

[Continued from page 267.]

**MODE OF ATTACHING STRAPS TO BOOT LEGS.**—Julius A. Pickering, (assignor to Wm. Walker,) of Milford, Mass.: I am aware that it is not new to cut the leather or lining of the leg to insert the strap, and that I do not claim.

But I claim supporting or retaining the loop or upper part of the strap, in the manner and for the purposes substantially as set forth and described.

**FAUCETS.**—Geo. W. Randall, (assignor to himself and Remond J. Todd,) of Boston, Mass.: I claim the combination of the auxiliary or inner tap with the outer tap and the conduit case, provided with two or more conduits, the whole being constructed and made to operate together, substantially as described.

I also claim the arrangement of the air passage, P, so as to discharge, with reference to the discharging end of the inner tap, substantially as described.

**SHIP-STEERING APPARATUS.**—D. J. Wilcoxson, of Milan, Ohio, assignor to himself and Isaac Collins, of Huron, Ohio: I claim, first, The combination of the double yoke with the traversing nuts, arranged substantially as described for the purposes set forth.

Second, Arranging the screws by which the rudder is turned on either side and below the top of the rudder post, so that, in case of accident, the tiller may be used to steer the vessel without its being interfered with by the steering mechanism.

**HUB BORE.**—Cutting B. Wiley, of Adrian, Mich., assignor to himself and Alex. Stebbins, of Lenawee Co., Mich.: I claim the combination of the sliding cutter head, G, with the adjustable ways or slides, E, with the nut, K, and screw, C, the whole being arranged as described, for the purpose set forth.

**PIROTECHNIC NIGHT SIGNALS.**—Martha J. Costan, of Washington City, D. C., administratrix of the estate of B. Franklin Costan, deceased: That which is desired to secure by Letters Patent, as the invention of the late B. Franklin Costan, is the signaling of any numeral, combination of numerals, or any character, or any combination of characters, by a methodical exhibition of different pyrotechnic fires, substantially as set forth.

## RE-ISSUES.

**MAKING ILLUMINATING GAS.**—N. Aubin, of Albany, N. Y. Patented Jan. 8, 1856: I claim the described process of making gas for heating or illumination, which consists—

First, In mixing materials substantially such as are specified.

Second, In introducing them into a chamber substantially such as described, located when the process is going on within retort.

Third, In causing the products of distillation of the mixture to pass out of such interior chamber, and then be subjected to a higher degree of heat, by passing in contact with the heated surface of the retort itself, substantially as specified, not intending to claim any one step of the process separately, but only the process substantially as set forth as a whole.

**GAS GENERATORS.**—N. Aubin, of Albany, N. Y. Patented Jan. 8, 1856: I claim the combination with a gas retort of a removable exterior chamber open at bottom, and having such relative shape with regard to the retort, and so located therein, substantially as is specified, and for the purposes set forth, and this I claim irrespective of the location of the opening through which said removable chamber can be introduced or withdrawn, and either with or without an apparatus for introducing steam into the retort.

**TIGHT JOINTS FOR GAS RETORTS.**—N. Aubin, of Albany, N. Y. Patented Jan. 8, 1856: I claim a joint between a gas retort and its cover made by fusible metal contained in a groove into which enters a rim, the joint being substantially such and for the purposes set forth.

**TUBULAR ELASTIC VALVE.**—Franklin Peale, of Philadelphia, Pa. Patented June 20, 1850: I claim, first, The flexible valve described for the purposes specified.

Second, The method described of adapting the flexible valve to pumps or other tubes of any kind, whether rigid or elastic, and inserting them therein, in the manner set forth and shown, or in any equivalent mode.

**SPRING BED BOTTOM.**—Hiram Tucker, of Cambridgeport, Mass. Patented July 3, 1855: Improvement added July 9, 1857: I claim the described spring-bed bottom, consisting of the combination of the frame, A, slats, B, and radial springs, C, essentially as described, and in combination with the features covered by my patent of Dec. 15, 1857.

