models from a distance can often be sent cheaper by mail. The safest way to remit money is by a draft on New York, payable to the order of Messrs. MUNN & CO. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & CO., No. 37 Park Row, New York.

Patents are now granted for SEVENTEEN years, and the Government fee required on filing an application for a patent is $15. Other changes in the fees are also made as follows:—

| | |
|---|---|
| On filing each Caveat | $10 |
| On filing each application for a Patent, except for a design | $15 |
| On issuing each original Patent | $20 |
| On appeal to Commissioner of Patents | $20 |
| On application for Re-issue | $30 |
| On application for extension of Patent | $50 |
| On granting the Extension | $50 |
| On filing a Disclaimer | $10 |
| On filing application for Design (three and a half years) | $10 |
| On filing application for Design (seven years) | $15 |
| On filing application for Design (fourteen years) | $30 |

The Patent Laws, enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.

The law abolishes discrimination in fees required of foreigners, excepting natives of such countries as discriminate against citizens of the United States—thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners, except the Canadians, to enjoy all the privileges of our patent system (except in cases of designs) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

### CAVEATS.

Persons desiring to file a caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The Government fee for a caveat is $10. A pamphlet of advice regarding applications for patents and caveats is furnished gratis, on application by mail. Address MUNN & CO., No. 37 Park Row, New York.

### REJECTED APPLICATIONS.

Messrs. MUNN & CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Their success in the prosecution of rejected cases has been very great. The principal portion of their charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted, are invited to correspond with MUNN & CO., on the subject giving a brief history of the case, inclosing the official letters, &c.

### FOREIGN PATENTS.

Messrs. MUNN & CO., are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business they have offices at Nos. 66 Chancery lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. They think they can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through their agency.

Inventors will do well to bear in mind that the English law does not limit the issue of patents to inventors. Any one can take out a patent there.

Circulars of information concerning the proper course to be pursued in obtaining patents in foreign countries through MUNN & CO'S Agency, the requirements of different Government Patent Offices, &c., may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, or any of the branch offices.

### SEARCHES OF THE RECORDS.

Having access to all the official records at Washington, pertaining to the sale and transfer of patents, MESSRS. MUNN & CO., are at all times ready to make examinations as to titles, ownership, or assignments of patents. Fees moderate.

### INVITATION TO INVENTORS.

Inventors who come to New York should not fail to pay a visit to the extensive offices of MUNN & CO. They will find a large collection of models (several hundred) of various inventions, which will afford them much interest. The whole establishment is one of great interest to inventors, and is undoubtedly the most spacious and best arranged in the world.

MUNN & CO. wish it to be distinctly understood that they do not speculate or traffic in patents, under any circumstances; but that they devote their whole time and energies to the interests of their clients.

### COPIES OF PATENT CLAIMS.

MESSRS. MUNN & CO., having access to all the patents granted since the rebuilding of the Patent Office, after the fire of 1836, can furnish the claims of any patent granted since that date, for $1.

### THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patentees who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by competent attorneys, to see if they are not likely to infringe some existing patent, before making large investments. Written opinions on the validity of patents, after careful examination into the facts, can be had for a reasonable remuneration. The price for such services is always settled upon in advance after knowing the nature of the invention and being informed of the points on which an opinion is solicited. For further particulars address MUNN & CO., No. 37 Park Row New York.

### EXTENSION OF PATENTS.

Many valuable patents are annually expiring which might readily be extended, and if extended, might prove the source of wealth to their fortunate possessors. Messrs. MUNN & CO. are persuaded that very many patents are suffered to expire without any effort at extension, owing to want of proper information on the part of the patentees, their relatives or assigns, as to the law and the mode of procedure in order to obtain a renewed grant. Some of the most valuable grants now existing are *extended patents*. Patentees, or, if deceased, their heirs, may apply for the extension of patents, but should give ninety days' notice of their intention

Patents may be extended and preliminary advice obtained, by consulting or writing to MUNN & CO., No. 37 Park Row, New York.

