

Remarks by the Editor.—Whilst we feel it due to the public to indicate our opinions on the subject of some of the patents granted in the United States, it will be readily perceived that there are considerations which, of necessity, force us to do so with great caution. This, however, is not the case with correspondents; our pages are, and shall ever be, open to the utmost freedom of remark, whenever the advancement of truth appears to be the aim of the writer; and those who think themselves aggrieved, may always be heard through the same medium.

We have read the foregoing article with peculiar satisfaction, as it is, in every particular, in perfect harmony with the views which we have entertained, and expressed. We had repeatedly observed, that if this principle of propelling vessels, &c. were correct, all that would be necessary to carry them up into the air, would be, to turn the atmospheric cylinders, with their mouths downwards, as fluids press equally in all directions. Should the agitation of this subject induce the patentee to pause, to re-examine the ground upon which he stands, and to retrace his steps before he finds himself on the quicksands, the advantage to himself will not be more real, than the gratification which we shall experience, in having aided in producing this result.

AMERICAN PATENTS.

LIST OF AMERICAN PATENTS GRANTED IN OCTOBER, 1828.

With Remarks and Exemplifications by the Editor.

1. For an *Engraving or Etching Machine*, being a new combination of machinery, comprising the principles of the circular and straight line dividing engines, and an engine causing a revolving graver or etching point, to engrave, or trace circular lines, upon either a printing cylinder for printing calicoes and other goods; or upon a mill or cylinder used for transferring patterns upon a printing cylinder for printing calicoes or other goods; or upon a mill, to be transferred to bank note dies; Rufus Tyler, Philadelphia, October 9, 1828.

The patentee states, that he is engaged in making further improvements, so as to render his machine more perfect; for these, when completed, he intends to apply for a patent, and, therefore, requests that a delay of two or three months may take place before publishing an account of his invention, in order that the whole may be presented to the public, in the most perfect form.

2. A machine for *Washing Clothes and Churning Butter*; John Grout, Caroline, Tompkins county, New York, October 10, 1828.

There is a strong similarity between this machine and several of its predecessors; we, therefore, pass it over without attempting a further description, than merely to say that there is a box, or trough,

fixed upon rockers, with a beater and strips within the box, and that a rocking motion is to be given to the whole, when the machine is used.

3. An improvement in the *Machine for Picking Cotton*; James Pinell, and Aber Maxson, Barboursville, Cabell county, Virginia, October 10.

The object proposed is, to turn the ordinary machine for picking cotton, by means of the foot applied on a treadle, exactly in the manner of the common turning lathe, and thus to substitute the power of men, for that of horses.

The brushes used to remove the cotton from the saws, are not attached immediately to the shaft, there being "two or more steel springs, fastened at one end to the stock of the brush, and at the other to the revolving shaft; the effect of which is, to admit of a vibration, which frees the brushes from the cotton, without the trouble of cleaning them."

What is claimed, "is the application of the crank, the treadle, and the fly wheel, so as to turn the same by means of the foot; and the use of the spring at the backs of the brushes."

4. An improvement in the *art of Melting and Fusing Glass*; and the materials for making and forming glass; Thomas W. Dyott, M. D. Philadelphia, October 10.

(See specification.)

5. An improvement upon the ordinary *Machine for Carding Wool*; Don Marcus Bacon, October 10.

(See specification.)

6. For the use of *Pine Resin* as an article of fuel for the purpose of heating ovens for the baking of bread, bread stuffs, meats, and such other articles of food as may be best cooked by baking; also for the purpose of heating hatters' kettles, used in the manufacturing and colouring hats; Richard L. Wood, Philadelphia, October 10.

The following is the specification.

"The manner of using the resin, is to break it in small pieces, and ignite a sufficient quantity at the entrance of the flues, so constructed as to pass around, and over the top of the ovens used for baking, and under and around the kettles used by hatters; adding a sufficient quantity, from time to time, to produce the required heat."

