

## AMERICAN PATENTS.

*List of American Patents which issued in the month of November, 1844, with Remarks and Exemplifications.* By CHARLES M. KELLER, late Examiner of Patents in the U. S. Patent Office.

1. For an improvement in the apparatus for the *Treatment of Fractures of Limbs*; Livingston Roc, White plains, Westchester county, New York, November 6.

The improvement in question is applied to the well known frame which is provided with joints and extension bars and screws to adapt it to limbs of various sizes, and to extend and retain the limb in any desired position, and consists of "three troughs or movable splints made of wood and so shaped as to correspond with the half of the leg and heel. The three differ in size only, and may be adapted to legs of all sizes. On the lower or convex side of these troughs or splints, and at about equal distance from the extremities thereof, is fastened a plate of metal with flanches on each side of it, and at such distance from each other as to fit the bar when the splints are placed upon it. And the design of them is to secure the said movable splints when sliding on the bar to which it is secured by a key. The object of the movable splint is to enable the surgeon, by removing one and substituting another, to employ which of them he pleases, according to the size of the leg, &c.; and also to enable the surgeon to adapt and treat with one trough only a greater variety of sizes than can be done with any known apparatus. There are other splints adapted to the outer and inner surfaces of the leg and ancle—these are also of different sizes, and have on the outside leather studs, through which the straps for binding them to the leg, &c. are passed. Another splint is adapted to the under side of the thigh, and made movable and secured to the thigh piece of the frame by means of a screw. And three other splints lined with leather are adapted to the sides and top of the thigh, and secured by straps, &c.

Claim.—"I do not claim the mode described of flexing and extending the framework; nor do I claim the mode of extending or shortening the splints as described. But what I do claim, is the combination of the splints (whether adjustable or not) with the hinged bar or framework; said bar being extended and flexed in substantially the manner described, and said splints being independent of the bar, and so constructed as to be readily attached or detached at pleasure, for the purpose herein described; the whole construction being substantially as herein set forth. I have applied the same principles of construction to the upper extremities, the modifications being only in form to suit the shape and motions of the upper limbs."

2. For an improvement in the *Straw Cutter*; E. Taylor, Rochester, Monroe county, New York, November 6.

The movable knife of this straw cutter is operated by having one

end jointed to a crank pin on the fly wheel, and the other to one end of a vibrating lever, by which a draw cut is given. At the junction of the knife and lever a connecting rod is jointed which extends down and is jointed to one end of a lever, turning on a fulcrum near the middle of its length, the other end being provided with a whetstone, which, as the knife descends, rises and rubs against the outer face of the knife, and sharpens it.

Claim.—“Having thus fully described the nature of my invention, what I claim therein as new, and desire to secure by letters patent, is the adjustable whetstone so arranged and combined as that it shall meet in its ascending angular motion the edge of the knife in its descending angular motion, thereby setting the edge in towards the straw-rest, and giving the edge of the knife an appearance much like that of the sickle.”

3. For an improvement in the *Truss for the Treatment and cure of Hernia*; Eliakim C. Darling, New Orleans, Louisiana, November 6.

Claim.—“What I claim as my invention, and desire to secure by letters patent, is the use of a continuous metallic band entirely encircling the body and fastening in itself, and of such materials as not to stretch by use, but of such malleability as to allow any person to shape it to themselves at pleasure; thereby doing away with the use of leather or other straps of stretching material.”

The pad and its appendages are connected with this metallic belt in the same manner as heretofore with the spring.

4. For a *Balance Crane for Raising and Weighing Heavy Bodies*; Louis Henry, Paris, France, assigned to Claudius Gignoux, New York city, New York, November 9.

“The nature of my invention,” says the patentee, “consists in combining with a lifting crane, a weighing apparatus, so that the articles that are raised by the crane, can be at once weighed, thereby facilitating the double operation.”

The mast of the crane instead of being supported at the top and bottom in permanent bearings, is connected with a standard, supported in the same manner as the mast of the ordinary crane, by means of links, and connected with a steelyard balance, so that the whole weight of the crane can be made to rest on the balance, and knife edges in links at the top of the mast.

Claim.—“Having thus fully described my improvements, and the operation of the same, what I claim therein as new, and desire to secure by letters patent, is the combination of the balance or steelyard with the lifting crane, substantially in the manner and for the purpose herein set forth.”

5. For an improvement in the *Grain Cradle*; Wm. A. Wood and John C. Loveland, Hoosick Falls, Rensselaer county, New York, November 9.

This is for making the teeth of metal tubes or partly of metal teeth and partly wood, instead of wood alone, and when made partly of wood and partly of metal, the hollow metallic part constitutes the extremity which is the most liable to bend.

Claim.—“What we claim as our invention and improvement, and desire to secure by letters patent, is the use of said hollow metallic teeth and hollow metallic parts of teeth; the metal being less liable than wood to relax and straighten.”

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6. For improvements in the *Cotton Press*; Jedediah Prescott, Memphis, Shelly county, Tennessee, November 9.

The follower of this press is operated by means of two parallel levers jointed to the underside of it (one at each end) and to a carriage, that runs on truck rollers on the bed of the machine, and is worked by cords passing around pulleys and extending to a capstan. The ends of the box are let into grooves in the follower or platen of the press, and work up and down with it, and at the end of the operation they are lifted out of these grooves and liberated by two short levers that strike against projections on the frame—these levers are designated in the claim by the letter *z*. The lower edges of the sides of the box are jointed to the frame, and, when closed, are held in place by two bars, which are thrown up towards the end of the operation, by pins connected and moving with the platen.

Claim.—“What I claim as my invention, and desire to secure by letters patent, is—1st. The combination of the inclined parallel levers with the horizontal carriage and rollers, arranged and operated in the manner and for the purpose set forth. 2d. The arrangement of the ends *d* of the box grooves in the platen, so as to rise and fall with the platen, and be liberated from it at the termination of the pressing.—3d. The combination of the levers *z* with the platen, arranged and operated in the manner and for the purpose above set forth. 4th. The manner of disengaging the bars from the box, by means of the pins upon the ascending ends of the box, in order to throw open the sides of the box, to tie and remove the bale.”

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7. For improvements in the *Tide Mill*; John Gerard Ross, New York city, New York, November 9.

