

Second, I claim combining the knives and space blocks with the case of a meat cutter in the manner substantially as described and for the purposes set forth.

1,279.—Sanford, Harroun & Co. (assignees by mesne assignments of G. F. Hebard, G. J. Hill and S. D. Rockwell), of Buffalo, N. Y., for Improvement in Printing Presses. Patented Aug. 7, 1860.

We claim, first, The combination of the spool or roller, C, or the equivalent thereof, which carries a roll of printing paper, or thin card board, which may be wound into a roll with feeding rollers, which have an intermittent feed movement, and the printing and numbering mechanism of a printing and numbering machine, substantially as described, so that the paper or card board may be run off from the roller and fed in by an intermittent movement of the feed rollers, and properly presented for printing and numbering coupon tickets from a continuous sheet of printing paper or card board, substantially as set forth.

Second, The combination and arrangement of the cutting mechanism with a roller or equivalent, carrying a roll of paper or card board, and the printing and numbering mechanism of a printing and numbering machine, so that coupon and other tickets may be printed, numbered and cut simultaneously from such printing paper or card board, substantially as described.

Third, In a machine for printing and numbering coupon tickets we claim, in combination with the printing mechanism for printing the tickets, making the numbering wheels adjustable horizontally, substantially as described, whereby the machine can be readily adapted to numbering tickets of different widths.

Fourth, In a machine for printing tickets from a roll or continuous sheet of printing paper or thin card board, we claim making the feed roller so as to act upon a portion of the width of the sheet instead of the whole width, whereby we are enabled to feed in thin sheets of printing paper or thin card board, in a smooth and even manner.

1,280.—Alexander Swift, of Cincinnati, Ohio, assignee by mesne assignments of Issachar Frost and James Monroe, of Albion, Mich., for Improvement in Mode of Separating Flour from Bran. Patented Feb. 27, 1849. Re-issued March 13, 1855. Again re-issued May 11, 1858.

We claim, first, The combination of the essential features severally described and severally numbered, 1 2 3 and 4 or their equivalents, substantially as described and for the purposes specified in the several numbers.

Second, We also claim the combination of the essential features severally described, and severally numbered 1 2 and 3, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth in number 5.

Third, We also claim the combination of the essential features severally described, and severally numbered 1 2 and 6, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth in number 6.

Fourth, We also claim the combination of the essential features severally described, and severally numbered 1 2 6 and 7, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth.

Fifth, We also claim the combination of the essential features severally described, and severally numbered 1 2 4 5 6 and 7, or their equivalents, substantially as specified; the purpose of the combination being substantially as set forth.

1,281.—J. E. Brown and S. S. Bartlett, of Woonsocket, R. I., and T. H. Dodge, of Washington, D. C., assignees to said Brown and Bartlett, for Improvement in Grain and Grass Harvesters. Patented Jan. 2, 1855. Re-issued Jan. 1, 1861.

We claim, first, The combination of a hinged or yielding drag bar, I, or its equivalent, with the main frame and finger bar or cutter stock of a harvesting machine, in such a manner that as the frame is advanced the drag bar or its equivalent will be advanced, and that in its turn will draw forward the finger bar which supports the cutting apparatus, which is left free to rise or fall bodily, or at the heel end, while the outer end rests on a lower surface, without affecting the motions of the main frame.

Second, The use and employment in a harvesting machine of a yielding drag bar, or its equivalent, arranged on the inner side of the machine, in combination with hinging the heel of the finger bar to said drag bar, whereby the entire cutting apparatus is left free to rise or fall bodily, or either end thereof, independent of the other, and without affecting the motions of the main frame.

Third, Hinging the front elevated end of a drag bar to which the heel of the finger bar is connected in a harvesting machine, to the front inner side of the main frame, in combination with giving said drag bar a lateral support in rear of the axis of the main wheels, whereby the strain on the frame is divided, while the rear end of the drag bar is retained in proper position but left free to rise and fall independently of the main frame, for the purpose stated.

Fourth, Fastening the heel end of the finger bar which supports the cutting apparatus in a recess in the end of a yielding drag bar, whereby the cutting apparatus is properly supported and kept in position at the side of the machine, and yet left free to conform to the inequalities of the ground without affecting the motions of the main frame.

Fifth, The combination of the drag bar, I, with rock shaft, H', and the front of the main frame, substantially as set forth.

Sixth, The use of a single draw or drag bar attached at its forward and elevated end to the machine by a connection, so that its rear end can rise and fall, as specified, in combination with a hinged or rigidly connected cutter stock or finger bar, for the purposes specified.