Remarks.—The foregoing, it is presumed, was suggested by the employment of rosin in Dr. Dyott's glass house, which fact was known in Philadelphia. Although the patents were issued on the same day, the application for that for fusing glass was antecedent to that of Mr. Wood. The purposes for which rosin is proposed to be used by each, differ specifically, and were not, therefore, considered as interfering applications. If the respective patentees can

sustain their claim to the use of rosin, it must, of course, be limited to the precise uses named by them.

7. A machine for *Thrashing Grain*, denominated the "American Thrasher;" John W. Post, of Philadelphia, and John Ryan, of New Baltimore, Virginia, October 10.

In this machine, there are to be two feeding rollers, into which spikes, or teeth, formed of wire, are to be driven: the gudgeons of the upper roller work in a groove, to admit of its rising and falling with the varying thickness of the straw in feeding. The beating cylinder has two or more strips of wood, running its whole length, and armed with strips of iron on the edges which beat out the grain; there are teeth, in one or more rows, set along these strips, and behind the beating edges, for the purpose of combing in, between the straws, and of thus obviating the difficulties which arise from the beaters consisting of a straight edge only. The patentees propose sometimes to omit the feeding rollers, and to substitute an arrangement of slightly projecting spikes in a straight feeding-board. Some other modifications are mentioned, as may be seen by the claim, which is, "the addition of spikes upon the beating strip attached to the cylinder, with the spikes standing back, and projecting beyond the strips; the application of two of the above beating cylinders, and the omission of the curb; the omission of the feeding rollers, and the curb, by the application of one of the beating cylinders, and an arrangement of spikes immediately under the cylinder, in a straight feeding-board."

8. A machine for *Mortising and Tenoning Timber*; William Jackson and J. J. Speed, jr. Speedsville, Tompkins county, New York, October 10.

The general construction of this machine is that of a common saw mill in miniature; there being a frame with a carriage on it, upon which the piece to be mortised, or tenoned, is to be secured. There is an ingenious, but simple contrivance, for shifting the pieces laterally, so as to adjust them, by bringing the gauge marks to the saw, or chisel. A saw is strained in the frame, when tenons are to be cut; and this, for mortising, is to be replaced by a chisel. There is a slip rail attached to the saw frame, for straining the saw, or for adjusting the chisel so as to enter the proper depth. A feeding arm causes the carriage to advance, by working on a straight rack. The ordinary mode of working the frame, is by a lever, in the manner of the common pump handle. "The chisels to be used, may be the common mortising chisel, the grooved chisel, or the common mortising chisel, with a steel spring on the back, having a beard on the lower end of the spring next to the chisel, to lift out the core or chips." "What we claim as our invention, is the particular construction, as described by us, of the set or gauge for confining and regulating the timber. Also the slip rail in the gate, regulating the depth of the chisel, and straining the saw, together with the

spring chisel before mentioned." "We also claim as a new application of parts heretofore known and used, the saw gate, balance, and lever, as before described."

9. An improvement in the *Pump for drawing Beer and Cider, Soda Water, &c.*; Levi Pitkin, Rochester, Monroe county, New York, October 11.

The object proposed, is to get rid of the poisonous matter contained in the metallic tubes and chambers of the pumps generally used. The following is the whole of the specification.

"The object of this improvement, is to do away the corroding, or poisonous effects of using metallic substances, or materials, in the construction of such pumps. The construction of the improved pump, is the same as those now in use, the only thing claimed as new, being the materials of which this improved beer pump will be constructed; which are either *lignum vitæ*, ebony, or other suitable wood; marble, free, or other stone; stone, or earthenware."

10. A triangular measure *Ruler for delineating Garments*; Allen Ward, Philadelphia, October 11.

(See specification.)

11. Improvement in the machine for *Sawing Clapboards* with a circular saw, for which a patent was obtained by Robert Eastman and Josiah Jaquith, March 16th, 1820; Jonathan Kidder, Gorham, Cumberland county, Maine, October 11.

In order to describe these improvements, we must present engravings, not only of them, but of the original machine. This we shall not now do, but merely give the claim of the present patentee, reserving a particular description for a future occasion. "I claim as improvements upon Eastman & Jaquith's original machine, the two bevel wheels, the rag-wheel, the lever, the hands, the moveable pin aforesaid, and nothing more."