The wheel is placed in a race, at one end of which there is a tide gate hinged to a wall beyond the end of the race and shutting against either side of the race; and at the other end of the race there are two current gates, one termed the “inner current gate,” and the other the “outer current gate,” these are hinged to the ends of the race way wall and shut against a pier placed beyond the end, and in a line with the middle of the width of the race way. The current in passing along opens the “current gate” and after acting on the wheel passes out through the “outer current gate,” and on the return tide the pressure of water closes this “outer current gate,” which causes the current to pass around to that side of the tide gate opposite to that at which it entered on the rise of the tide, throws it against the opposite

side of the race-way, acts on the same side of the wheel as on the rise of the tide and passes out through the "inner current gate." The dam walls are formed with pits open at the sides for the free ingress and egress of the water to act on floating caissons which sustain the wheel and always keep it at the required elevation. The shaft of the wheel (or wheels) is connected with the frame work of the mill by bars radiating from the axis of a cog wheel, into which mesh the cogs of the master wheel.

Claim.—"First. I claim as new, and of my invention, and desire to secure by letters patent, the mode described of fitting the tide-gate I, at one end of a race-way, formed by an inner and outer dam-wall, in combination with an outer current-gate K, and an inner current-gate L, at the opposite end of the race-way; the whole constructed and operating substantially as herein described.

Second. I claim the mode of forming the dam-walls with pits, open at the bottom, to receive and float the caissons that carry the water-wheel; and the combination therewith of the described means for regulating, adjusting, and directing the ascent and descent of the wheel or wheels, substantially as the same are described and shown herein.

Third. I claim the combination of the described mode of fitting the gates and wheel, and making them act together in the manner described herein."

8. For an improvement in the *Smut Machine for Cleaning Grain*; Jacob Groat, Troy, Rensselaer county, New York, November 9.

This is for the addition of a reservoir or spout to the case, or concave, which surrounds the beater and rubber, into which the grain is thrown, and the discharge therefrom is regulated by a gate, so that the grain may be kept in the machine as long as may be necessary to clean it thoroughly.

Claim.—"Having thus fully described my improvement, what I claim therein as my invention, is, first, the regulating reservoir or spout, constructed as above described, in combination with the cylinder and concave, as herein specified."

9. For an improvement in the *Means of Removing Mud, Sand Bars, &c., from the Beds of Rivers, &c.*; Dennis Vermillion, Washington, D. C., November 9.

A mass of logs are put together in the form of a boat, to be moved down by the current, tide, or otherwise, and which from its great weight and strength will acquire great momentum. Iron breakers, sharpened at the lower end, pass obliquely through apertures in this mass, and extend down to the depth required to act on the obstruction to be removed. At the stern there is suspended a drag rake, connected with the boat by means of two arms that slide freely in apertures in the ends of a cylinder which is hung on appropriate journals; and for the purpose of raising this rake, cords extend from it to a windlass on the boat. The operation of the apparatus is this—The boat being put in motion by the current, or otherwise, is directed towards

the sand bank, or other obstruction, and the breakers and rake having been set to the required depth, the breakers cut up and loosen the sand, mud, &c., which is then raked into deeper water.

Claim.—“What I claim as my invention, and desire to secure by letters patent, is the combination of a bulk of square logs, resembling the hull of a vessel, the adjustable breakers and the rake with its oscillating cylinder and windlass; the whole forming an apparatus for removing sand or mud bars or shoals, or other similar obstructions to navigation, from the beds of rivers and other waters; said apparatus being (substantially) constructed, and operated, as herein above described.”

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10. For an improvement in the *Cultivator Tooth*; James Birdsell, Hamilton, Chester county, Pennsylvania, November 9.

The nature of this invention consists in attaching a separate cutter to the tooth of a common cultivator constructed in the ordinary way; the said cutter being so formed as to be turned to make the heel become the point, and vice versa. It is convex on the upper, and concave on the under side, and the latter rests on the ground, so that being reversible it will keep sharp until worn out.

Claim.—“Having thus fully described my improvement, I wish it to be understood that I do not claim a self-sharpening cultivator tooth, as that is known; but what I do claim as my invention, and desire to secure by letters patent, is the self-sharpening convex cutter constructed substantially as herein set forth, in combination with the cultivator tooth, in the manner and for the purpose described.”

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11. For an instrument for *Measuring Coats, Vests, &c, and for Drafting the same for Cutting*; John P. Combs, Trenton, Mercer county, New Jersey, November 9.

Two scales are jointed together and provided with a protractor, and to each of these scales there is a measuring tape attached by eyelet holes and buttons at given distances apart on the face of the scales and corresponding with the marked divisions thereon.

Claim.—“What I claim as my invention, and desire to secure by letters patent, are the jointed protractor, and the straps or measures, and attached with the screw and eyelet holes, as before described; by means of which all the angles necessary to be had, in order to insure a perfect fit, are easily and accurately obtained.”

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12. For an improvement in the mode of *Constructing Fire Places and Flues*; Daniel Hemingway, Leesburg, Harrison county, Kentucky, November 13.

The back of the fire place is vertical to a certain height, it then falls back about one foot inclining upwards to the height of the arch, and from this line it widens out on each side in a circular form, and contracts in the same manner to form the flue.

Claim.—“I do not claim expanding the flue above the throat; but what I do claim as my invention, and which I desire to secure by letters patent, is dropping the back of the fire place below the arch,

in the manner described, in combination with the expanding flue, substantially in the manner set forth."

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13. For an improvement in the *Horizontal Wind Mill*; Daniel Dennett, Centreville, St. Mary's Parish, Louisiana, November 13.

The wings or vanes of this mill are jointed to radial arms, and are suspended by cords to vibrating levers that pass through, and are jointed to, the shaft above the arms to which the wings or vanes are jointed, so that by this arrangement the moment one vane begins to make "back wind," (as it is termed,) it is blown down, and by its connection with the one on the opposite side of the shaft draws it up to catch the wind.

Claim.—"Having thus fully described the nature of my improvements in the horizontal wind-wheel, what I claim therein as new, and desire to secure by letters patent, is the manner herein set forth, of combining the motion of the two opposite vanes by means of cords, chains, or rods, by which they are connected to the end of a vibrating beam, substantially in the manner and for the purpose herein made known."