Seventh, Hinging the finger bar in a grass harvesting machine to a vibrating drag bar, or equivalent device, when said drag bar or equivalent device is used for the purpose of sustaining and supporting the cutting apparatus to the right of the path of the wheel of the machine, and of allowing it to conform freely to the uneven surface of the ground while the machine is in operation.

1,282.—J. E. Brown, S. S. Bartlett, of Woonsocket, R. I., T. H. Dodge, of Washington, D. C., assignees of said Brown and Bartlett, for Improvement in Grain and Grass Harvesters. Patented January 2, 1855. Re-issued January 1, 1861.

We claim, first, The combination of a floating folding finger bar with the frame of a grass harvesting machine, whereby when the machine is in operation the cutting apparatus is left free to conform to the inequalities of the ground without affecting the motion of the main frame and is also capable of being raised and turned or folded up so as to facilitate the passage of the machine from place to place, or over fields of cut grass.

Second, The arrangement of a floating folding finger bar with the frame of a grass harvesting machine in such a manner that the attachment can freely approach said finger bar from the rear and turn up the outer end thereof with facility to pass stumps, stones, or through gates, without tipping up or raising the carriage while the main weight of the finger bar is allowed to rest on the ground at the side of the machine, for the purposes stated.

Third, The combination of a stop, V, or any equivalent device for the purpose stated, with the heel of a floating folding finger bar and the frame of a grass harvester.

1,283.—J. E. Brown, S. S. Bartlett, of Woonsocket, R. I., and T. H. Dodge, of Washington, D. C., assignees of said Brown and Bartlett, for Improvement in Grain and Grass Harvesters. Patented January 2, 1855. Re-issued January 1, 1861.

We claim, first, The combination of the following elements in a grass harvesting machine, viz., a main frame, two supporting wheels to sustain said frame laterally and at the proper distance above the ground, a rigid tongue to draw and steady the machine by and a floating finger bar for the purposes stated.

Second, So combining in a grass harvester, a floating finger bar, a frame to support the driver, and the tongue or draft beam by which the machine is drawn forward as that the finger bar which supports the cutting apparatus can rise and fall freely at either or both ends without affecting the motion of said frame or tongue.

Third, The combination and arrangement in a grass harvesting machine of a frame to carry the driver, two wheels to support said frame, one at each side thereof, a tongue to draw the machine by and a double-jointed finger bar attachment, substantially as and for the purposes stated.

Fourth, Combining the floating finger bar with the frame of a grass harvesting machine so that said floating finger bar shall project entirely from the right side of the machine, substantially as and for the purposes stated.

DESIGNS.

1,542.—E. J. Ney (assignor to the Lowell Manufacturing Company), of Lowell, Mass., for five Designs for Carpet Patterns.

1,547.—I. B. Woodruff, of Winchester, Conn., for Design for a Clock Case.

NOTE.—In the above list of patents, issued on the 25th ult., we recognize the names of THIRTY-TWO patentees whose specifications and drawings were prepared at this office.—Ers.

PATENTS FOR SEVENTEEN YEARS.



The new 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 duration of patents granted under the new act is prolonged to SEVENTEEN years, and the government fee required on filing an application for a patent is reduced from \$30 down to \$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 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 law abolishes discrimination in fees required of foreigners, excepting reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, 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.

During the last sixteen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventors and Patentees at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds in the quickest time and on the most liberal terms.

The Examination of Inventions.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

Preliminary Examinations at the Patent Office.

The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of \$5, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a Patent &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh-streets, Washington, by experienced and competent persons. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

How to Make an Application for a Patent.

Every applicant for a Patent must furnish a model of his invention. If susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the government fees by express. The express charge should be prepaid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of 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.

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, under the new law, is \$10. A pamphlet of advice regarding applications for Patents and Caveats, in English and German, furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

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We are very extensively engaged in the preparation and securing of Patents in the various European countries. For the transaction of this business, we have offices at Nos. 66 Chancery-lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through our 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 our Agency, the requirements of different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our Branch Offices.

Rejected Applications.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our 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 us on the subject, giving a brief history of the case, inclosing the official letters, &c.

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.

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.



W. F. Q., of Del.—Though the velocity of the earth's surface at the equator is greater than that of a cannon ball, it does not follow that the centrifugal force is sufficient to stop the ball.