## ADDITIONAL IMPROVEMENTS.

**SEEDING MACHINES.**—Charles Cox James, of Dayton, Ohio. Patented Dec. 15, 1857: I claim the arrangement of the stationary roof, like screen, N, lateral sloping projections, e, septum, O, slides, G, and G', slotted bars, F, and shoes, I, I, with slide, E, and trough, P; the above part being constructed substantially as described and used in combination with the features covered by my patent of Dec. 15, 1857.

## DESIGNS.

**FLOOR CLOT 1.**—James Patterson, of Elizabeth, N. J.

**PLATES FOR COOKING STOVES.**—S. H. Ransom, of Albany, N. Y.

**PLATES FOR STOVES.**—S. H. Ransom, of Albany, N. Y.

## Canadian Patent Laws.

England has always displayed an admirable cosmopolitan policy in permitting the citizens of all nations to secure patents for new improvements on equal terms with her own people—no distinction being made on account of birth, or place of nativity. Any nation which lays claims to justice and wisdom in the administration of its affairs, stands in a position to have those claims disputed unless it exhibits a spirit of liberality in fostering improvements in the arts and sciences. The Canadas have occupied such a position for several years past, for while provision is made in their laws, for issuing patents to British subjects, they grant none to the citizens of any other government. Unlike the mother country, they exhibit a narrow, unjust and unwise policy towards the inventors of every country but their own. Quite a large number of intelligent men in Canada have always felt this to be an evil, but hitherto they have not been able to effect such a reform in their laws as they desired. Two years ago, a bill was introduced into the Provincial Parliament to effect this object, but we regret to state, it was defeated by a considerable majority. As a counterpoise to this, it has afforded us much pleasure to be informed that more liberal views have recently been exerting a beneficial influence among our northern neighbors on

this question, and that a committee of competent members has been appointed to reconsider the question fully, by the present Parliament, which is now in session at Toronto.

We hold this to be a good omen, and we hope it will result in permitting the inventors of all nations to secure patents upon easy terms in Canada. We can assure our Canadian friends that we have not the least doubt, but such an amendment to their patent laws will be the means of greatly advancing their solid interests. We are positive that they have lost much by refusing protection by patents to our inventors, for when they visit the United States they are regarded with suspicion if they approach our machine shops and manufactories—the inference being, that the object of their visit is to purloin new inventions, and as a consequence they are denied privileges which are fully allowed to others. But even if Canadians were permitted free access to examine all our new inventions, they would not secure much benefit for Canada, without a full protective patent law. The cause of this is a question of easy solution. A new invention, however good it may be, has generally some prejudices to overcome, and there is at least always more expense involved in its introduction than to commence a similar manufacture in opposition after it has acquired a reputation. For this very reason, therefore, persons who have capital, and who would be ready and willing to invest in establishing new manufactures, will not do so without such a protection as that which is secured by patents. From our own knowledge of facts, we are free to assert that a vastly increased number of new and useful inventions would have been introduced into Canada, during the past three years, had the laws permitted our citizens to take out patents there. As a question of justice to our inventors and those of other nations, as well as an act of wise policy for the people of Canada themselves, we urge them to improve their patent laws in the particular feature which we have distinctly pointed out.