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14. For a machine for making *Tuscan or Leghorn Braid*; Elisha Fitzgerald, New York city, New York, November 13.

It is to be regretted that, from the necessary complexity of the mechanical arrangements, a description without drawings could not be made sufficiently clear. After the pieces of straw have been deposited in a box, the whole operation of taking each separate piece, introducing, bending it over, trimming off the surplus, and transferring and retransferring the pincers or nippers by which the pieces are held, and the completed braid delivered, is carried on, with the most beautiful regularity, without the hand of an attendant.

As the claim refers to, and is wholly dependent on the drawings, we are under the necessity of omitting it.

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15. For an improvement in the manufacture of *Lamp Black*; Gilbert Mini, Philadelphia, Pennsylvania, November 13.

The rosin or other material to be burned is put into a furnace which opens into a large room, without chimney or any other opening than the one communicating with the furnace.

Claim.—"What I claim as my invention and improvement, and desire to secure by letters patent, is the mode herein described of burning lampblack—that is to say, burning it in a confined building or room without a chimney or draught, substantially in the manner set forth in the above specification."

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16. For an improvement in the *Point for Manifold Writers*; Jesse K. Park, New York city, New York, November 13.

The nature of this improvement consists in making a spiral flexible point, of either steel, platinum, gold or silver wire, or any other metal suitable for the purpose. Said spiral to form a cone and so

attached to the handle as to have a point within it to check the elasticity and prevent the point from yielding too much.

Claim.—“What I claim as my invention, and desire to secure by letters patent, is the manner in which I construct my point for manifold writing, by combining with the conical spiral wire point; the check point, in the manner described, and attaching them to a handle for the purpose described.”

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17. For an improvement in the method of *Preventing Chimneys from Smoking*; Joseph Gilbert, Frease's P. O., Stark county, Ohio, November 13.

Channels are made around the fire place, before the pilasters and fascia are put on, which communicate, by means of vertical channels in the stack, with the spaces between the floors and ceilings to conduct cold air to the fire place. The pilasters and fascia of the mantel are placed over these channels, thus forming the front thereof. The lower portion of the fascia of the mantel is brought to a feather edge, so as to form a horizontal longitudinal space behind the mantel communicating with the horizontal air channel in the breast of the chimney, through which space behind the mantel, the cold air passes from the said channels to the fire place.

Claim.—“I do not claim admitting the external air for the purpose of preventing chimneys from smoking, as that has been done before; but what I do claim, is the mode herein described of introducing the air—that is to say, between the mantel and the arch, in the manner and for the purpose described.”

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18. For an improvement in *Manufacturing Lard and Tallow*; H. A. Amelung, St. Louis, Missouri, November 13.

This process consists in extracting fat from fibrin, &c., by mechanical means, such as rollers, and discharging into a vat divided into an upper and lower compartment by a sieve, which permits the oil and fat to pass into the lower compartment, from which it is put into a warm water bath, to separate the oil and fat entirely from the fibrin, albumen, &c. And, in conclusion, the fat is put into a vessel heated by steam, to be cooked.

Claim.—“What I claim therein as new, and desire to secure by letters patent, is the process herein described of obtaining fat from the fibrin, &c. before it is cooked, and afterwards cooking the expressed fat in the manner described; by which the danger of injury to the lard, by cooking it with its impurities, is obviated, and a much purer article obtained, as well as a saving effected.”

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19. For an improvement in the machine for *Sowing Grain Broadcast*; Ezra Fisk, Fayette, Kennebec county, Me., November 18.

There is a cylinder placed at, and which closes up, the opening in the bottom of a hopper. This cylinder is grooved longitudinally, and in rotating, the grooves carry out the seeds, which would be thrown on the ground in rows, were it not that the frame, or “platform,”

which holds the hopper and cylinder, has a reciprocate movement communicated to it by spurs on the axle of the supporting wheels of the machine, and a spring, which casts the seeds broadcast over the surface of the ground. Along the lower edge of the hopper there is a brush for clearing the surface of the cylinder of the surplus seeds.

Claim.—“What I claim, is the combination of the vibrating grooved cylinder with the vibrating slide or platform, and also, in combination with the vibrating cylinder, the brush as described; said parts being arranged and operated substantially in the manner set forth.”

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20. For an improvement in the *Wheat Fan or Winnowing Mill*; William Stanley, Jamestown, Guilford county, N. C., November 18.

Claim.—“I do not claim a spiral fan wheel, as that has been before used with winnowing machines; but what I do claim, is placing upon the same shaft two spiral wheels, so arranged and combined that the air shall be drawn in at both ends of the concave cylinder which surrounds them, and contracted and forced out at the centre upon the screens, or be used for any other purpose where a strong blast of air is required, substantially in the manner herein described.”

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21. For an improvement in the *Cooking Stove*; James H. Lyon, Schenectady, New York, November 18.

The furnace of this stove is placed above the oven, and slides thereon, from front to back, by means of handles passing through the front of the stove, to regulate the baking in the oven.

Claim.—“I claim as my invention, the government of the heat of an oven during the process of baking, by combining therewith a movable furnace, situated immediately above said oven.”

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22. For improvements in the *Mowing or Reaping Machine*; Wm. F. Ketchum, Buffalo, Erie county, New York, November 18.

In this machine, the grain is cut by means of vibrating cutters, projecting somewhat in the manner of saw teeth from one edge of a plate. The cog gearing which forms the connexion between this vibrating plate and the supporting wheels of the carriage, to which the whole mechanism is attached, is placed within the supporting wheels that have cogs on their inner peripheries, and are cased in to protect the mechanism.

For the purpose of bending in the heads of grain and holding them whilst being cut, there is an endless apron which passes over rollers at a proper height above the cutters.

Claim.—“What I claim as my invention, is the combination of the driving wheels with the cutters, in the manner described, by forming internal gear on the wheels, and inclosing all the driving gear inside of them by the construction and arrangement above set forth.

and I also claim the employment of an apron in combination with the cutters, for turning in the tops of the grain, as herein described.”

