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ASSIGNMENTS OF PATENTS.

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Parties sending models to this office on which they decide not to apply for Letters Patent and which they wish preserved, will please to order them returned as early as possible. We cannot engage to retain models more than one year after their receipt, owing to their vast accumulation, and our lack of storage room. Parties, therefore, who wish to preserve their models should order them returned within one year after sending them to us, to insure their obtaining them. In case an application has been made for a patent the model is in deposit at the Patent office, and cannot be withdrawn.

It would require many columns to detail all the ways in which the Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with patent property or inventions to call at our extensive offices, No. 37 Park Row, New York, where any questions regarding the rights of Patentees, will be cheerfully answered.

Communications and remittances by mail, and models by express (prepaid) should be addressed to MUNN & CO. No. 37 Park Row, New York.



L. M. R., of Ohio.—No chemist has ever been able to make butter; it is formed in globules in the body of the cow. The temperature of the cream is very important in churning. If it is below fifty degrees, the cream may be churned for days without separating the butter, and if much above sixty degrees, a portion of the casein will be mixed with the butter, giving it a white appearance and cheesy flavor. Milk absorbs the odor of turnips or other roots kept with it in the same cellar; it should be kept by itself in a cellar of the most immaculate cleanness, and of uniform temperature.

J. H., of Maine.—The plan of melting quartz to extract gold has been tried many times. The most plausible plan is to make the quartz into soluble glass by fusing it with an excess of soda, and it is claimed that this method is practical. A fatal objection to a gunpowder engine is the accumulation of sulphide of potassium in the cylinder. A carbonic acid engine would doubtless be sufficiently powerful to propel a flying machine a short distance.

A. A. K., of Minn.—As water under a head exerts an equal pressure in all directions, there is no objection to making a water-wheel to work by pressure. Water engines have been made essentially the same as steam engines but with larger ports. There was one employed at the waterworks at Washington and it was said to yield 94 per cent of the power, a larger proportion than any wheel.

H. H. S., of N. Y.—The attraction of magnetism is in inverse proportion to the square of the distance, the center of power being within the magnet a short distance from the end. As your bar, B, is much nearer the magnetized wires than the bar, C, the attraction of the wires for B will be several times greater than for C, and will tend to resist a motion of the bars instead of causing them to revolve.

E. L., of N. J., and S. M., of Mass.—Pyrolygneous acid is a waste product in the manufacture of gunpowder, being distilled from wood in making the charcoal. Some of the powder manufacturers purify it for market and some do not. It is also manufactured at works specially erected for the purpose in different parts of the country; there is one at Green Point, Long Island, and another near Ithaca in this State. It is used principally by dyers.

J. S. B., of N. Y.—The object of writing is to communicate the ideas of one person to another, and to accomplish this it is important that the ideas should be presented in their proper order, and one at a time. When a writer uses a parenthesis, he begins to express one idea, and interrupts the expression of that to give utterance to another. It is better generally to make a complete and separate sentence to convey the idea contained in the parenthesis.

B. T. S., of Ill.—Water is very slightly compressible, and is therefore a little more dense at the bottom of the ocean than at the surface. Hence a body that would barely sink at the surface might be arrested before it reached the bottom. This would not be the case with metals, stones, and other substances the specific gravity of which is several times greater than that of water.

A. R. C., of Ill.—We do not know of any work that has every variety of steam engine illustrated; most of the common varieties are given in "Bourne's Catechism." Steam engines are being invented every day, and it would take a large work to hold the several varieties, good, bad, indifferent, and those of no value whatever.

J. D. L., of Ky.—Of two wheels running together the smaller is the pinion. Ask your customers whether the wheels run together, and the diameter of both, then you will know which is the pinion. Some pinions on the monitor turrets are 3 feet in diameter.

E. P., of Cal.—Your communication is interesting, and is written in the clear style which is always desirable, but we are forced to reject it on account of its great length. This is one of the worst faults that an article can have for our paper.