### ASSIGNMENTS OF PATENTS.

The assignment of patents, and agreements between patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park Row, New York.

### UNCLAIMED MODELS.

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.

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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

## Notes and Queries

**W. V. H., of N. Y.**—A fly-wheel does not create power—the idea is absurd. It is employed for two distinct offices. First, to give uniformity to the motion of machinery in cases where either the force or the resistance is variable. Second, to accumulate the power where a resistance greater than that of the force is to be overcome for a short period. An instance of the latter application is seen in the steam punch, where the resistance in some cases would stop the engine but for the aid of the heavy fly-wheel, in which the power of the engine for some time has been accumulated.

**J. T. S., of N. Y.**—High piston speed is a desirable element in an engine, but we cannot see how a much higher velocity can be got with a pair of double engines than with one engine of the pair. Some advantage may be derived from one helping the other off its centers, but if one engine runs 600 feet per minute, it does not follow by any means that two engines will run 1,200 feet. A high piston speed is economical, other things being equal. Any engine will run at high speed if you give it steam high enough and it is sufficiently large for the work. Mr. John Wiley, of Broadway New York, will furnish you with a book on ship-building.

**P. S. S., of Pa.**—We have no doubt that Mr. Hogg was in error in supposing that canned fruit will keep better without the addition of sugar. It is true that a small quantity of sugar in water will cause fermentation, but it is also true that a weak solution of sugar will ferment more readily than a concentrated one; indeed if it is sufficiently concentrated no fermentation will take place. All fruit contains sugar or starch enough to induce fermentation, and the addition of more sugar will doubtless tend to prevent fermentation.

**F. E. W., of Mass.**—You are mistaken in regard to the law. Unless you made a definite agreement with your workman to get up the improvement for you, you could lay no claim to it. He is employed by you to do a certain amount of work for certain wages, but has not pledged to you the result of his ingenuity in devising new inventions. This is as we understand the matter.

**W. T. C., of Mass.**—The mistake you made was in delaying your application for a patent, until some one has got a patent for the same thing. In order now to vindicate your rights, you must apply for a patent, and have your claims put into interference with those allowed to the other party. Many inventors by delaying their applications, involve themselves in much trouble.

**B. & D., of N. H.**—Steam causes the whistle to vibrate rapidly, that is what gives the sound. The steam strikes the thin edge percussively, or like a hammer, and that is what makes the vibrations. The pitch or note of all musical sounds is determined by the number of vibrations occurring in a given time.

**J. H. C., of N. H.**—If the watch falls with the same velocity of course the shock on the pivots of the balance wheel will be the same; but with a thicker case it would fall through the air with slightly greater velocity.

**J. F., of N. Y.**—Messrs. Balliere & Brothers, No. 440 Broadway, New York, have published a treatise on coal oil and petroleum by Abraham Gesner, M.D., F. G. S.

**H. H., of Ohio.**—Your improvement in sawing machines seems to be new, but before applying for a patent we advise you to have us make a preliminary examination into its novelty at the Patent Office.

**R. B. W., of Ohio.**—Mr. Richard Dudgeon, machinist, of Columbia street, this city, will furnish you with a punch that will cut an inch hole by hand in a bar one inch thick.

**W. C., of Pa.**—Your quadrant would measure the altitude of a star, but we should think with less trustworthy accuracy than those at present in use.

**C. R. S., of Md.**—The metal you send us is known as Chinese white copper. It is made by taking copper 40.4, nickel 31.6, zinc 25.4, iron 2.6 parts.

**E. A. K., of N. Y.**—The mechanical powers are the lever, the pulley, the wedge, the inclined plane, and the screw.

**N. W. F., of N. Y.**—There is no better electrical machine for medical purposes than Dr. Smith's, the kind you now have.