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23. For an improvement in the *Machine for Separating Grain*



*from Straw; Manning and Christopher Packard, Clarendon, Orleans county, N. Y., Nov. 18.*

A belt, or apron, is made to pass over rollers, at the upper and lower ends of an inclined board, and above this there is arranged a succession of rotating beaters, the shafts of which are placed at equal distances apart from end to end of the inclined plane. These beaters are composed of bars parallel with the shaft, and arranged in an ellipsis around it, and the greater diameter of the first is placed at right angles to that of the second, the third corresponds with the first, the fourth with the second, and so on, throughout the series. The grain and straw from the thrashing machine is discharged at the top of these beaters at the bottom of the plane, and by their rotation, the straw is carried up and discharged at the top, and the grain thus separated falls into the apron, and is by it carried to a fan.

Claim.—“What we claim as our invention, and which we desire to secure by letters patent, is the combination and arrangement of the revolving oval racks for conveying the straw and separating the grain therefrom, operated in the manner set forth, or other mode substantially the same. We also claim the combination of the revolving endless apron, with the before described revolving oval racks, arranged in the manner and for the purpose set forth.”

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34. For improvements in the *Rotary Steam Engine; Matthew Fletcher, England, Nov. 18.*

The pistons of this rotary engine are attached to, and rotate with a drum placed within a permanent cylinder and eccentric thereto, the periphery of the drum being in contact with one part of the inner periphery of the cylinder. The outer face of the pistons are segments of circles equal in diameter to the inner periphery of the cylinder, and their inner edges are jointed to slides that play in radial grooves in the drum. As it is indispensable that the outer faces of the pistons, in their rotation, be kept concentric with, and therefore, their inner edge converging to the centre of the cylinder, their ends are connected with segments that rotate in an annular, formed by two rings or circles, concentric with the cylinder. And to prevent, in some measure, the friction produced by the centrifugal force which presses the pistons against the periphery of the wheel, a ring, or hoop is let into a groove in the face of the segments on the ends of the pistons, which binds them together and prevents the centrifugal action.

Claim.—“What I claim, is—1st, the concentric and eccentric motion, in conjunction with the jointed fliers or pistons, which causes the said fliers or pistons always to point to the centre of the cylinder, and keep the same radius as the cylinder. The eccentric motion, alone, would not carry out the fliers or pistons to form a true circle, if not in conjunction with the principle of jointed fliers.

“2d. I claim the method of taking the friction from the outside of the fliers or pistons, against the sides of the cylinder, occasioned by the centrifugal force, by means of the ‘ring or hoop’ which unites the fliers or pistons in manner substantially as described.”

35. For an improvement in the *Smelting Furnace*; Leman Bradley, Sharon, Litchfield county, Connecticut, November 18.

This consists in dividing the stack into two, three, or more compartments, by means of partitions, extending from the top to a point a little above the entrance of the blast. Into one of these divisions the coal only is put, and the usual charge of ore, coal, &c., in the others; and that part of the hearth which is below the coal division is elevated above the other portion, that the coal may be kept up to the blast, and permit the melted metal to descend below it. The patentee sums up the operations and the advantages in the following words, viz: "The greatest part of the charge being put in the compartment next to the headstone, the metal will rest on the boshes, and will not come down faster than it is melted by the blast—the principal part of which comes in through the body of coal in the chamber, from the blow-pipe; the combustion being thereby rendered perfect before the blast reaches the metal, a great saving of fuel is effected, and a better quality of iron is produced. The damper over the coal chamber is kept down during the operation, and the gases are allowed to escape through the chambers on the opposite side of the partition. The fuel in the chamber rests on the hearth, and cannot fall much below the blast. A small blast can also be thrown in on the opposite side of the furnace to the main blast, which is regulated at pleasure."

Claim.—"Having thus fully described my improvements, what I claim therein as my invention, and desire to secure by letters patent, is dividing the interior of the furnace stack into two or more compartments, by partitions, which descend nearly to the bosh of the furnace—the bosh being the same as that of the common blast furnace, except the elevated hearth; the whole being constructed, arranged, and combined, in the manner and for the purpose herein set forth.

"I also claim the hearth, raised above the common hearth, and with the bosh, so that the melted metal will fall below the blast, and the fuel be retained up to the blast, as set forth."

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36. For an improvement in the *Press for Packing or Compressing Cotton*; Peter M. Wright, New York City, N. Y., November 26.

The follower of this press is carried down by means of connecting rods, jointed to the follower and to cogged segments, operated by pinions; and for the purpose of increasing the capacity of the press for larger bales, the rods are connected with the follower by means of notches (called by the patentee ratchets) in the rods, which fit into pins or wrists projecting from the sides of the follower.

Claim.—"I claim the method of increasing the capacity of the press, by prolonging the upper ends of the connecting rods or levers, in connection with the ratchet as described."

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37. For an improved method of making *Stereotype Plates*; Clement Davidson, Saratoga, New York, November 26.

Claim.—"Having thus described my improvements and their operation, what I claim as my invention, and desire to secure by letters

patent, is—1st. The joining the moulds in the manner described, or in any other substantially the same.

"3d. I claim constructing the casting pan in the manner described, with upright tubes at the sides thereof, through which the metal flows into the pan; and the cover having a cup formed on the top thereof, with holes through it into the pan: the whole being arranged in the manner and for the purpose described.

"3d. I claim the combination of the moulds, the floaters, or plates between them and the pans, in the process of stereotyping, substantially in the manner and for the purpose set forth; by which any convenient number of plates can be cast at one time, without danger of breaking the moulds, or injuring the face of the letters, by dirt, or dross, or shrinkage.

"4th. I claim the combination of the revolving and stationary cutters, for reducing and leveling the back of stereotype plates, as herein made known; and, in combination therewith, the springs or fingers for holding down the plates.

"5th. I claim the combinations of the chisels, constructed and arranged as herein described, with the ordinary leveling machine, in the manner and for the purpose above specified.

"6th. I claim, also, the revolving marginal cutters, for leveling the edges of stereotype plates, arranged and constructed in the manner set forth, in combination with the chiseling machine for finishing stereotype plates."

Without drawings, or a description beyond the limits of this work, the nature of these improvements could not be indicated better than by the above claims.

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38. For improvements in the *Machine for Cutting Shingles*; Tillott Cole, Kent, Putnam county, New York, November 26.

