

these are of like or different colors) prepared with tongues and grooves in the usual manner required for common flooring...

SAWING MACHINES—Hiram Wells, of Florence, Mass.: I am aware that various devices have been employed for feeding the carriage to the saw...

ECCENTRIC EXPLOSIVE SHELLS—Wm. W. Hubbell, of Philadelphia, Pa. Patented Jan. 22, 1856—Re-issued Jan. 19, 1858: I claim the combination of the head or segment of the solid sphere with flat base uniformly around the fuze hole...

AIR TIGHT STOVE—Zephaniah Bosworth, of Harmer, Ohio, assignor to J. M. McKinlay, of Dubuque, Iowa. Patented April 6, 1842—Extended for the term of seven years from April 6, 1856—Re-issued Jan. 19, 1858: I claim a fire-pot, a combustion chamber, and descending flues leading from the bottom thereof...

SCROLL SAWING MACHINE—U. B. Vidal, of Philadelphia: I am aware that a saw similar to the one, F, described has been previously used for operating reciprocating saws...

But I claim the arrangement of the slotted slide, H, with a cam, F, embraced by the friction rollers, G, and operated in connection with the springs, F, C, all as set forth.

[This is described on another page.]

COMBINED HORSE COLLAR AND HAMES—G. W. N. Yost, of Cincinnati, Ohio: I claim the adjusting breast yoke, E, in combination with the hame bows, A, A', for the purpose of making the hames press directly backward and upon the fleshy portions of the shoulders in any direction...

WINDOW BLIND FIXTURES—A. G. Batchelder (assignor to H. E. Pearson and A. M. Butterfield), of Lowell, Mass.: I claim the application of a stand clasp in the rail in combination with the spring and guide rod, in the manner and for the purpose set forth.

SEWING MACHINES—A. H. Boyd (assignor to O. D. Boyd), of Saco, Me.: I claim the combination of the lever, M, with the shoe, and spring, A, for giving the shoe a vertical reciprocating movement. Also, in combination with the slide, T, for giving the horizontal reciprocating movement to the shoe...

RESTORING WASTE VULCANIZED RUBBER—H. L. Hall, of Beverly, Mass., assignor to the Beverly Rubber Company: I claim the process above described, namely, boiling waste vulcanized rubber in water, after it has been reduced to a finely divided state by grinding...

PUMP BUCKET—W. F. Horton, of Lockport, N. Y., assignor to W. K. Marvin, of New York City: I do not claim any single member of this bucket as new, either shaft, flanges, washer or packing. But I claim the peculiar arrangement of the flange, D, and B, with the coaugated washer, d, and packing C, when all are operated and secured in the manner described...

COAL SCREENS—Geo. E. Hoyt and F. Neshwitz, (assignors to G. E. Hoyt), of Brooklyn, N. Y.: We do not claim any form of rotating coal screen. Neither do we claim any arrangement which requires the dust to pass through a succession of screens before being finally separated from the coal.

But we claim preventing the dust and dirt which have been so separated from the coal from again mingling with it by means of the arrangement before described of the inclined screens, C, D, E, F, in combination with the dust sieves, b, the whole constructed, arranged and operated substantially in the manner set forth, and applied to the purposes specified.

REGISTERING THE SPEED BACK OR FORWARD AND DISTANCES PASSED OVER BY RAILROAD TRAINS BY MEANS OF ELERO-GALVANIC BATTERIES—Lewis Troost (assignor to John M. Battle) of Mobile, Ala. Patented in England, June 15, 1857—in France, June 18, 1857: I wish it to be particularly understood that I do not confine myself to the use of any of the particular mechanical devices described, nor to the use of any particular marks or characters in the several registrations...

But I claim, first, The method described of recording the performance of a railway train on its journey, by the combination of a registration of time, and one or more registrations of distance, such registrations being made in lines parallel with or contiguous to each other, to show by comparison with each other the speed, movements, and stoppages of the train, substantially as specified.

Second, The indication of the backward movements of the train by a registration of a different character to that of the forward movements, but in the same relation to the registration of time, so as to show the time occupied and the distance passed over in backing and to enable such distance to be deducted from the distance run forward, and the distance run from the starting point to be correctly ascertained.

[A notice of this will be found on another page.]