G. J., of Minn.—You do not forfeit your patent by any delay in bringing it before the public. You are not obliged to do this.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, Nov. 23, 1864, to Wednesday, Nov. 30, 1864:—

H. E. G., of N. Y., \$25; C. E. R., of N. Y., \$30; T. B. T., of N. Y., \$25; G. & H., of Pa., \$20; W. B., of Mass., \$45; G. F. B., of U. S. A., \$20; L. DeL., of N. Y., \$30; W. F., of N. Y., \$22; M. H., of N. Y., \$15; M. F. R., of N. Y., \$10; G. H. G., of N. Y., \$10; W. F. G., of N. Y., \$15; C. S., of N. Y., \$15; A. L. G., of Mo., \$20; E. B., of Ind., \$16; P. C., of Ill., \$15; A. R. D., of N. H., \$15; C. B. & W. T. B., of Ill., \$16; J. D., of Mich., \$15; D. S., of Mass., \$75; G. B., of N. Y., \$35; S. R., of Pa., \$25; D. M., of U. S. A., \$16; C. C., of N. Y., \$25; J. C., of N. Y., \$15; S. & S., of Ohio, \$16; B. J., of N. J., \$25; J. K., of N. Y., \$25; G. E. W., of N. Y., \$25; J. M. M., of N. Y., \$25; W. P. M., of Wis., \$20; J. M., of N. Y., \$15; R. & C., of Ohio, \$20; J. S., of N. Y., \$45; J. B., of N. Y., \$40; L. W., of Conn., \$20; A. M. W., of N. Y., \$15; W. T. L., of N. Y., \$15; J. W. P., of Ill., \$20; F. L., of N. Y., \$20; H. T., of N. Y., \$20; W. W., of N. J., \$15; J. R. S., of Ill., \$10; J. R., of Ind., \$16; H. W. W., of Pa., \$25; J. N. A., of Iowa, \$25; D. C. A., of Iowa, \$26; T. M. L., of N. Y., \$25; A. K., of Pa., \$76; L. D. H., of Ill., \$25; S. W. W. & Co., of Mich., \$31; F. M. G., of N. Y., \$15; L. & G., of Pa., \$25; E. H., of Ind., \$25; H. J., of N. Y., \$30; A. L. A., of N. Y., \$12; J. J. G., of Ohio, \$30; C. B. H., of Ill., \$20; F. S., of N. Y., \$45; P. H. P., of Conn., \$20; A. D., of La., \$20; A. H., of N. Y., \$20; P. W. P., of England, \$20; G. W. P., of N. Y., \$22; A. W. C., of Conn., \$20; W. H., of Del., \$15; J. W., of N. Y., \$55; S. & T. of N. Y., \$16; I. A. P., of Ill., \$15; H. E., of Pa., \$15; I. C. P., of Ill., \$30; Mrs. S., of Ill., \$16; D. F. V., of Ky., \$16; S. W. F., of Mass., \$25; S. & L. R., of Pa., \$16; W. H. L., of Texas, \$25; J. E. M., of Ill., \$30; S. J. C., of Conn., \$15; W. N. R., of Ind., \$15; J. J. R., of Ill., \$16; A. & G. W., of Iowa, \$20.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it, and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, stating the amount and how it was sent, whether by mail or express.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, Nov. 23, 1864, to Wednesday, Nov. 30, 1864:—H. E. G., of N. Y.; G. E. W., of N. Y.; J. J. G., of Ohio; T. M. L., of N. Y.; J. N. A., of Iowa; L. D. H., of Ill.; B. J., of N. J.; G. W. P., of N. Y.; J. K., of N. Y.; A. L. A., of N. Y.; D. S., of Mass. (3 cases); P. C., of Ill.; S. R., of Pa.; D. C. S., of N. Y.; E. H., of Ind.; J. W., of N. Y.; H. J., of N. Y.; T. B. T., of N. Y.; F. & D., of Mass.; D. C. A., of Iowa; G. N. B., of Mich. (2 cases); J. E. M., of Ill.; W. F., of N. Y.; C. E. R., of N. Y.; J. M. M., of N. Y.; G. B., of N. Y.; H. W. W., of Pa.; C. C., of N. Y.; J. B., of N. Y.

TO OUR READERS.

INVARIABLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was pre-paid has expired.

MODELS are required to accompany applications for Patents under the new law, the same as formerly, except on design patents, when two good drawings are all that are required to accompany the petition, specification and oath, except the Government fee.