In this machine, the knife for cutting the shingles is attached to a sliding gate, and the block of wood is put upon a platform, and, after the cut of a shingle, pushed up by the attendant, for another cut; and the block is gauged by means of two vertical eccentric rollers attached to, and moving with the knife gate. The eccentricity of these rollers is for the purpose of so gauging the block as to cut the butt alternately, from opposite ends of the block, by giving them half a revolution to each stroke of the knife, which is effected by an arrangement of levers jointed to the gate and pitman, that, by means of a hand taking into a ratchet wheel, turn a cog wheel connected with a pinion on each of the rollers.

Claim.—"What I claim as my invention, and desire to secure by letters patent, is—1st. The combination of the eccentric rollers, for gauging the thickness of the shingle to be cut, with the knife gate, as herein described. 2d. In combination with the eccentric rollers on the vibrating gate, the arrangement of cog-wheels, ratchet, and levers, for rotating the eccentric rollers as described."

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39. For an improvement in the *Hand or Bench Plane*; Levi Sandford, East Solon, Courtland county, New York, November 26.

A plate of iron is attached to the back side of the "throat," or rather the bed on which the bit lies, which receives the screw that secures the cap to the bit, to make a double iron, so that the same screw binds the two irons together and to the stock, the two irons being provided with elongated holes for the screw to pass through to admit of adjustment. And this same plate or block of iron attached to the stock, receives the end of a screw which extends up beyond the upper end of the bit, where the two are connected by a collar, so that by turning the screw, the bit can be set to any degree of cut required.

Claim.—"I am aware that a patent has been granted for a plane, in which there is a piece of metal secured to the back part of the throat of the plane, to receive a screw, by which the bite of the bit is regulated. And I am also aware that a screw has been used for drawing cutting tools in and out, at pleasure, to regulate the degree of bite; and therefore I do not claim these devices as my invention. But what I do claim as my invention, and which I desire to secure by letters patent, is the arrangement by which the piece of metal at the back side of the throat receives the screw that secures the cap embracing the bit; and, also, the set screw for the adjustment and moving of the bit; by which arrangement, the said bit can be set without moving the cap, as described."

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40. For an improvement in the *Mortise Latch for Doors*; Wm. Wilson, Northampton, Hampshire county, Mass., November 26.

Claim.—"Having thus fully made known and described the manner in which I arrange and combine the respective parts of my cylindrical mortise latch, what I claim therein as new, and desire to secure by letters patent, is the manner of retracting the bolt by means of two slides, actuated by means of a toothed pinion—said slides receiving the horns of the bolt, and constituting two racks, formed and operating substantially as set forth."

Each of the two slides moves in opposite directions, and the horns of the bolt are back of a shoulder on the slides, so that the slide that moves backward by the turning of the pinion, which is on the spindle of the knobs, carries the bolt back, whilst the other is at liberty to move forward. By this arrangement, the turning of the knobs in either direction will move the bolt.

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41. For an improvement in the *Cheese Press*; John Martin, Jr., Medina, Medina county, Ohio, November 26.

The piston of this press slides in a frame, the bottom of which, constitutes the bed of the press. The head of the piston is provided with a set of rollers, arranged around the counter, and the top of the frame is provided with a corresponding set. One end of a cord is attached to the head of a piston and passes around the two sets of pulleys, and then through a hole in the piston head to a windlass above. After the cheese has been put under the piston of the press, the windlass is turned sufficiently to suspend the whole press, and by the arrange-

ment of the cord to which it is suspended, the weight of the press continues to make pressure on the cheese.

Claim.—“What I claim as my invention, and which I desire to secure by letters patent, is the before described combination of the block, or frame, of the self-acting press, with the piston, cord, pulleys, and windlass, suspended and operating in the manner and for the purpose set forth.”

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*List of American Patents which issued in the month of December, 1841, with Remarks and Exemplifications. By CHARLES M. KELLER, late Examiner of Patents in the U. S. Patent Office.*

1. For improvements in *Machinery for Raising Sunken Vessels*; John Custis, Yarmouth, Barnstable county, Mass., December 10.

Frames are built on two floats, and these are connected together by means of several truss frames, leaving space enough between the two floats for the reception of the vessel to be raised, and the ends of the truss frames rest on the heads of jack screws. A chain, (or chains,) passes around the body of the vessel, below what constitutes the water line of a vessel, and is then connected with the truss frames by other chains in the manner fully expressed in the following

Claim.—“I shall claim the peculiar combination of the two truss frames extending between two opposite standards, each having depending chains with links, or hooks, by which, said truss frames may be alternately connected to the vertical chains which are attached to the horizontal chain extending around the vessel, or about the bottom of the same, as above explained, by which arrangement of the apparatus the vessel may be raised by bed screws, as described.

“Also, the combining with said truss frames, the horizontal chain whose ends are passed through loops, or strong rings, attached to it where it comes in contact with each side of the bow abaft the cut-water, by which disposition of loops upon the chains, the chains can be fitted to vessels of different sizes, and be caused to bind tightly around the bottom, so as not to slip over the same; the whole being arranged, constructed, and operating substantially as above explained.

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2. For a machine for *Turning or Bending the heel of Scythes, or that part which fits into the Snath*; Abel Simonds and A. G. Page, Fitchburg, Worcester county, Massachusetts, December 10.

The heel of the scythe is griped between a rest block, attached to the top of a bed plate, and a sliding gripping bar operated by a hand lever, arranged below the bed plate, and then that part of the heel which is to be bent, and which extends beyond the gripping bar and rest block, is bent by a bending lever jointed to the bed plate, and operated with a toggle joint lever connected with a sliding rack, the teeth of which are thrown into gear with a pinion by the lever which operates the gripping bar.

Claim.—“Having thus described our invention, we shall claim the combination of the bending lever with the gripping bar, and also with

the rest block, and operating the said bending lever, by the combined arrangement of toggles or progressive levers, rack bar and pinion, the whole being arranged substantially as herein set forth."

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3. For improvements in machinery for *Raising Blocks of Ice from a Pond*; Nathaniel J. Wyeth, Cambridge, Middlesex county, Massachusetts, December 10.

