

the string pieces, D D, suspension rods, B B, diagonal brace, C C, and shoes, E E, substantially as herein set forth.

2,702.—METHOD OF CASTING THE DRIVING WHEELS OF HORSE-POWERS, HARVESTERS, ETC.—E. P. Russell, Manlius, N. Y.—Patented Aug. 15, 1865.

I claim, 1st, Placing the pulley pins of driving wheels in the sand or mold by means of a model driving wheel so as to secure equidistance between the pins, substantially as and for the purposes specified.

2d, The combination of the driving wheel, A, the pin, C, and the friction roller, B, constructed in the manner and arranged as substantially as described.

2,703.—PLOW.—Frederick Volkman, Hoboken, N. J., assignee of Bruno Volkman. Patented Nov. 27, 1865.

1st, I claim a plow cart that is made and operating substantially as and for the purpose herein shown and described.

2d, The device for raising and lowering the front end of the plow beam, L, by means of the screw shaft, I (fitted in the axle, D, and sliding block, b), the nut, c, and plate, e, balance bar, e, links, g and i, all made and operating substantially as herein shown and described.

3d, The adjusting device, n, when so made by the application of a set screw, n', substantially as and for the purpose herein shown and described.

4th, The draft chain, K, attached to the underside of the plow beam and to the landside of the same or, in other words, to the lower left-hand edge of the same, substantially as and for the purpose herein shown and described.

5th, The perforated axle, B, in combination with the frame, B A E, and sliding block, b, for the purpose of allowing the lateral adjustment of the screw shaft, I (or its equivalent), substantially as and for the purpose herein shown and described.

6th, The manner herein shown and described of adjustably securing the draft bar, G, to the plow cart by means of the perforated axle, D', bolt, H, and semi-circular front plate, D, and pin or set screw, S, all made and operating substantially as herein shown and described.

7th, In combination with the device for adjusting the plow beam up and down the wheel, F, of the cart, when so arranged that by its adjustment the axle of the cart can be sunk more or less, as set forth.

8th, Hanging the front end of the plow beam directly to the screw shaft, I, by means of links, g, e, balance bar, e, and nut, c, all made and operating substantially as herein shown and described.

9th, The draft chain, K, when secured to the plow in the manner described in combination with the laterally as well as obliquely adjustable draft bar G, as set forth.

2,704.—CIDER MILL.—W. N. Whiteley, Jerome Fassler and Oliver S. Kelly, Springfield, Ohio. Patented Dec. 15, 1863.

1st, We claim the press beam, B, constructed with the lugs, G G, upon its lower part and at a distance from ends, as and for the purpose shown and described.

2d, The arrangement of the posts, A A, press beam, B, girder, C, rails, E E, post, F, and platform, I, to form the frame of a combined grinding and pressing fruit mill, as set forth and described.

2,705.—STRIPPING TOP FLATS FOR CARDING MACHINES.—W. B. Bates, Mansfield, Mass., Administrator of the Estate of George Wellman. Patented March 18, 1866. Antedated Nov. 25, 1853.

I claim, 1st, The combination of the segmental gear and its set rim or locking plate, with the pinion and its locking plate or recess, as a device for imparting an intermittent rotation to mechanism from a continuous one, for the purpose of opening and closing the stripping card, substantially as described.

2d, The combination of the said device for producing intermittent rotation, with the mechanism that moves the cleansing frame from one top card to another, substantially as described.

3d, The combination of the said device for producing intermittent rotation, with the mechanism that moves the cleansing frame from one top card to another, substantially as described.

4th, Combining and arranging the segmental gear and its set rim or locking plate, with the two pinions, each with its locking plate or recess, placed on opposite sides of said segmental gear, so as to operate the stripping apparatus, and move the cleansing frame alternately, substantially as described.

5th, The combination and arrangement of the mangle pins or teeth, with the arc of a circle directly attached to the cleansing frame and concentric with the movements, for the purpose of avoiding intermittent gearing, substantially as described.

6th, Mounting the stripper card upon radial arms that have their centers or axes below the stripper card and near the axis of the cleansing frame, substantially as described.