## Saw-Mills without Balance Wheels.

**Messrs Editors.**—I have not had much experience with the up-and-down saws, but I think I understand something of the philosophy of fly-wheels, &c. Theories may err but philosophy never. When machinery operates well, it must be on philosophic principles. One of your correspondents "goes in" for a uniform fly-wheel, and others for a heavy side or weight upon the pitman to balance the gravity of the saw. I will differ from them all, and place the weight and pitman together and argue the point thus. We know that a uniform fly-wheel without any attachment will run without any and-up-down strain, because the centrifugal force is equal; but if a weight is added to one side, it will pull off in every direction as it revolves and causes an up-and-down springing of the timbers. Now if the pitman be attached to the opposite side, the strain is nearly doubled; the bearing operating as a fulcrum and receiving the strain of the momentum of the heavy side; add the resistance of the cutting of the saw, and we have the strain greatly increased. Now change the weight to the pitman side and it will pull the saw through with but little strain to the shaft bearing, and the momentum of the weight will be neutralized in carrying the saw up again with but little strain to the bearing. I once ran a saw having a simple crank without a fly-wheel, and found that the shaft would pull up as well as down even when the saw was not cutting; the momentum of the saw upwards has to be checked for the return stroke, if the weight and pitman are together, the weight will receive or neutralize the checking strain.

M. B. RANKIN.

Guadalupe River, Texas,  
March 20, 1858.

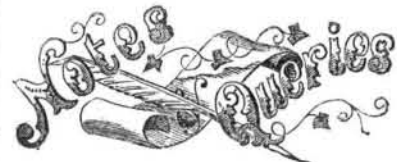
**ERRATA.**—In our description of Cummings' Ash-Sifter on page 256 of the present volume of the SCIENTIFIC AMERICAN, the date of the patent should be 1859 instead of 1858 as there stated.

## Improvement in Power Looms.

W. H. Cheetham, Jr., of New York City, has invented and patented an improvement in power-loom for weaving carpets or other fabrics which require the use of several shuttles as may be required for any pattern and the bringing of the several shuttles into operation in proper succession by automatic mechanism without using more than two or three shuttle-boxes (according to the number of plies in the fabric to be produced) on each side of the loom, and thereby to get rid of the difficulties which attend the lifting of the enormous weight of a large number of shuttle-boxes and shuttles in making the necessary changes of the shuttle, and of the inconvenience which arises from the necessity of keeping so great a weight swinging back and forth in the operation of the loom, and thus to enable the loom to be driven at a greater speed than is practicable where a large number of rising and falling shuttle-boxes is used. The claim will be found on another page.

## Variable Cut-off Gear.

D. A. Woodberry, of Rochester, N. Y., has invented and patented an improved variable cut-off gear, which can easily be attached to any engine already in use. The invention consists in a certain novel and simple combination of a vibrating yoke attached to the stern of the cut-off valve, and a rotary cam or wiper wheel deriving a positive rotary motion from the engine, which provides for the opening of the cut-off valve always at the proper time and the closing of the same to cut-off the steam at any point in the stroke of the engine that may be desired. The claim will be found on another page.



\* PERSONS who write to us, expecting replies through this column, and those who may desire to make contributions to it of brief interesting facts, must always observe the strict rule, viz., to furnish their names, otherwise we cannot place confidence in their communications.

We are unable to supply several numbers of this volume; therefore, when our subscribers order missing numbers and do not receive them promptly, they may reasonably conclude that we cannot supply them.

J. B. Van D., of N. Y.—A hydraulic ram is totally inapplicable on shipboard; a fall, however small, is necessary for its operation.

W. H. S., of Conn.—A patent could not be procured for the application of an india-rubber ring to a peg awl, so as to throw it out after the blow. It is not new, as the same thing has long been known.

C. A. B., of Pa.—We make no charge for the publication of articles in our columns, therefore your offer to pay for the one you have sent us about Martin's boiler can have no effect to induce us to change our mind in reference to it. We decline its publication, as it would seem to be, on our part, an unprovoked attack upon his patent. We have never pursued this course towards any patentee since we began the publication of this journal.

G. B. S., of C. E.—The Bain Telegraph patent is owned or controlled by Marshal Leferts, of this city. We furnish copies of claims of patents for \$1 each, but not the full specifications. We should be obliged to procure such copies from the Patent Office; and to render the specification intelligible, the drawings ought also to accompany them. If you desire it we can ascertain the exact cost.

W. Z. C., of Ill.—The ore you sent us is an argillaceous iron ore, and would no doubt make a good common paint when properly ground and mixed.