In this piece of mechanism there are two gigs, or vertically sliding frames, one for hoisting the blocks of ice from the water and depositing them on to the inclined railway, down which they slide to the other gig, or sliding frame, for letting down the blocks on to a car or sled.

The hoisting gig is provided with balance bars, jointed to the frame of the gig, which correspond with the rails of the railway, and they are so jointed to the frame as to have their greatest length from the fulcrum out towards the railway, so that the weight of the block of ice will preponderate and cause the balance bars to take the inclination of the railway.

Claim.—"I shall claim the application to the hoisting gig of the *balance bars*, constructed and operating substantially as above set forth. Also the combination of the depressing gig with the receiving railway; and the combining of the said depressing gig and receiving railway with the elevating gig; the whole being constructed, arranged, and operating substantially in manner and for the purposes hereinbefore explained."

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4. For improvements in machinery for *Raising Blocks of Ice from the Water and Depositing them on a railway*; Nathaniel J. Wyeth, Cambridge, Middlesex county, Massachusetts, December 10.

In this improvement I shall claim, elevating blocks of ice from a lower to a higher level, by means of the sled, in combination with the ascending and descending inclined planes and horizontal rails extending over the descending plane, and which horizontal rails receive the blocks of ice, when the sled passes down the rear plane, the whole being constructed, arranged, and operating substantially as herein above set forth.

Also, that arrangement of machinery or addition to the sled which is herein termed the *catch*, for the purpose of retaining the blocks of ice over the sled and preventing them from sliding down the inclined plane when they are received upon the slide rails of the planes, the same being constructed substantially as herein before explained.

Also, the method of connecting the inclined and descending planes and horizontal rails with the transportation railway, at any desirable station of the latter, by arrangement of curved slide and guide rails supported on a platform having railway wheels connected to it by which it may be transported from place to place as occasion may require, the whole being constructed and arranged on principles and in manner substantially as described. Also constructing the rail way cars in the manner above set forth, with slide rails arranged on their

bottoms and guide rails on their sides, and connecting those of each car by the hinged ends, each having a small lapping rail upon it, which extends over that in contiguity with it, and by means of which any two cars may be united, whatever ends of the same are brought together, the whole being for the purpose of sliding the blocks throughout the train and leading the same thereon and unloading the same therefrom as herein before described.

Also curving the guide rails and commencing them in rear of the slide rails as described, for the purpose of causing the ice to resume its proper position on the sled to pass up the inclined plane, should the ice by any accident have been forced over the side of one of the runners more than that of the other.

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5. For improvements in *Machinery and Railway Cars for discharging Blocks of Ice from Cars and depositing them in Store Houses*; Nathaniel J. Wyeth, Cambridge, Middlesex county, Massachusetts, December 10.

Claim.—“Constructing cars for the transportation of ice, with the elevating lever bars, which discharge the blocks of ice out of the sides of the cars, the said lever bars being elevated by bent levers (or other suitable means,) as described, and combining said lever bars with the slide rails of the cars, and with the tables or platforms arranged by the sides of the cars, and upon which the ice is received when discharged from the cars, the said tables being constructed on the principles herein before mentioned. I also claim the arrangement of the slide rails,—so that they may be elevated above the surface of the table, the whole of the above parts claimed being constructed and operating substantially in the manner as I have herein before set forth.”

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6. For an improvement in *Water Wheels*; John L. Smith, Salina, Onondaga county, New York, December 10.

Two of these wheels are put on a horizontal shaft, one on each side of the trunk or tunnel through which the water is applied to the wheel, the face towards the tunnel being open for that purpose. The apertures or issues for the water extend from the shaft to the outer rim, which is scalloped for that purpose, and are formed by the forward edge of one bucket, and the back edge of the other, these being placed diagonally for this purpose. And to the back edge of each of these buckets there is a flanch radial in its length, and parallel with the shaft in the direction of its width, which extends to the inner face of the wheel, or to the floor.

Claim.—“What I claim as my invention, and desire to secure by letters patent, is the mode of constructing the bucket as set forth, namely, by forming it with a flanch on the inner face of the wheel, extending from the hub, or centre, to the circular scalloped rim, and attaching its outer edge to said scalloped rim, all as before described.

7. For an improvement in the *Smut Machine for Cleaning Grain*; John D. Beers, Philadelphia, Pennsylvania, December 10.

A rotating fan is placed in a horizontal cylinder open at each end near the shaft, for the admission of air, and the cylinder is provided with conveyors placed diagonally on the outer surface, and communicating with the inside by means of slots through which the grain is forced by the current of air into them, and at one end they communicate with a semicircular conduit on one of the heads, through which the dust, chaff, &c., is discharged. The grain is fed into the cylinder through an inclined trunk connected with the cylinder by means of a rule, or other joint.

Claim.—“What I claim therein as my invention, and desire to secure by letters patent, is the manner in which I have arranged and combined the cylinder, the conveyors, and the openings therefrom, into and through the conduit or tubular space on the head of the cylinder, for the purpose herein fully explained and made known. I claim also the manner of feeding the grain into the cylinder, containing the revolving vanes, or beaters; the same being introduced through an inclined trunk or pipe furnished with a rule or other analogous joint so as to give any desired elevation thereto, and so that its inclination may be graduated to the nature of the grain and the velocity of the motion of the fan; and I likewise claim the mode of regulating the winnowing of the grain in its discharge from the cylinder, according to the intensity of the blast produced by the vanes, by means of a discharge tube furnished with a graduating joint, in combination with the vanes; by means of which arrangement, the same blast is made to winnow the grain, both in the feeding and discharge tube, substantially in the manner herein made known.”

8. For an improvement in *Carriage Springs*; R. B. Brown, Essex, Chittenden county, Vermont, December 14.

At the bottom and on each side of the body of the carriage, there are two helical springs wound on a bar; they are held between permanent blocks, and the end of sliding rods connected with straps attached to each end of a grasshopper spring; and a roller attached to each end of the carriage body frame rests on these straps, so as to render available the force of the grasshopper and the helical springs.

Claim.—“What I claim is the arrangement of the helical springs, rods, straps, and rollers, in combination with the grasshopper springs, for the purpose and in the manner described.”

9. For an improvement in *Tuyeres for Forges*; Riverius C. Stiles, and Joseph S. Graves, East Bloomfield, Ontario Co., N. Y., December 14.