**R. B., of Canada.**—We know of no prize offered for a demonstration of the problem to bisect an angle.

### Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, Oct. 5, 1864, to Wednesday Oct 12, 1864:—

L. E., of N. Y., $25; R. C. & M., of N. Y., $35; B. & G., of Ill $20
F. H. P., of Conn., $15; E. T. M., of N. Y., $40; J. B., of N Y $20;
I. F. B., of Conn., $81; L. W. T., of N. Y., $22; H. S., of Tenn., $20; I. B., of N. Y., $20; J. B., of N. Y., $40; C. T. W, of Pa., $22; S. & S., of Mass., $15; W. Y., of N. Y., $25; G. G. P., of Pa., $40; A. M. of N. J., $15; A. J. N., of R. I., $25; J. S., of Conn., $25; W. N., of N. Y., $25; D. H. I., of Ill., $30; R. P. F., of Maine, $15; C. L., of N. Y., $40; J. S., of N. Y., $25; D. F. W., of Mass., $15; L. D. C., of Mich., $40; C. S., of N. Y., $12; H. B., of N. Y., $30; E. S., of N. Y., $20; J. S., of N. Y., $45; A. C. C., of N. Y., $40; O. G. B., of N. Y., $20; J. C., of N. Y., $20; A. M. G., of N. H., $20; S. C. R., of N. Y., $20; G. K., of Vt., $25; H. O., of Maine, $15; J. F. L., of Mich., $15; S. P., of N. J., $30; S. P. O., of Ill., $12; A. S. M., of Ill., $30; S. T., of Ill., $42; F. L., of Ohio, $15; D. I. S., of N. Y., $25; D. F. H., of Mass., $100; E. J. K., of N. Y., $10; L. G. K., of Mass., $20; V. W. B., of N. Y, $40; M. J. D., of N. Y., $40; J. L. T., of La., $15; H. N., of R. I., $20; H. N., of Pa., $20; P. & S., of Conn., $20; R. P. B., of Mich., $20; P. S. F., of N. Y., $20; R. & S., of Ill., $25; C. B., of Cal., $60; C. F., of N. Y., $30; J. S., of N. Y., $25; B. & L., of Cal., $15; J H. M., of Ohio, $25; N. B. B., of N. Y., $30; B. B., of R. I., $15; T N. D., of Ind., $15; J. F. S., of N. Y., $35; N. T., of N. H., $25; M. K., of Ohio, $25; A. J. S., of Cal., $19; T. M., of N. Y., $15; W. H. C. of Ind., $25; J. H. C., of Mass., $16; G. F., of Ill., $25; A. R. D., of N. H., $15; S. W. K., of Mass., $15; W. C. McB., of N. J., $35; S. R., of Pa., $30; G. S., of Mass., $15.

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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.

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Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, Oct. 5, 1864, to Wednesday, Oct. 12, 1864:—

C. L., of N. Y.; D. I. S., of N. Y.; D. S., of Cal. (4 cases); V. W. B., of N. Y.; L. W., T., of N. Y.; A. C. C., of N. Y.; R. & S., of Ill.; A. J. N., of R. I.; N. B. B., of N. Y.; S. P., of N. J.; W. H. C., of Ind.; G. K., of Vt.; H. L., of Iowa; G. F., of Ill.; G. M. M., of Pa.; L. E., of N. Y.; H. B., of N. Y.; J. S., of N. Y.; W. C. McB., of N. J.; W. Y., of N. Y.; J. H. M., of Ohio; W. N., of N. Y.; J. F. S., of N. Y.; J. S., of N. Y.; C. F., of N. Y.; S. R., of Pa.; A. J. S., of Cal.; R. C. & M., of N. Y.; J. S., of N. Y.; E. T. M., of N. Y.; C. S., of N. Y.; M. J. D., of N. Y.; J. B., of N. Y.; A. C. C., of N. Y.; C. T. W., of Pa.; J. S., of Conn.; C. A. B., of Cal.; D. H. I., of Ill.; S. P. O., of Ill.; N. T., of Ind.; A. S. M., of Ill.; G. G. P., of Pa.; M. K., of Ohio.