SPRING PRESSURE GAGES—M. Y. Young, (assignor to himself, H. F. Litchfield and J. G. Hamilton), of East Boston, Mass.: I claim supporting the piston entirely by an elliptic spring, sustained in position by a cross-bar or partition or the equivalent thereof applied in the case, and making the piston to rest in other respects only against the elastic diaphragm, and have no connection with the sides of the space within which such piston may move, the whole being productive of an advantage, as above stated.

PRINTING PRESSES—Stephen P. Ruggles, of Boston, Mass. Patented Jan. 1, 1851—Re-issued Jan. 19, 1858. I claim the gage bar for cards above referred to, in combination with the vibrating platen, and stop-finger and crank which operates the same, in the manner and for the purpose described.

I also claim the use of a segment of a cylinder in combination with the stationary form bed, so that the rotary inking apparatus may move over the form, and then after taking ink from the fountain, distribute it on said cylinder as above set forth. I also claim, in combination with the stationary form bed, the revolving cheek plates, I, I', for carrying the rolls over the form, as set forth and described.

I also claim the movable bearers on the side of the form bed, arranged and operated substantially as above described, so as to be moved outwards when the inking rollers are passing over the form and drawn inwards when the sheet or tympan is moved up to said form. I also claim regulating the delivery of the ink, by combining with the delivery roller, a grooved ratchet wheel and weighted pawl band operating with the lever stud, cam roller, and stop lever, substantially as specified.

I also claim supporting the journals of one of the ink-

ing rollers on sliding bearers, so that it may be moved up against the delivering roll by means of studs on said bearers and cams, operating the same as set forth.

Vault Covers—George R. Jackson, of New York City. Patented April 21, 1857—Re-issued Jan. 19, 1858: I claim combining glasses of an inverted pyramid, polygonal, or conical form with the sash or metallic portion of an illuminating vault cover or its equivalent, for the purpose of producing a wide spread and perfect diffusion of the rays of light which may pass through said cover into the apartment beneath, substantially as set forth.

ECCENTRIC EXPLOSIVE SHELLS—Wm. W. Hubbell, of Philadelphia, Pa. Patented Jan. 22, 1856—Re-issued Jan. 19, 1858: I claim the combination of the head or segment of the solid sphere with flat base uniformly around the fuze hole, with the segment of the hollow part forming a spherical shell with flat-based head and externally smooth, as described.

AIR TIGHT STOVE—Zephaniah Bosworth, of Harmer, Ohio, assignor to J. M. McKinlay, of Dubuque, Iowa. Patented April 6, 1842—Extended for the term of seven years from April 6, 1856—Re-issued Jan. 19, 1858: I claim a fire-pot, a combustion chamber, and descending flues leading from the bottom thereof and between the fire-pot and outer casing to a chimney, all arranged in the interior of a box, enclosure, or casing of suitable materials with proper provision for admission of air or fuel, all substantially such as are described, in combination with a properly governed aperture for admitting air into the chimney without passing through the fire-substantially in the manner set forth, the whole constituting a stove substantially such as is specified, and this combination is claimed, whether the oven be used or not. The sliding door, L, the drop door, C, and the other parts of this stove do not differ from such as has been previously known and used; no claim is therefore made to them, or in fact any part of the stove taken individually, but the claims are limited to the combination, substantially as set forth and made known.

Table of Patents Issued to Each State in the Year 1856.

Table with columns for Classes (I to XXI) and rows for States (Me., N.H., Vt., Mass., Conn., R.I., N.Y., N.J., Pa., Del., Md., Va., N.C., S.C., Ga., Ala., Miss., La., Ky., Tenn., Ohio, Ind., Ill., Mich., Wis., Iowa, Minn., Mo., Texas, Ark., Cal., Foreign) and a Totals row. The table contains numerical data for each state across various patent classes.

REMARKS.—There seems to have been no curious inventions for the year 1856. The number of inventions, however, in particular classes, and of articles in some classes, is somewhat remarkable—for instance, in class I, nearly one-third were for Harvesters, being eighty-seven, and Planters being thirty-seven. There was fifty-three inventions in Fire-arms. The offer made two or three years ago, by a firm in Vermont, of \$10,000 for a Sawing Machine for Marble, set inventors to work, and was followed by the issue of twenty-six patents for such machines. It would be useful and interesting to inventors especially to know if any of these machines came up to the demands of the gentlemen, and whether the money was paid, as promised.