Two pyramidal tubes project from the top of the wind chest, the space between them being sufficient for the bed of the fire, and the apertures for the discharge of the wind being near the top of the pyramids and in a direction towards each other, so as to concentrate the blast between the two pyramids.

Claim.—“What we claim is combining with a wind chest arranged as described, two or more tubes, or two or more apertures inclined towards each other, so as to produce a concentrated blast.”



10. For an improvement in the *Horizontal Double Acting Suction and Force Pump*; Joel Farnam, Stillwater, Saratoga county, New York, December 14.

Claim.—“I am aware that pumps have been made and patented with two pumps or channels placed at the side of the cylinder and extending from top to bottom, separated by a partition extending from end to end, and provided with valve seats, and cups, at top and bottom, or at bottom alone, and therefore I wish it to be understood, that I do not claim these modes of arrangement in this application.— But what I do claim as my invention, and desire to secure by letters patent, is the arrangement of the trunk, as above described, on each side of a partition placed equidistant between the two ends of the cylinder, each one communicating with that end of the cylinder nearest which it is placed, and provided with cups and valves above and below the two trunks, substantially as herein set forth.”

11. For an improvement in the *Manner of Combining a Coking Oven for Coking Bituminous Coal, with Boilers for Generating Steam*; Reuben McMillen, Middlebury, Summit county, Ohio, December 14.

Claim.—“I do not claim to be the first that has combined an oven for coking with a boiler or boilers for generating steam, with the intention of economizing heat, but what I do claim as new in my apparatus is the method of applying heat in the coking of bituminous coal, and of coking the same by means of an oven, or ovens, consisting of two or more compartments, divided from each other by close partitions, and to which compartments the coal is supplied, and its combustion and coking regulated as set forth, the same being combined with the boiler, or boilers, as specified, and the whole being constructed and operating substantially in the manner described.”

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*Decision in a suit, brought by John B. Emerson, in the Circuit Court of the United States, for the infringement of his patent for a Submerged Wheel with Spiral Propellers, by Hogg & Delamar.*

This was an action for an alleged infringement of a patent granted to the plaintiff for a submerged wheel, with spiral paddles, intended to propel vessels. The defendants conduct the Phoenix Foundry, in the city of New York, and had fitted various vessels with “Ericsson’s propellers.” The principal question in the cause was, whether these propellers, claimed to have been patented by Mr. Ericsson, were substantially the same as the wheel patented by the plaintiff.

The plaintiff, Mr. John B. Emerson, produced and read to the Jury a copy of his letters patent, dated 8th March, 1834. He proved, by Dr. Jones, that, at the time of filing his specification, he deposited in the Patent Office a drawing of the wheel, and also a model. The original specification, drawing, and model, were destroyed by the fire which consumed the Patent Office in December, 1836.

The counsel for the plaintiff then produced and offered to read a

certified copy of a drawing made by the plaintiff, and filed in the Patent office on the 28th February, 1844; this was objected to by the defendant's counsel, on the ground that the specification did not refer to any drawing, and that none had been annexed thereto—this objection was overruled, and the drawing was put in evidence.

The deposition of Dr. Jones, of Washington, was then read, by which it appeared that the plaintiff came to that city in March, 1844, and had with him the model of his improved wheel; that Dr. Jones was consulted by him, and then advised him that the drawing filed in February was imperfect, and an inaccurate delineation of the wheel; and that thereupon, Dr. Jones prepared a new drawing, with references, which was sworn to by Emerson, and filed on the 27th March, 1844. The counsel for the plaintiff then offered to put this corrected drawing in evidence. The counsel for the defendants objected, upon the ground that the Commissioner of Patents had no right to receive and file more than one drawing, and that by the filing of the drawing made by Emerson in February, the power conferred by the Act of 1837 had been exhausted. The Court overruled the objection, and the second drawing was put in evidence.

The counsel for the plaintiff then produced the model of a ship, with the propeller wheel, patented by the plaintiff, and then read the deposition of Charles Robinson, who deposed that he had made the said model in the year 1837, in New Orleans, and that it had been publicly exhibited for a year, in the Merchants' Exchange of that city, and from thence was taken to the plaintiff's ship yard.

The plaintiff's counsel then called William Serrell, who testified that he was a civil and mechanical engineer. Being shown models of the plaintiff's wheel, and of Ericsson's propeller, he stated that he had examined them, and had been forced into the conclusion that they were essentially the same.

This witness was subjected to a very long and minute cross-examination, which strongly exhibited his accurate and scientific acquaintance with the principles of practical mechanics. He stated, in substance, that the two machines were substantially the same in mechanical construction and action; that he could construct the plaintiff's wheel from his specification. He went into a detailed explanation of the specification, and said, that, taking it as a whole, he considered it sufficiently disclosed that which the inventor intended to construct.

The plaintiff's counsel also called James P. Allaire, who testified that he had been engaged for many years in making steam engines and other machinery; that "Ericsson's propeller" was identical in mechanical construction and effects with the plaintiff's wheel. He examined the specification, and testified that he could from it construct a wheel similar to the models produced in Court.

John C. Kiersted testified that he was a practical mechanic, and that, taking the specification, with either of the drawings filed by Emerson, he could construct a wheel similar to the models. He also proved that the defendants had made and applied "Ericsson's propellers" to a large number of vessels.

Stephen E. Glover testified that he was acquainted with Ericsson's propeller; that he had been interested in his patent, and that the charge for the use of his propeller was three dollars per ton for large vessels, and two dollars and fifty cents per ton for those of a smaller class.

The counsel for the defendants admitted that they had applied "Ericsson's propellers" to six vessels, each of 150 tons, and to one vessel of 340 tons.

The counsel for the defendants then called Dr. Dionysius Lardner, who testified that, before the date of the plaintiff's patent, he had seen propellers in England which had been patented by Mr. Perkins, and also by Mr. Smith. Models of them were produced, but the witness admitted that they differed substantially from the plaintiff's. He testified that the specification was vague and indefinite, and that he could not, from its directions, construct a wheel such as the plaintiff claims to have patented.