### TO OUR READERS.

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.

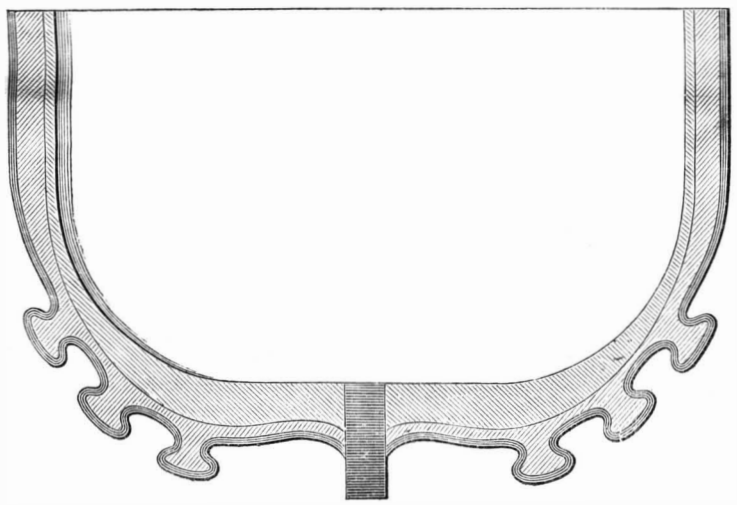
INVARIABLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was pre-paid has expired.

### Improved "Rorqual Fold" for Ships.

Many narrow-beam ships are much benefitted by attaching long "shelves," running fore and aft, projecting downward, at an angle from the sides, a foot or more. These "shelves" take hold of the water, confine it, and thus prevent the heavy roll and lurch that crank ships are liable to. This invention is designed to effect the same object, and it is called by the inventor the "rorqual fold," from the whale of that species, which is the largest known to naturalits, and for the peculiar faculty of creating similar folds in its skin.

Regarding the uses to which it may be applied, and the advantages resulting from it, the inventor says:—

"Our vessels, as now constructed, sit on the water



BOWDLEAR'S "RORQUAL FOLD" FOR SHIPS.

regardless of the laws of hydraulics, and entirely at the mercy of the waves. There is no affinity between the vessel and its element. It rises and falls, rolls and pitches, without the least control over the waters around. My theory is, when my attachment is placed on a vessel's bottom that the tendency to roll is counteracted by the resistance these folds offer. They clench the water like so many fingers, and keep the vessel from rising above its true center of gravity, as the water and vessel retain their mutual hold of each other. Thus when a vessel is lifted by the powerful action of the sea, the momentum given exceeds that of the wave itself, and consequently she plunges at random, or rolls by her momentum beyond the requirement of the element by which she is surrounded; in fact she does not roll on a safe center of gravity.

"Practical men who have examined it, among them Admiral Stringham, are desirous to see it at once applied."

This invention was patented Oct. 14th, 1863, by John Bowdlear, of Roxbury, Mass. For further information address him at that place, Box No. 419.

### Butter at Sixteen Cents.

Canada must be a very desirable place to live in at the present time. The prices of provisions in the London (C. W.) markets make us long for a corresponding reduction in the enormous prices for food which are obtained here. We quote from the Canada *Farmer:—*