J. H. S., of Nevada Ter.—For your high fall of 100 feet, we think a turbine would be the best kind of wheel. The wheel of J. E. Stevenson yielded the best results at the Philadelphia trial. Address him at the Novelty Iron Works, New York, for all the information you need. 33,000 lbs. of water falling one foot per minute yields one horse power; a cubic foot of water weighs 62½ lbs. Consequently, to find the horse power of your fall, multiply the number of cubic feet running in your stream per minute, by the fall in feet, and the product by 62½, and divide by 33,000. It is impossible to obtain the whole power for use on machinery as some of the water will leak, and the power is wasted in other ways. Mr. Stevenson's wheel yielded 87 per cent, which we believe is the largest proportion that has ever been obtained.

A. L., of Conn.—We do not engage in the business of procuring copyrights. When you are in this city you had better apply to some leading book publishers for information on the subject.

J. V. R., of N. Y.—You will find oreide of gold described on page 200 Vol. IV., (new series) SCIENTIFIC AMERICAN.

H. L., of N. J.—Morrison & Carr, of the New York city pottery, Thirteenth street, manufacture porous cups for galvanic batteries, and have done so in large quantities for the past three years.

D. W. B., of N. Y.—So far as we know, neither pot nor pearl ash are manufactured by boiling in a vacuum pan. We do not see what advantage could be secured by such a method of evaporation, as no saving of fuel is effected by the use of a vacuum pump in concentrating fluid.

W. S. P., of Mass.—The best method of removing grease from the leather of pulleys, is to soak it for a short period in cold, strong soap suds, then squeeze and dry it.

D. G. W., of Vt.—Sheet copper will be more durable for your chimney top, than galvanized sheet-iron.

S. B. W., of N. Y.—It is not supposed that all flint is composed of the coprolites of whales, only that the nodules in chalk are.

D. S., of Wis.—You say there is a prevalent idea in your neighborhood that fence posts set in the ground with the little end down, will last longer than with the large end in the ground, and you ask our opinion in regard to its correctness. We have no opinion on the subject, because we have no grounds for forming one. We attach very little weight indeed to the fact that such a notion prevails in your community, from the disposition of people to take such notions one from another, without any examination. If you will set 100 posts, one half of them with the large end in the ground, and the other half in a reversed position, and will repeat the experiment with various kinds of wood, cut at different seasons of the year, and set in different kinds of soil, and will write a plain account of the investigation, we shall be pleased to publish it in the SCIENTIFIC AMERICAN.

W. S., of C. W.—We have had a great deal of trouble from air accumulating in lead pipes where the pipes passed over an elevation. We think your best plan would be to attach a suction pump to the lower end of your pipe. You would generally be able to draw the air out from the bend in your siphon.

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Money Received

At the Scientific American Office on account of Patent Office business, during one week preceding Wednesday, March 5, 1862:—

J. H., of Scotland, \$20; L. W., of Conn., \$13; F. E. B., of N. Y., \$45; G. and M., of N. Y., \$20; C. P. B., of Conn., \$20; A. C., of Mass., \$20; F. G. L. S., of Wis., \$20; A. B., of Conn., \$40; W. G., of Ind., \$15; J. S. H., of Cal., \$50; T. C., of R. I., \$75; W. F., of Hanover, \$30; J. B. S., of Prussia, \$15; R. H., of N. Y., \$28; J. McH., of O., \$15; D. C. D., of Ind., \$25; F. G. J., of L. I., \$225; R. J. S., of N. Y., \$30; H. H. E., of Conn., \$15; J. H. I., of Ill., \$15; B. F. S., of Vt., \$15; G. and C., of Conn., \$15; L. C. C., of Mass., \$20; C. G. M., of Vt., \$15; J. H., of N. J., \$25; M. S. S., of O., \$15; S. T. D., of N. J., \$15; J. McH., of O., \$15; E. D. W., of Pa., \$50; J. P. W., of N. Y., \$25; C. E. S., of Md., \$45; D. G., of N. Y., \$20; D. B., of Conn., \$20; A. B., of N. Y., \$15; C. S., of N. Y., \$20; C. O. P., of Mass., \$45; F. C., of N. H., \$20; J. F. H., of Cal., \$10; E. S. N., of Iowa, \$15; C. H. and W. G. D., of Pa., \$15; T. H. A., of Ill., \$20; J. I., of Pa., \$15; W. H. L., of Mass., \$15; C. G. P., of Ind., \$15; A. S. L., of N. Y., \$125; R. and Co., of N. Y., \$100; H. O. P., of Mass., \$15; W. B., of Iowa, \$15; A. R., of Cal., \$15; W. O., of N. Y., \$15; J. H. R., of Ill., \$15; G. and J., of R. I., \$15; P. S. C., of N. Y., \$15; I. McD., of Iowa, \$15; J. K. H., of Ind., \$15; W. P., of Md., \$15; D. W. H., of Cal., \$25; J. W. B., of N. Y., \$25; J. A. W., of N. Y., \$25; T. V., of Cal., \$20; J. B. S., of Conn., \$32; J. H., of N. Y., \$20; S. and R., of N. Y., \$45; E. and A. B., of N. Y., \$20; C. B. S., of Mass., \$45; A. O. C., of N. J., \$20; W. R. B., of Mich., \$20; W. and F., of Wash. Ter., \$20; D. W. H. of Cal., \$20; L. S., of Mass., \$15; B. S. and J. M., of Pa., \$25; J. R. G., of Ill., \$10; P. and B., of Mass., \$15; L. W. P., of Mass., \$53; J. M., of N. Y., \$15; W. H., of Iowa, \$15; A. H. and J. A. B., of Pa., \$15; J. H., of O., \$15; W. H. P., of N. Y., \$15; J. S. T., of N. Y., \$10; S. E. S., of N. Y., \$15; W. C., of O., \$15.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Feb. 26, to Wednesday March 5, 1862:—