12. A mode of *Covering Buildings*; Hazard Knowles, Colchester, New London county, Connecticut, October 11.

The process is, to nail cloth (hemp cloth being preferred) upon a smoothly boarded roof. To cover this cloth with wheat or rye paste to fill the pores, and make it smooth, and then to cover the whole with ordinary oil paint.

For information on this subject, our readers are referred to p. 172, vol. 1, and p. 345, vol. 4, of this Journal.

13. A mode of *Constructing Doors*, to secure buildings against cold and storms; Daniel Williams, jr. New London county, Connecticut, October 11.

A groove is made along the under edge of the door, and within this a metal plate, or strip, reaching the whole width of the door, is hung upon pivots at the ends, so as to close upon the sill, when the

door is shut. The particular arrangement cannot well be explained in words, and the drawing furnished is not very descriptive.

14. An improved machine for *Cutting Rags* for the manufacture of paper; Moses Y. Beach, Springfield, Mass. Oct. 11.

This machine bears a strong resemblance to some of those used for cutting straw. There is a heavy fly-wheel turning on a stout iron shaft, the gudgeons of which rest on a strong frame; two or more arms project at right angles from the shaft of the wheel, and carry knives, or cutters; on the edge of the frame, a cutter is firmly fixed, so that the others, in their revolution, pass it, and cut, like the blades of shears. There is a feeding cloth passing round rollers, like that in the carding machine: upon this cloth the rags are placed, and carried by proper gearing, between the cutters. By altering the gearing, the rags may be cut more or less fine, as they may be wanted.

"The inventor claims as new, the use and application of this machine for cutting rags for the manufacture of paper, by means of improvements adapting it to that use; consisting in extending the horizontal shaft through the axis, so that each end of it rests in the strong frame, thereby giving stability and uniformity to the motion of the knives; also in the increased power derived from increasing the weight and dimensions of the wheel and arms, beyond what has heretofore been used or known for any similar operations. Also in the use of the arms, one or more proceeding from the horizontal shaft, and attached to the balance wheel, or placed at a distance from it, as may be preferred; also in the use of the regulating screws which hold said knives in their places, and graduate them as required; also in all the other particulars above specified, so far as they differ from all other machines heretofore known or used."

15. Improvement in *Window Blinds*; John Parkerson, Boston, Massachusetts, October 11.

The plan proposed, is to have two metal pins projecting from each end of the slats of which the blind is composed; these pins are to pass into holes made in moveable strips, confined within the edges of the frame of the blind. These strips are confined in their places, and made to traverse up and down, by means of flat disks or wheels, of metal, which turn on centre pins, between the sliding strips and frame, having each two pins in their peripheries, which pass into holes in the sliding strips, in the manner of the pins on the ends of the slats.

16. *Fastenings for Bedsteads* and other framings, by a mortise and tenon, called the "Mortise and Wedge dove-tail tenon Fastening;" William Swift and William Ottivelle, New Bedford, Massachusetts, October 11.

The exact construction of these cannot be shown without drawings: the general principle of their action, is similar to that of some

fastenings previously known. Plates are let in and screwed on to the posts, and are flush with their surfaces: in these plates are mortise holes and slots, to admit iron pins, which are let into the ends of the rails; there being two in each end, near their upper and lower sides. The back parts of the plates are dove-tailed, or wedge shaped, and upon these wedge shaped parts, notches upon the ends of the pins, bear, and are tightened by being forced down. They are well represented in the drawings which accompany the specification; but as they will, probably, be found at an early day in most of our hardware stores, an engraving of them is unnecessary.

17. For *Preparing the Back-lint, or Fibres of Hemp*; Abraham K. Smedes, October 11.

(See specification.)

18. A *Rotary Steam Engine*, for propelling vessels, or machinery, or for any purpose to which steam power is applied; Stillman Blake, Providence, Rhode Island, October 11.

(See specification.)

19. *Spinning and Roping Cotton and Wool*, by a machine called the "Complete Spinner;" John W. Wheeler, Galway, Saratoga county, New York, October 11.