RECEIPTS.—When money is paid at the office for subscriptions, a receipt for it will always be given; but when subscribers remit their money by mail, they may consider the arrival of the first paper a *bona-fide* acknowledgement of our reception of their funds.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and enclosing \$1 as fee for copying. We can also furnish a sketch of any patented machine issued since 1853, to accompany the claim, on receipt of \$2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

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VOLUMES III., IV., VII., AND X., (NEW SERIES) complete (bound) may be had at this office and from periodical dealers. Price, bound, \$2 25 per volume, by mail, \$3—which includes postage. Every mechanic, inventor or artisan in the United States should have a complete set of this publication for reference. Subscribers should not fail to preserve their numbers for binding. **VOLS. I., II., V., VI. AND VIII.** are out of print and cannot be supplied.

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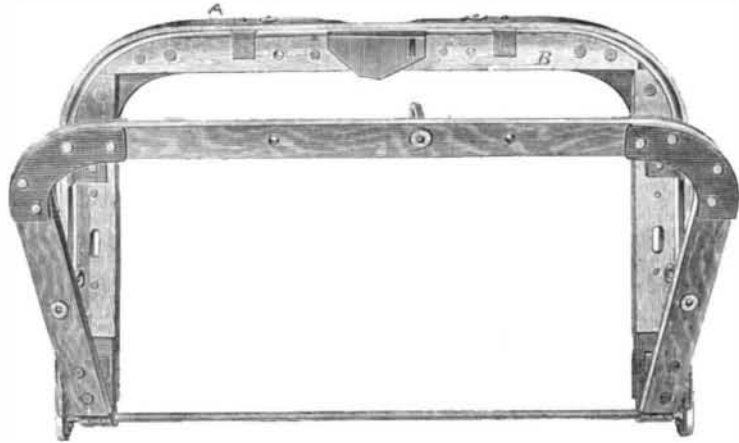
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Auf der Office wird deutsch gesprochen. Dasselbe ist zu haben: Die Patent-Befehle der Vereinigten Staaten, nach den Regeln und der Geschäftsordnung der Patent-Office und Anweisungen für den Erfinder, um sich Patente zu sichern, in den Vereinigten Staaten sowohl als in Europa. Dieser wichtige und den Patent-Erfindern fremder Länder und darauf bezügliche Nachrichten; ebenfalls nützliche Hülfe für Erfinder und solche, welche patentesiren wollen. Preis 20 Cts., per Post 25 Cts.

Improved Carpet-bag Frame.

This frame is made of wood stayed with iron, and the advantages to be derived from so constructing it are, that it is cheaper to manufacture by one-third, is more easily transported, and is much lighter. The iron frames commonly used require to be covered with cloth to conceal the rivet heads employed to fasten them together before attaching the outside coverings. The wood in this frame is got out straight, as shown, and needs no bending, the several pieces being united by metallic guards. The corners of the wooden portion are rounded off, and the metal stays or braces are stamped out with dies, so that they also are cheaply made. The top or bow, A, is the only

**LAGOWITZ'S CARPET-BAG FRAME.**

bent piece, and this is fastened securely by the stays, B, to the side frame. In other respects this frame is not peculiar. A patent was procured on it through the Scientific American Patent Agency on the 16th of September, 1863, by Samuel Lagowitz. For further information address him at 333 Broad street, Newark, N. J.

Telegraphic Present to the Czar.