L. W., of Conn.; J. B. S., of Conn.; H. M. H., of Pa.; J. H., of Cal.; E. D. W., of Pa., two cases; R. J. S., of N. Y.; L. W. P., of Mass.; J. H. V., of Mass.; J. P., of Ind.; W. B. B., of Mich.; B. T. and S. M., of Pa.; R. H. G., of N. Y.; W. O. H., of Pa.; T. C., of R. I., three cases; J. A. W., of N. Y.; J. W. B., of N. Y.; E. P., of Cal.; A. B., of Conn.; J. P. W., of N. Y.; J. H. I., of Ill.; J. H., of N. J.

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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 is required to accompany the petition, specification and oath, except the government fee.

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For further particulars, address—

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They are manufactured of every number of Emery, fine or coarse, moulded to every size, and made in quality to any degree of hardness. They are true, and carefully balanced; and, as they always present an even surface, and do not glaze, are unequalled for cutting, grinding, sharpening and polishing purposes. Their durability and efficiency commend them as a matter of economy, to all workers in metals. We subjoin the following from many testimonials:—

MORGAN IRON WORKS, New York, Nov. 30, 1861. NEW YORK EMERY WHEEL CO.—Gentlemen: Having given the Patent Solid Emery Wheel manufactured by you a severe trial, I do, without hesitation, pronounce it the best wheel I have ever used, as it cuts quick, wears slow, and does not glaze or scorch by friction. Respectfully yours, JOHN GALLIGHER, Foreman Morgan Iron Works.

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NEW YORK OBSERVER FOR 1862.—IN ASKING the aid of all who may desire to extend the circulation of the New York Observer, it is proper for us to state distinctly the position it occupies with reference to the present condition of public affairs in our beloved country.

Having always maintained the duty of good citizens in all parts of the land to stand by the Constitution, in its spirit and letter, when that Constitution was assailed and its overthrow attempted, we accordingly at once gave a cordial support to the Government in its patriotic endeavor to assert its lawful authority over the whole land. Believing secession to be rebellion, and when attempted, as in this case, without adequate reasons, to be the highest crime, we hold

- 1. That the war was forced upon us by the unjustifiable rebellion of the seceding States.
2. That the Government, as the ordinance of God, must put down rebellion and uphold the Constitution in its integrity.
3. That every citizen is bound to support the Government under which he lives, in the struggle to reestablish its authority over the whole country.
4. That the Constitution of the United States is the supreme law of the Government as well as of the people; that the war should be prosecuted solely to uphold the Constitution and in strict subordination to its provisions; and the war should be arrested, and peace concluded, just so soon as the people now in revolt will lay down their arms and submit to the Constitution and laws of the land.
5. It is printed on a double sheet, so as to make two complete newspapers, one devoted to secular and the other religious matters; and these may be separated so as to make two complete journals, while the price for both is no greater than is charged for many papers smaller than either one of the two.
6. It gives every week a complete synopsis of the most interesting events in all the denominations, including those that are called, Evangelical and those that are not; as every intelligent Christian wishes to be well informed respecting all of them.
7. It gives a well-digested epitome of the News of the Day, Foreign and Domestic, prepared with great labor and care, so that the reader is sure to be put in possession of every event of interest and importance to the public.
8. The foreign correspondence of the Observer is unrivaled, and has long commanded the admiration of intelligent men.

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The state of the country renders it important for us and esirable for the churches, that a new and earnest effort be made to extend the principles of the true religion, and sound religious truth into all the families of the land. In every neighborhood there must be some who do not net take a religious newspaper, and who might with a little exertion be induced to subscribe.

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