This is one of the machines commonly called "Domestic Spinners;" and is intended to run from eight to about twenty-four spindles. These are all, of course, modifications of the larger machines used in cotton and wool factories. In this instrument, the rims of the band wheels are directed to be made of strips of raw hide, formed, whilst wet, upon wooden moulds, and allowed there to dry and become hard. The collars, or poppet heads, as they are called, of the spindles, are directed to be made in a peculiar way, of leather, and of horn. A particular mode of tightening the bands is designated, and there are some other variations in the arrangement of the parts. The claims of the patentee, are as follow:

"1st. The raw-hide rims of the wheels.

2nd. The manner of placing and applying the friction pulleys, so as to produce equality of bands, and diminish friction.

3d. The particular mode of communicating motion to the spindles, by arranging, gearing, and banding the wheels, friction pulleys, and spindles.

4th. The peculiar mode of hanging the spindles."

20. *Improvement in the Revolving Rail, and Round Tenon Bedstead*; Garret Post, Auburn, Cayuga county, N. Y. Oct. 11.

Round side and end rails, with ratchet wheels, and clicks, or falls, for tightening sacking bottoms, have been patented both in this country and in England. The present patent varies the use of round rails and tenons, by letting plates of metal into the posts, so as to be flush; these plates to have holes in their centres, to receive the tenons, and a circle of smaller holes at a sufficient distance from

them, to receive the points of bolts, fixed longitudinally in the rails, to retain them in their places, when the sacking is strained. It is also proposed, sometimes to use the ratchet wheel, cast so as to form a cap to the rail, having the tenon cast on to it, and affixed to the rail by screws. The rails to be tightened by a lever fitting into a hole in the rail, or by taking a hitch with a cord upon one of the pins to which the sacking bottom is fastened. The sacking is either to have holes worked in it, as usual, to hitch upon pins on the rails, or a cord is sewed within the edge of the canvass, and loops left to pass over the pins. To prevent the rails from springing, braces are formed by pieces of plank, placed edgewise, and passing from side to side, their ends being hollowed so as to fit the rails, which, consequently, retain these stretchers in their places.

21. An improvement in the machine for *Carding, Winding, and Making of Hats*, or felts; Isaac Sanford, Blockley, Philadelphia county, Pennsylvania, Oct. 11.

There is a curious history attached to this machine; the particulars of which we cannot give, but will merely state the fact, that it has lain dormant for about twenty-nine years, the money having been paid into the treasury, on the 22nd of February, 1799; and a model having been deposited in the office on the 21st of December, in the same year. Since that period, the inventor has been engaged in other pursuits, but has, within a few years, again turned his attention to the subject of this machine, and has taken out his patent.

We cannot furnish, without engravings, a description which would give any adequate idea of the construction of this ingenious instrument, and we shall, therefore, not attempt it. A number of machines, for the same purpose, and having many parts in common, have been patented, and suits respecting their validity are now pending. The present claim appears as a veteran in the field, so far as age is concerned, but in the contest, is a new recruit; should it prove a soldier of fortune, its merits shall, hereafter, be made known.

22. *A Machine for Cutting Files*, called "Hatch's Improved File Cutter;" John Hatch, Roxbury, Norfolk county, Mass. October 11.

This machine is intended for cutting files entirely by pressure, without a blow from a hammer. The whole instrument with its adjustments are necessarily complex; and as the object of cutting files by pressure is novel, the patentee has not thought it necessary to claim any particular part, but has given a description of the whole.

The file to be cut, is sustained upon a firm bed or anvil, the chisel, placed at the proper slope, is worked by a toggle joint, and the motion is regulated by a heavy fly-wheel. The file to be cut is carried forward by a screw, moved by a ratchet wheel, the feed of which may be regulated. As files are taper, the bed upon which the file is cut, is raised or lowered by a sliding piece, which passes under it, and which advances with the file. The form of this piece

must correspond with that of the file, being in shape exactly its reverse; that is, as files are thickest in the middle, this must be thinnest there, and diminish, or increase, exactly in this reversed proportion.