We have seen a beautiful little telegraphic present intended for the Czar of Russia, a description of which will be of interest to our readers. The article is, in fact, a complete telegraph office, comprised within the compass of a morocco case eight inches in length, six inches in width and three and one-half inches in depth. Within this case are contained a complete galvanic battery, known to telegraphers as the electropian battery, with six glass cups for the acids, in which are inserted the zinc plates and carbons by which is generated the electric fluid. Attached to each cup is a switch, by which either the whole or a part of the force of the battery can be applied to the wires connecting with the instrument. The force, or electric power, generated by this miniature battery is sufficient to work the instrument and transmit easily messages between this city and Boston. The relay magnet is only three inches in length, an inch and a half in width, comprising two coils of copper wire as fine as the finest thread, covered with fine silk, each coil covered with bone rubber and containing one mile of wire. The "sounder," by which the operator designates by the number and length of the sounds or "clicks" the letters transmitted, is only an inch and a half in length, an inch and a quarter wide, and an inch in height, comprising two upright magnets over which is situated the armature connected with the brass standards by a small brass lever, the whole set on a hollow base of hard rubber. The key which the operator uses to transmit despatches is of brass, as is also the switch attached to it, and is mounted on hard rubber. The workmanship is of the finest character, nothing being wanted to make the whole contents of this little case a complete and thorough outfit for a first class telegraph office. The instrument is on the Morse system, and is that which is in general use in Russia. This *bijou* of telegraphy is indeed a beautiful specimen of American mechanism, such as will stimulate the Russian telegraphers to emulate, and one which will add much to the widespread fame of Charles T. Chester, Esq., its maker, as a New York artisan. Col. Charles S. Bulkley, Chief Engineer of the Russian American Telegraph line, is in possession of this miniature telegraph

office, and it will be presented to his Imperial Highness, the Czar of Russia, upon the arrival of Col. Bulkley at St. Petersburg, after the completion of the great intercontinental telegraph line between the two countries.

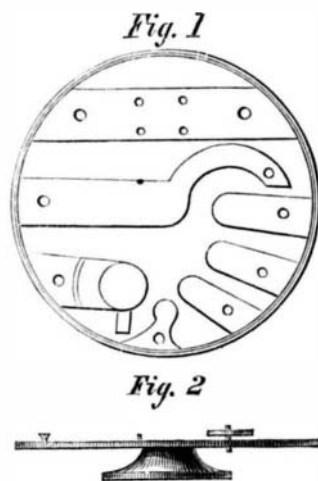
Sweeping the Streets of New York.

Very few persons have any conception of the magnitude of the work to be performed in cleaning the streets of a large city like New York. The *Herald*, in an article on the subject, remarks:—There are two hundred and sixty-eight miles of paved streets in this city, averaging thirty-three feet in width. This gives an area of one thousand one hundred and

thirty-nine acres to be cleaned. The city inspector has the whole area swept once every fortnight; about one-quarter is swept three times; three hundred and forty-five acres are cleaned six times; and seventy-five acres twelve times in the same space of time. This is equivalent to cleaning three thousand five hundred and fifty-three acres once in two weeks. In addition to this work the ash carts traverse every mile of the streets, on each side, every day, Sundays excepted. This is equivalent to traversing five hundred and thirty-six miles a day, and conveys some idea of the extent of this magnificent metropolis. The expense for street cleaning last year was \$398,223.

KIMBALL'S WATCH MOVEMENT HOLDER.

Watch makers will appreciate this little workholder, since its use will save a good deal of time and vexation in hunting after the several parts of the watch which have been removed for cleaning or re-



pairing. Instead of putting the parts under a bell glass on a sheet of paper, as is generally done, and turning them all over to find one particular screw, this plate is provided, and each piece is put into the hole or position it occupies in the watch. Fig. 1 is a view of the plate marked off like a "movement" and so that the workman can see at a glance what he is doing. This plate rests on a broad base which holds it firmly; the utility of it is too obvious to require further comment; it will no doubt become popular with watchmakers. A patent was issued through the Scientific American Patent Agency on Aug. 30, 1864, to E. M. Kimball, of Toledo, Ohio, whom address for further information.

New Safety Apparatus.

An ingenious apparatus for enabling persons to remain under water, or in places filled with deleterious gases, has been contrived by a French inventor. The apparatus consists simply of a piece of wood having the form and dimensions of the human mouth when open. To this piece of wood two india-rubber tubes are fixed, of any length, according to the exigencies of the case. The man engaged in the operation is further provided with a nose-pincher, or instrument for compressing the nostrils, so as to prevent the introduction of the deleterious gas or of water, as the case may be. The operator puts the piece of wood into his mouth, and puts on the nose-pincher. He stops up one of the orifices with his tongue, and inhales pure air from the other; after which he shifts his tongue on the latter orifice, and exhales his breath through the other. He continues thus regularly shifting his tongue from one orifice to the other, in the order of inspirations and expirations; but even a mistake would be of little consequence.

[This strikes us as being a complicated operation.—Eds.]

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