisions of their peripheries and their inner circumferences divided into ten equal sides, in combination with a barrel having stop pins in its circumference, for the type plate, and a changing plate attached thereto, and ratchet wheel, cap plate, and pawl, and bent lever, for the purpose of operating a series of number plates, the said combi-

nation of parts being entirely distinct from any known mode for producing the same result (that is, counting), which I lay no exclusive claim to, the principle being well known, and I therefore limit my claim to combination of parts, substantially as set forth.

Second, I claim the use of the rod, lever, inking roller lever, and arm, in combination with the type wheel, substantially for the purposes as set forth.

Third, I claim the use of the inking roller frame and rod attached thereto, and rotating ink plate, in combination with the lever, slides, and type wheel and levers operating the same, substantially as set forth.

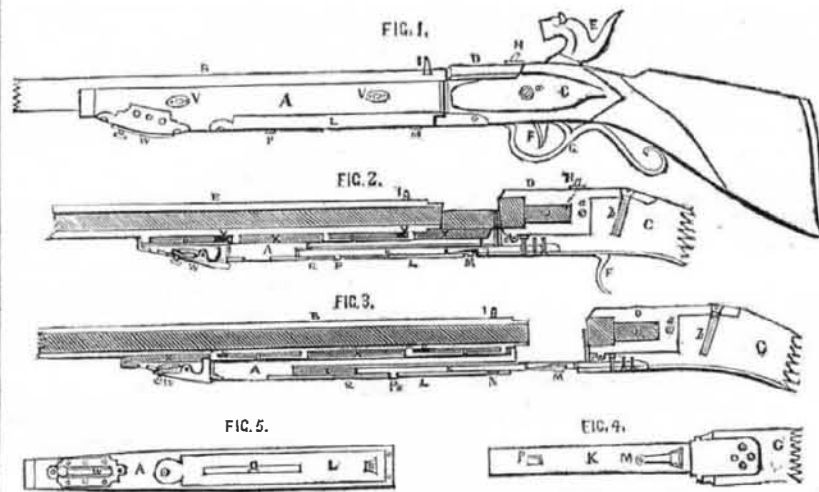
Fourth, I claim the bed, with guides attached thereto, in combination with the table and type wheel, substantially as set forth.

**JOINTING SHINGLES**—By Wm. Stoddard, of Lowell, Mass.: I claim the arrangement of the horizontal sliding boxes, which carry the jointing knives, by which they will cut the edges of any width of shingle, itself operating the devices for holding the boxes firmly, and in the proper position, while the shingle is being cut, as set forth.

**AIR-HEATING STOVES**—By J. M. Thatcher, of Lansingburgh, N. Y.: I claim the combination of the inverted domes or frustums, and plate, with the short tubes connecting them, substantially as described, for the purpose of effecting the connection between the lower end of the fire or draught flues, and carrying the air through them, to the spaces between the cylinders or tubes.

**PARAFFINE OIL**—By James Young, of Manchester, England. Patented in England Oct. 7, 1850: I claim the obtaining of paraffine oil, or an oil containing paraffine from bituminous coals, by treating them as described.

### NICKERSON'S IMPROVEMENTS IN FIRE-ARMS.



Permit me, through the medium of your useful and widely circulated journal, to draw the attention of manufacturers and others to the valuable improvement in fire-arms of C. V. Nickerson, of Baltimore, Md., and to make a few remarks on guns of that description. The peculiar uses and advantages to which fire-arms made for loading at the breech can be applied, are various and important and may be defined under several heads as follows:—viz., for riflemen in bush fighting and mountain warfare, they are invaluable, as they can avail themselves of any obstruction barely sufficient to screen the body, load and fire with great rapidity, without unmasking, as is the case in using the ramrod. Mounted men, whether in the chase or fight, can avail themselves of its great facilities, without alighting or interfering with the management of the horse. In light infantry drill it often becomes necessary for troops to extend their line, and at intervals of several paces lay flat on the ground; after the first fire the operation of re-loading in that awkward position, with the ramrod, must be apparent to all; whereas, with a weapon of the above description, he may retain his ground and fire at pleasure. The ordinary musket can be altered to this plan at a trifling expense. Its advantages, when infantry have formed to receive cavalry, are manifest, as no matter how compact men may be forced, this method of loading enables them to fire with that rapidity which is absolutely necessary to check an assailing force. Fowling pieces can be manufactured with great beauty and economy; cartridges can be made to suit the bore of the gun with neatness and accuracy, entirely superseding the shot-bag and powder flask, and in the pursuit of game, with competitors in the field, the sportsman can load and fire much faster, and without that nervous excitability consequent on hasty loading with the ramrod. The spirit of invention cries "onward!" and even the school of the soldier must give way to the march of improvement; the day is not far distant when the old-fashioned method of "ramrod cartridge," will be an obsolete idea.