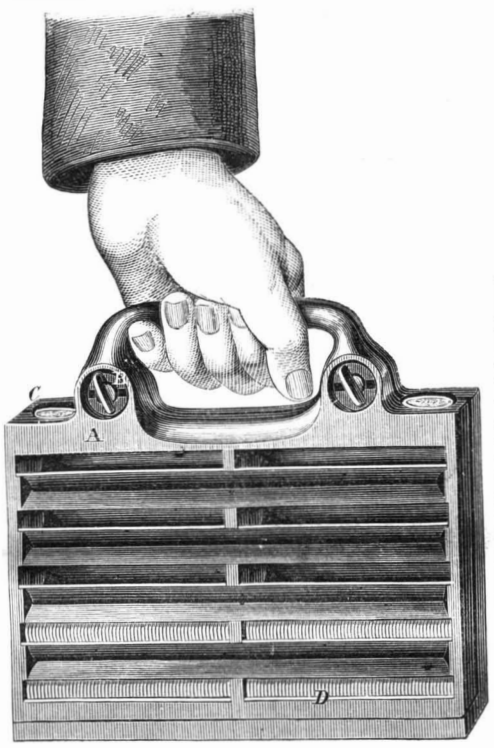
"Meat, from farmers' wagons, in large supply, and by the quarter very cheap. Beef $2 to $3 50 per 100 lbs. Mutton and lamb, 2c. to 4c. per lb. Poultry—dressed turkeys, 50c. to 75c.; geese, 25c. to 37½c. each; fowls, 37½c. to 50c.; ducks, 32c. to 40c. per pair. Butter, fresh in rolls, 16c. to 18c. Eggs, 10c. to 12½c. per dozen. Fruit—apples plentiful, at 25c. to 62½c. per bushel. Vegetables abundant; potatoes, 40c. to 50c. per bushel; turnips, 37½c.; onions, $1 to $1 25."

Beef here costs ten times as much. Butter three times and poultry six times as much. Potatoes nine times as much.

An English photographer has lately introduced a novelty in the mode of taking carte-de-visite photographs with the signatures of the sitters appended. This gives but little extra trouble. The sitter simply signs his name on a slip of paper, and finds its fac simile, diminished in size, transferred to the portraits when they come home.

### HOWARD'S COIN SAFE.

By transporting specie to a distance in the ordinary canvass bags, boxes, or other packages, where the coins have a chance to rub against each other, a very perceptible loss occurs from abrasion or friction. The rough milled edges scraping against each other, and on the smooth parts, is the cause of this loss; the amount of wear on large lots of gold is really very serious, as our large importers know to their sorrow. This has been provided against, as will be seen by inspecting the accompanying engraving. The case, A, is made of cast-iron, and is japanned handsomely outside and in. The case separates in the middle like a portmanteau, and at the junction of the handle with the body has two small turn screws, B, which keep the case together when set as shown, but there are two slots in the handle which allow the case to be opened when the screws are turned horizontally. In the upper side of the case there are circular depressions, C, which receive the wax on which the seal of the owner or express company is placed. The gold sets in a series of racks inside, and each rack is proportioned to suit a certain denomination; or they may be made all of one




size as desired. The gold packed is shown at D and in this condition is wholly protected from loss by the causes mentioned previously. Money cannot be lost out of this safe as it is from bags, which are often cut or ripped, and it need not be counted, as the contents are known, when the racks are full, by a glance. It is more durable than a bag, for it will last for years, whereas bags are costly and soon wear out. The inventor cites one instance where this safe would have been useful; there are, doubtless, many similar ones:—"Last winter when there was about six inches of snow on the ground and it was fast increasing, a gentleman was carrying a bag of gold through Wall street; the bag ripped and a number of pieces fell in the snow, his predicament was peculiar; he could not leave what he had dropped for obvious reasons, he could not count what he had left so as to ascertain how much he had lost, he could not tell how many pieces there were under the snow. So all he could do was to rummage with benumbed fingers in all the snow on that part of the sidewalk, and with an amused audience to witness the performance." This coin safe can be conveniently carried in the hand like a carpet bag, and will, no doubt, become popular with our business firms.

A patent is now pending through the Scientific American Patent Agency by Joseph P. Howard, of Brooklyn, N. Y. For further particulars address Andrews & Co., 29 Cliff street, New York City

Soft soap mixed with a solution of potash or caustic soda, or pearlash and slaked lime, mixed with sufficient water to form a paste, is an excellent solvent for old putty and paint. Either of these laid on with an old brush or rag, and left for some hours, will render the putty or paint easily removable.



FROM THE STEAM PRESS OF JOHN A. GRAY & GREEN.