These are the essential features of the machine, but with respect to its operation, we have our doubts. File cutting machines have been repeatedly made, but we do not know that any of them have been found to answer so well as the hand of a clever workman; and we know, that most, if not all of them have been abandoned. Two difficulties appear to us to present themselves in the action of a machine to operate by pressure; the first is, the necessity, and extreme difficulty, of making the blanks to be cut, perfectly true, and all alike in their relative thicknesses; and without this, the guide cannot raise the bed so as to cause the cutter to bear every where with equal force. The plan proposed will not obviate this, nor do we know of any by which it can be overcome. The second difficulty which we apprehend, is in the effect produced by pressure, when compared with percussion. We must doubt whether the same kind of edge will result from successive cuts by pressure, and by blows; this is a point which experience alone can decide, and we should like to know the result.

We could urge other objections, but forbear, and hope that the experience of the inventor may convict us of error in those already made.

23. An improved mode of constructing *Stereotype Blocks*; Samuel G. Goodrich, Boston, Massachusetts, October 11.

This is a very simple and neat contrivance, for fixing stereotype plates upon a wooden block. A strip of brass, is firmly screwed on one edge of the block, and projects, in two places, above its side, so as to form a lip, to receive one edge of the stereotype plate. A notch is cut on the opposite side of the block, to receive, and allow play to a moveable lip of brass, which is to confine the other edge of the plate. This moveable lip, is perforated with three holes in a row, as in the margin. The two outer holes have wires soldered into them, which project out about two inches, and slip, neatly, into corresponding holes in the edge of the block. From this same edge, projects a screw, which passes through the middle hole; upon this screw a nut is fitted, and is turned, first by the fingers, and then by a small wrench, so as to cause the projecting lip to embrace the plate firmly. A brass plate, the whole length of the block, is screwed upon its edge, so as to cover the notch of the moveable lip. This plate is hollowed at its upper edge, opposite the nut, to allow it to be turned with facility.



24. Making *Cast Iron Hubs* (or naves) for wheel carriages; William Dickinson, Batavia, Genesee county, New York, October 11.

This hub is cast in five pieces, so formed as to fit together, and present a perfect nave, to receive the spokes and axle.

The patentee describes the whole, but does not specify any particular point which he claims.

Cast iron hubs have been made repeatedly, but it is said that they are too hard for the wood. In mill wheels of cast iron, which move steadily, spokes of wood will continue to fit well, but in carriages, where there are perpetual jolts, the iron has been found to bruise the wood, and cause it soon to work loose. Where water insinuates itself into the mortise, so as to rust the iron, this rust acts upon, and injures the wooden tenon. We have not had sufficient experience of the fact ourselves, but these are the objections urged.

25. Improved construction of *Pipe Boilers for Steam Engines*; Alden Potter, New York, October 11.

The specification is in the following words:

"The pipes are made with an elbow, the two arms forming a right angle. The small end of one pipe, is received into the large end of another, and the two are held firmly together, by a bolt passing lengthwise through one arm of each pipe, the bolt having a nut and screw at one end, and a head on the other end."

"Each pipe is raised at one end, so as to elevate, successively, every layer, or coil of pipe; thus forming a continued line of pipe, of any required length, similar to the worm of a still, but describing a square, or parallelogram."

ALDEN POTTER.

The remainder of the patents for October, will appear in the next number.

SPECIFICATIONS OF AMERICAN PATENTS.

Specification of an apparatus for Saving Heat, in the process of Combustion. Patented by STEEN ANDERSON BILLE, of New York, Nov. 8, 1828.

THE atmospheric air, necessary for combustion, is generally supplied by means of the draft, resulting from the rarefaction of the air in the fire-place, and, therefore, at the expense of the heat, carried off by the smoke, or foul air, escaping through the chimney. From the specific heat of atmospheric air and steam, at equal temperatures, estimated by volume, being nearly as 50 to 31, it follows that the escape of 50 cubic feet of atmospheric air, at a temperature of 212° , will be nearly equal to the escape of 31 cubic feet of steam of the same temperature, which proportion is still more increased in favour of smoke, on account of the steam and carbonic acid gas formed by the combustion; when in addition to this it is considered, that the atmospheric air, by an elevation of temperature from 32° to 212° , only suffers an expansion of about $37\frac{1}{2}$ per cent. giving a pressure upon the square inch (in proportion to the difference in weight