The Reports for 1856 seem to be carelessly compiled. By the tabular statement (page 2), we have given as the number of patents..... 2,502

Summary table showing counts for Patents, Re-issues, Designs, and Additional Improvements, categorized by List of Patentees and by Index to Vol. III.

It will be seen, from the above, that out of returns from four different sources, no two agree. Again, in the alphabetical list of patentees, there are several errors. On page 71, the name of James A. Cutting is omitted for a re-issue, dated Aug. 12, 1856. On page 100, the re-issue to B. J. La Mothe, is stated to be in Class X., instead of a re-issue. Page 106, an additional improvement granted to John F. Mascher is placed in Class XVIII. Page 107, patent to W. H. McNary (No. 16,285) is placed as a re-issue, instead of in Class III. Page 125, re-issue to T. J. W. Robertson, is placed in Class III. Page 139, re-issue to A. Swingle, is placed in Class III. These errors have been discovered in forming the above table. It may be said they are slight, and errors must be expected, but the utility of the tables and classification is destroyed, unless they are correctly made up. This must be evident to every one. T. G. S.

Tin versus Gold for Teeth.

MESSRS. EDITORS—In 1841, the second molar tooth in my "working" side of the under jaw became decayed in the center of the crown and forward, so much so that it was very sensitive. Not being where a dentist was accessible, I undertook the job of filling it. I cleaned the cavities and enlarged them slightly sidewise, and filled them compactly with heavy tin-foil, the only thing I could get; thinking that as soon as practicable I would have the thing more artistically done. It is now seventeen years since I did so, yet the tooth has been used constantly, is emphatically a "working" tooth, and is as sound and strong, apparently, as the way it was filled; it has not (owing, I suppose, to the non-conducting properties of the tin) shown the slightest sensitiveness. The metal seems as durable as gold, and if so, is far preferable on several accounts. I shall never have a tooth filled with anything else, if I should need such work done again. R. H. A. Baltimore, Md., January, 1858.

Steam Ice Boat.

The Janesville (Wis.) Standard describes a steam ice-boat, projected by J. Ward, of that place. It is to be a small steamer, minus the wheels, and be placed on runners. The method proposed to propel it, in the absence of wheels, is thus described:—

"There are to be two belts of india rubber passing fore and aft under the deck, over pulleys, driven by the engine; and to the belts, which run parallel to, and near each other, there are connected dogs or poles, inclining upward from the ice to the belts at an angle towards the bow, and while one is passing from front to rear, the other is dragging to the front, and so act alternately, making tracks once in forty feet, or more than the length of the belts."

This method of propulsion appears to be an endless belt grappler.—Eds.

Torsion.

This term is applied to the twisting or wrenching of a body by the exertion of a lateral force. If a slender rod of metal be suspended vertically, and, having its upper end fixed, be twisted through a certain angle by a force acting in a plane perpendicular to its axis, it will, on removal of the force, untwist itself; and return with greater or less velocity, and after a series of oscillations, will come again to a state of rest. The limits of torsion within which a body will return to its original state, depends on its inherent elasticity. A fine wire of a few feet in length may be twisted through several revolutions without impairing its elasticity, but if carried beyond a certain point, the fibers or particles will be torn asunder and assume a new position, as, for example, in a lead wire, before finally breaking.

Atacamite.

Chloride of copper is a mineral of a green or greenish black color, and adamantine or vitreous luster. It occurs in massive fragments, in rhombic prisms and rectangular octahedrons, which give off fumes of hydrochloric acid gas when heated before the blow-pipe. This compound is found in Saxony, the neighborhood of Vesuvius, and the desert of Atacama, between Chili and Peru. In Chili this mineral is ground into powder, and sold under the name of arsenillo, as a sand for dusting letters.

A NEW COMET.—H. P. Tuttle, of the Harvard College Observatory, discovered a telescopic comet on the evening of the 4th inst. It was first seen at half-past seven P. M., and makes the fourteenth comet discovered at that Observatory. It is in the northern part of the heavens, and can only be seen with a powerful telescope.

We Americans have manufactured 25,965 miles of railroad, which, if it could be stretched in one continuous line around the waist of Mother Earth, would still leave her about a thousand miles for a bow-knot.