C. C. F., of N. H.—The art of stuffing birds requires long practice to master. To preserve your eagle for stuffing, all the intestines should be taken out and the bird wiped as dry as possible, and the interior stuffed with tow and arseniated soap. It is the arsenic which preserves the feathers and flesh from decay; great care is therefore required on the part of those who prosecute this art. Creosote is a tolerably good substitute, and we advise you to use it in the meantime.

S. M., of P.—Barr stones are found in Georgia, and from their hard crystalline appearance, and other causes, there is little doubt that they have once been in a molten condition.

E. B. G., of Vt.—We cannot inform you where rules and instructions for tin-plate workers can be obtained.

W. G. W., of Ohio.—Dead oil is one of the products of coal tar, and is not, so far as we are aware, manufactured in this country. It is the same product of mineral tar that creosote is of vegetable tar. "Knapp's Technology" will tell you all about it.

H. J. T., of R. I.—The rice buttons are made from rice in a state of pulp, which is dried in a proper mold under pressure, and thus becomes hard and durable.

M. S. H., of Ill.—You can procure a Sharpe rifle by addressing the Sharpe Rifle Manufacturing Company at Hartford, Conn.

G. E. G., of N. Y.—Button-hole machines have been attempted, but as yet without success, so far as we know. You had better send us a sketch and description of yours for examination.

E. W., of Conn.—You should apply to the Legislature of Connecticut for a premium to restore the peach-tree before any movement is made to solicit prizes from other States.

H. M., of Pa.—Lieut. Maury made no reply to the communication to which you refer regarding the Gulf Stream. We suppose his writings on this subject cover the ground.

S. W. W., of La.—If you had forwarded us an account of the meteor at the time when the incident occurred, it would have been interesting as a matter of news, but it is too old for publication now.

A. P., of Ohio.—A coiled wire made into a cable, as you have described, will retard instead of facilitating the flow of the electric current.

A. D. B., of Pa.—Cantelo's egg-hatcher is the best, but we cannot tell you its price or capabilities. Such apparatus are not used on this continent, and we, ourselves, are old foghorns enough to prefer the egg hatching machine called a hen.

R. C. Jr., of Montreal, C. E.—Common gas jets have been burned on platinum points, and they have given an increased light, and so would calcium points if used in the same manner. It would be far too troublesome, however, to use the latter in street lamps, for all the benefits that would be obtained from them.

A. C. F., of Pa.—A patent could not be obtained for making a fluid lamp of gutta-percha. We could not advise its use for this purpose, especially if the fluid contained turpentine.

W. & T., of N. Y.—We have a good opinion of the Volcanic Repeating rifle, but we cannot answer your enquiry us to its accuracy in long ranges compared with the common rifle.

T. A. B., of N. Y.—A little oxalic acid rubbed upon the ink-spots, and then moistened, will take it out of your book.

W. H. B., of Ala.—If the escape pipe of a steam-engine run out horizontally at the stern of a boat, the steam, in escaping, would tend to propel the vessel forward by its reactive force; but the amount of this would just be in proportion to the back pressure, and would require the pipes to be much contracted. No benefit would therefore result from such an arrangement.

T. S., of Conn.—"How long has the connection of two boilers (working together) by water pipes, as well as steam pipes, been an exploded idea?" Such never has been, and probably never will be, an exploded idea. Some gang boilers are thus connected, and some are not, but if all the boilers are of the same capacity and construction, and set on the same level, we believe this is the best mode of connecting them.