7th, The combination of the cams, X X, with the levers, Y Y, carrying and operating the stripper card, substantially as described.

8th, The combination of the cams, X X, with the lifting rods, Z Z, and the levers, Y Y, arranged to operate in connection, substantially as described.

9th, The combination of the cams, X X, with the chain belts, Q', the chain pulleys, R', and shaft, M, arranged and operating substantially as described.

10th, The combination of the guide, E', on the cleansing frame with the stationary guide, D', on the frame of the machine co-operating substantially as described.

11th, The combination of the springs, F', and the pins, E', and lifting rods, L, and their application to the frame, S, substantially as described.

12th, The mechanism for cleansing the stripper card arranged and applied substantially as described.

2,706.—STRIPPING TOP FLATS FOR CARDING MACHINES.—William B. Bates, Administrator of the estate of George Wellman, Mansfield, Mass. Patented Dec. 6, 1853.

1st, I claim the combination and arrangement of a continuously revolving radial arm and pin, or crank pin, and a circular locking plate connected therewith, with a series of intermittently revolving radial working grooves to receive said pin, connected with a locking plate provided with segmental recesses corresponding to said grooves and to the other locking plate, substantially as described.

2d, Combining with the cleansing frame, a mangle gear and the mechanism herein described for imparting an intermittent motion to the same suitably arranged, by which the cleansing frame is moved from one top card to another in any order desired, in both directions, and held at rest while the cleansing operation is performed, substantially as described.

3d, So combining and arranging the cleansing frame, the mangle gear and pinion, and mechanism for giving it intermittent motion, when the motion of the cleansing frame is from one top card to the next but one, that when the pinion passes around the extremity of the series of pins or teeth of the mangle gear to the opposite side of the same, the distance of the point from where the pinion starts where it stops on the mangle gear will correspond to the movement of the cleansing frame from one top card to that next to it and thus shift the order of cleansing the top cards when the frame is moving in opposite directions, substantially as described.

4th, Attaching the stripping card to radial arms, so arranged that by the collision of the said stripping card with the raised top card, the raised top card to cleanse the same, substantially as described.

5th, Forming the working faces of the cams that raise the top cards in separate and detached sections, placed so as to act in succession in combination with a series of projections or working surfaces on the device that raises the top cards substantially as described.

6th, The combination and arrangement of the several correspondent parts to form a complete apparatus by which the top cards of a carding machine may be automatically stripped or cleaned, substantially as described.

2,707.—BRIDGE.—Zenas King, for himself and assignee of P. M. Foyes, Cleveland, O. Patented Oct. 1, 1861.

I claim, viz: The construction and arrangement of the arch when the same increases gradually in its vertical and lateral dimensions from the ends

A' A', of the arch to its center or crown, substantially as and for the purpose set forth.

2d, The construction and arrangement of the arched or curved stay plates or channel-irons in combination with arched bridges, for the purpose specified.

2,708.—CENTRIFUGAL SUGAR MACHINE.—Alexander Mackey, New York City. Patented June 18, 1867.

I claim, 1st, The combination with the centrifugal cylinder of a distributor arranged within but detached from the said cylinder, substantially as and for the purpose herein set forth.

2d, The distributor, C, constructed essentially as shown, in combination with the centrifugal cylinder, B, and arranged in relation thereto substantially as and for the purpose herein set forth.

2,709.—COOKING STOVE.—Daniel E. Paris, Troy, N. Y., assignee by mesne assignments of James R. Hyde. Patented June 10, 1862.

I claim, 1st, A reservoir thus situated and constructed with a concave front, next adjoining said rear flues, the back of which latter shall be of a similar and conforming shape, for the purpose set forth and herein explained.

2d, Bolting or fastening the reservoir to the upright plate of the stove, substantially as herein shown and described.

DESIGN.
2,713.—COFFIN.—Henry Hoffman, Jenner's Cross Roads, Pa.

NOTE.—FIFTY-FOUR PATENTS in the above list were obtained through the home office of the SCIENTIFIC AMERICAN, exclusive of a number solicited through the Washington branch.—Eds.