The following description is taken from the Letters Patent:

Fig. 1 represents an elevation of the ordina-

ry fowling piece; fig. 2 is a vertical section view of the same, the barrel having been moved in a position to insert the cartridge into the breech chamber. Figure 3 is a vertical section, showing my improvement as applied to a musket, the barrel and stock having been moved forward in a position to insert the charge into the breech chamber. Figure 4 is an inverted view, showing the projecting bar with its spring catch, of the butt of the stock. Figure 5 is a view of the underside of the stock showing its grooved socket case. Where the same letters of reference occur on the above figures they indicate the same parts.

The nature of my invention and improvement consists in dividing the stock at the junction of the barrel and breech, and furnishing the butt of the stock with a horizontal bar or guide blade projecting from the lower portion thereof, fitted into a socket, sheath, or case, secured to the under-side of the stock, whereby the barrel and stock are supported, and allowed to have a longitudinal movement from the breech for the insertion of the cartridge into the chamber, and using a spring catch attached to the under-side of the said bar, for interlocking with the sheath or case, whereby the barrel is held securely in its place. When closed in with the breech chamber to confine the charge, this manner of mounting the barrel is designed to be applied to the musket, wherein the barrel is firmly banded to the stock and cannot slide independently of the latter.

A is that portion of the stock in which the barrel, B, is mounted; C is the butt of the stock, in which the breech, D, is mounted; E is the cock; G is the trigger guard; H is the cap nipple communicating with the breech chamber; I is the sight of the barrel; J is the chamber of the breech to receive the charge, enlarged at its outer end to receive the end of the barrel, B; when closed in with the breech, D, it is secured firmly to the butt, C, by bolts, a, b, c. K is the bar for supporting the barrel, bolted firmly to the under-side of the butt, and projecting horizontally forward into the case or sheath, L, let into and secured to the stock, whereby the barrel is permitted to move from and towards the breech; this bar, K, is provided with a spring catch, M, to

lock the barrel and stock, A, (which are banded together) to the breech where the charge is inserted, by the end thereof entering an opening, N, forward in the case, L; the bar, K, is also furnished with a pin or catch, P, near its outer end, which enters a slot, Q, made in the said case, L, the use of which is to arrest the movement of the barrel, B, from the breech by catching against the end of said slot, Q, (as shown in fig. 3), the slot allowing the barrel, B, and stock, A, to recede toward the breech to be again locked by the spring, M, after the insertion of the charge. The bar, K, is provided with a recess to permit the spring catch, M, to rest from the socket case, L, to move the bar with its stock. The upper portion of the supporting and guide bar, K, is made flat, and the lower portion convex to fit the socket case.

The operation of loading the musket is as follows:—The operator grasps the stock, A, with his barrel in his left hand, and with the fore-finger presses the spring catch, M, inwards, and thus unlocks the projecting bar, K, from the socket case, L, of the stock, and with the right hand separates the butt of the stock with the breech, D, from the other part of the stock, A, and barrel, B, until the pin or catch, P, strikes the end of the slot, Q, in the socket case, L, the cartridge is thus inserted, and the breech and barrel again drawn together, the end of the barrel entering the enlarged portion of the cartridge chamber or breech, D, where they are again locked together by the spring catch, M, entering the opening, N, in the socket case. C. V. NICKERSON.

#### Maryland Institute.

On Tuesday evening last week, Walter R. Johnson, Esq., delivered the closing lecture of the season before the institute. The subject was the Social and Industrial Relations of Man in America and Europe. The Baltimore papers (Sun and Clipper) speak in glowing terms of the lecture. The following extract from it is worthy of great attention:—

"In the University of Turin is given by one of its learned Professors a course of chemical lectures specially intended for students of Architecture. It is called chemistry applied to the art of the builder. How eminently serviceable might not such a course be in our country! Had even so much only of the laws of chemistry as relates to the temperature at which wood is liable to take fire been understood or attended to by the builders of our national capitol, we might probably have been spared the deplorable and discreditable loss of our great Congressional Library. And had something been known of the causes of decay and disintegration of building materials, our public edifices at the seat of government would not have so often required the mantle of charity to be spread over their multitude of sins, in the shape of coats of paint, daubings of putty, and patches of plaster."

#### Cheap Ocean Postage.

A resolution has been introduced into the Senate, in favor of reducing the postage on letters carried across the ocean. We go for such a law, heart and soul. It is certainly a very singular thing that a letter can be carried three thousand miles on land for three or five cents, but cannot be carried across to England, or from it, for less than 24 cents. It is said that the expense of ocean steamers is very great, hence a large postage has to be charged to pay their expenses. This is not good reasoning; the same kind of arguments were employed against the enactment of the cheap land postage law. It is our opinion that an ocean ten cent letter postage, across the Atlantic, would bring in as much money to the Post Office, as the 24 cents for each letter now. The increase of letters would be so great that it would cover all expenses. A ten cent ocean postage, might be tried, we believe, without the least risk; it would be a great blessing to men of business and millions in our country. Let the Senate wake up to cheap ocean postage; that is the intervention we want just now, along with any other useful measure.

An experimental trip has been made by a small locomotive weighing only three tons, on the Lowell (Mass.) railroad. It ran at the rate of 26 miles per hour, with 50 passengers,