The deposition of Charles M. Keller was then read. He testified that he was a clerk in the Patent office; that he had officially examined the two patents of Emerson and Ericsson; that, in his opinion, they were different, and did not conflict; and that he had made a report to that effect to the Secretary of the Treasury.

James J. Mapes and William A. Cox testified that they were consulting engineers, and that they had read the plaintiff's specification; that it was vague and indefinite, and that they could not, from its directions, construct the wheel claimed by the plaintiff. Upon cross-examination, these witnesses stated that they were not practical mechanics.

Joseph Belknap, a draughtsman in the employ of Dunham & Co.; James Cochran, second engineer of the steamer Princeton; and George Birkbeck, jun., a person in the employ of the defendants, stated that they could not, from the specification alone, have constructed the wheel; but that, with the aid of the corrected drawing made by Dr. Jones, they could have done so.

The Court charged the jury, that the patentee is bound to file a specification of his discovery, which shall apprise the public of his invention without ambiguity or uncertainty; that, if they shall find that the plaintiff originally filed drawings, so that all persons might have examined them, and that such drawings were similar to those produced in the trial, then they might come in aid of the specification. He directed the jury to view it as the whole specification, and gather from it what the plaintiff intended to claim. His Honor then examined the terms of the specification in detail, and reviewed the testimony of the witnesses. He instructed the jury, that they must construe the language as addressed to men skilled in this branch of art—and if a competent mechanic could, from it, have constructed the wheel, it is sufficient. If such a mechanic could not, from the specification, have constructed the machine, then the plaintiff must fail, unless he can help it out by the drawings; that these must be shown to have been filed with his original application; that in this case, the Patent Office and its contents having been destroyed by fire, he is

compelled to supply the evidence in the best way he can. The Judge then reviewed the evidence as to the drawings filed in 1844. He further instructed the jury, that it had been contended that Emerson had abandoned his patent to the public by non-use; that this might arise either from positive abandonment, or might be implied from circumstances—and if the jury should find that he had relinquished his right, then he could not maintain this action; that a patentee cannot lie by an unreasonable time, and allow his invention to go into use. The Judge then reviewed the evidence upon this point.

He further charged, that it did not appear to be denied, that if the plaintiff's patent was valid, that the defendants had infringed it; that the jury were bound, if they found in favor of the plaintiff, to give him a verdict for his actual damages; that in some cases the Court had instructed the jury, that they might, in addition, give damages to compensate the plaintiff for the expenses of the litigation—but that, in the present instance, he thought they ought not to find beyond the actual damages proved. He repeated, that the great question in the cause was, had the plaintiff established his right to the wheel commonly known as "Ericsson's propeller?"

The jury found a verdict for the plaintiff for 3,575 dollars and six cents, costs. It is stated that, of the jury, eight were practical mechanics.

Lond. Jour. of Arts & Sci.

*Opinion of the Judges of the Circuit Court of the United States in relation to Sales made by Inventors previously to taking out Patent Rights.*

It has heretofore been held in the Patent Office that, under the seventh section of the law passed on the 3d March, 1839, the sale of a newly invented article by the inventor, or with his consent, before he applied for a patent, would not invalidate it, excepting such sale had been made for more than two years prior to such application, or excepting on proof of the abandonment of such invention to the public. But by a letter just received from an intelligent gentleman in New York, it appears that, on the 13th instant, in the circuit Court of the United States, in the case of James Wilson vs. Austin Packard, it was in evidence that Wilson had sold a stove, the right to which was in controversy two months prior to his application for a patent therefor. On this testimony it was ruled by Judges Nelson and Betts that, if the inventor sells the article which he has invented in the usual way, or if he authorizes another to sell it, he abandons it to the public. That the sale, in the usual way, in a single instance, is a dedication of it to the public. That it is not a question whether the inventor intended to abandon it to the public, but merely what he has actually done. That the idea that a person can sell the thing invented without an abandonment to the public is an absurdity. That if the jury was satisfied that the plaintiff had thus sold, in one instance, before he applied for his patent, they should find for the defendant.

It is to be hoped that an appeal from this decision may be made to the Supreme Court, in order that it may be either confirmed or re-

versed. What was the intention of those who framed the section of the law in question is well known to the writer of this article: in many instances men had labored long and exhausted their means in bringing a machine to perfection, and, by selling this individual instrument, they could procure money enough to enable them to obtain a patent; but, under the then existing laws, such sale amounted to a forfeiture of their rights. It was really supposed by the uninitiated that the law had been changed in this particular, but it now appears that the attempt to do so was a failure, and that the Commissioner of Patents and others filling important stations in the Patent Office have not only misconstrued the law, but have afforded advice and information to inventors which have been destructive of their interests. Whatever may be the final result, should the question be carried up to the Supreme Court of the United States, the only safe course now to be followed by inventors, will be for them carefully to abstain from making any sale before completing their applications in the office.

Since the foregoing was written a further communication has been received from New York, written by a gentleman of the Bar, from which it appears that Judge Nelson charged the jury that the patent was equally avoided by the sale of the stove, on the part of the applicant, *after he had completed his application, but prior to the issuing of the patent.* It is not intended, in the present communication, to enter into any argument respecting the correctness of the instructions given to the jury by the Court. It frequently happens that months and sometimes years elapse between the time of making the application and the completion of the grant. In the case of Wilson's patent, this had extended to full three years, and during this period a number of his stoves had been sold. It is not known to the writer that a legal decision adverse to the safety of so selling had been ever made in our courts. The instructions given by the Patent Office and the words of the Patent law, as well as many decisions under the act of 1793, and that now in force, have quieted the minds of inventors respecting their right to make sales after their applications were before the office; but now all is uncertainty, even on this point, and the validity of a large proportion of the existing patents put in jeopardy.

T. P. J.

National Intelligencer.

## ENGLISH PATENTS.

*Specification of the Patent granted to THOMAS CLARK and CHARLES CLARK, of Wolverhampton, in the County of Stafford, for Glazing and Enamelling Cast Iron Hollow Ware, and other Metallic Substances.*—Sealed May 25, 1839.

To all to whom these presents shall come, &c., &c. The nature of our said invention consists in so cleaning and preparing the surface of the inside of the cast iron surface to be enamelled, that when the proper enamelling material is placed upon it and exposed to a proper heat,