Money received at the Scientific American Office on account of Patent Office business, for the week ending Saturday, April 9, 1859:—

D. R., of Pa., \$25; W. B., of Wis., \$30; J. McD., of Mich., \$30; R. H., of Tenn., \$25; H. B., of R. I., \$25; W. S. & G. B. of Ill., \$30; G. B. of Wis., \$25; G. F. D., of Pa., \$25; C. R. M. W., of N. Y., \$30; W. L. G., of N. Y., \$30; G. S. M., of Pa., \$30; S. & J. T., of Pa., \$25; G. R. H., of Mo., \$20; J. D. B., of Vt., \$27; G. W. D., of N. Y., \$50; W. S. & Co., of O., \$35; T. M., of N. Y., \$25; R. F. W., of N. Y., \$25; W. H. A., of Iowa, \$25; E. B., of Pa., \$25; T. B. T., of S. C., \$10; J. H., of Pa., \$25; H. L., of Mass., \$30; E. S., of Vt., \$30; C. M. B., of Mo., \$30; J. L. N., of Ill., \$35; C. H. B., of Pa., \$25; T. S., of Ill., \$25; S. H., of N. Y., \$25; N. B. G., of N. Y., \$25; T. V., of Texas, \$35; S. F. A., of Ky., \$25; L. H. T., of R. I., \$25; L. P., of N. Y., \$25; G. R., of N. Y., \$25; H. W. A., of N. Y., \$150; P. & M., of O., \$25; B. D., of Ct., \$30; L. S. B., Jr., of N. Y., \$10; A. M., of La., \$70; C. A. & S. W. T., of R. I., \$30; R. H. & A. D. M., of N. Y., \$100; S. B., of N. Y., \$25; T. H. T., Jr., of Mo., \$30; R. B. B., of Vt., \$25; J. S., of Mich., \$25; K. & P., of Ct., \$30; N. B., of Iowa, \$25; L. W., of Iowa, \$15; J. S. B. N., of Mo., \$30; R. J. H., of O., \$25; R. A. F., of N. Y., \$30; P. M. of N. Y., \$25; J. B. A. of N. H., \$200; J. T., of Ill., \$30; C. C., of Wis., \$25; L. & P., of N. Y., \$25.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, April 9, 1859:—

W. H. A., of Iowa; L. & P. of N. Y.; H. L. of Mass.; G. M. of Ct.; K. & P. of Ct.; C. H. B. of Pa.; T. S. of Ill.; P. M. of N. Y.; D. R. of Pa.; T. M. of N. Y.; S. B. of N. Y.; G. K. of N. Y.; N. B. G. of N. Y.; H. G. of O.; J. H. of Pa.; L. H. T. of R. I.; E. B. of Pa.; R. H. of Tenn.; J. L. N. of Pa.; N. B. of Iowa; T. B. B. of N. Y.; G. R. of N. Y.; S. F. A. of Ky.; R. I. H. of O.; P. & M. of O.; C. C. of Mass.; H. G. of La.; S. & J. T. of Pa.; T. W. G. of N. J.; R. B. B. of Vt.; R. F. W. of N. Y.; W. A. of N. Y.; (3 cases).

## Literary Notices.

**CARPENTERS' AND JOINERS' ASSISTANT.**—Published by Blackie & Son, No. 117 Fulton street, New York.—This work is published in numbers, sixteen of which have been issued. It is illustrated with numerous engravings on steel and wood, and is unquestionably the most superb and thorough treatise on the subject ever published. Wooden steeples, ornamental windows, bridges, houses, roofs, arches, and all the styles of superior architecture and joiner work are amply illustrated and described in a scientific manner. As our country is celebrated for wooden structures, it is a most valuable acquisition to our carpenters, joiners, and architects.

**PRESENT PRACTICE IN THE LOCOMOTIVE ENGINES.**—Published by Blackie & Son.—This is a supplement to "Railway Machinery," a very extensive treatise formerly issued by the same publishers. This supplement is edited jointly by D. K. Clark, C. E., of London, and Zerah Colburn, M. E., of New York, both able and practical engineers. The latest improvements in English and American locomotives are described and illustrated with accuracy and clearness, and much useful information necessary to engineers, is here presented for the first time. Four numbers have been issued, and four more will complete the volume.