PATENT OFFICE DECISIONS

BEFORE THE BOARD OF EXAMINERS-IN-CHIEF OF APPEAL.

Interference Between the Applications of M. and D.

ELISHA FOOTE, for the Board.

M. has a patent granted Feb. 10, 1863, for a self-raking apparatus applied to a single-wheel rigid-bar reaping machine. The improvements consist in applying the same self-rake to a two-wheeled jointed-bar machine. D. has an extensive manufactory of reaping machines at Auburn, N. Y. M. appointed an agent residing at that place to endeavor to procure the adoption of his rake upon the two-wheeled reapers manufactured there, and instructed him fully, in February, 1865, as to the manner of making the application. In July following he went there personally, procured their adoption by D., spent two or more weeks in D.'s manufactory making the application, and entered into a contract with him for the use of his patent for a stipulated rent.

It is alleged by D. that the apparatus constructed under the supervision of M. was imperfect and did not operate satisfactorily; that the pulleys were not of the proper relative sizes, the cams were not of the right shape, etc. If all admitted that he alleges to the full extent that he claims, it would fall short in our judgment, of making him an inventor. It is a mistake to suppose that the one who perfects the mechanical details is entitled to the patent. An inventor need not necessarily be a mechanic. He has a right to employ the mechanical skill and experience necessary to carry out his conceptions, and it has been said that even their inventions in reference to details belong to him. It is hardly to be expected that the first structure should be perfect; a trial and some practice usually suggest many alterations, and these do not by any means deprive an inventor of his right to a patent.

We entirely agree therefore with the Examiner in awarding the patent to M., and his decision is affirmed.

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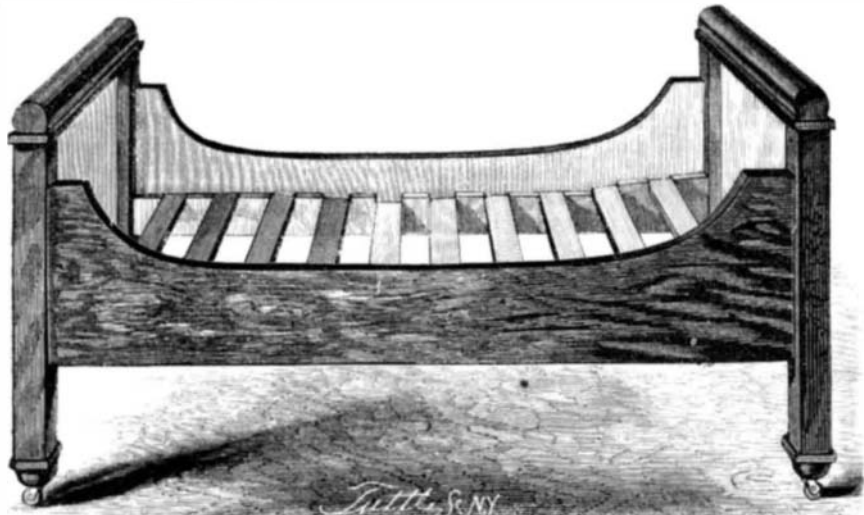
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THE COMING EXHIBITION by the American Institute of the city of New York is of such general interest that we direct the attention of inventors and manufacturers to an advertisement in another column which informs those who desire to compete for prizes how they may, by prompt action, secure a place. We are informed that many novelties have already been promised and it is confidently asserted that this Exhibition will surpass all former displays by its extent, variety, and attractiveness.



PATENTS

The First Inquiry that presents itself to one who has made any improvement or discovery is: "Can I obtain a Patent?" A positive answer can only be had by presenting a complete application for a Patent to the Commissioner of Patents. An application consists of a Model, Drawings, Petition, Oath, and full Specification. Various official rules and formalities must also be observed. The efforts of the inventor to do all this business himself are generally without success. After a season of great perplexity and delay, he is usually glad to seek the aid of persons experienced in patent business, and to have all the work done over again. The best plan is to solicit proper advice at the beginning.

If the parties consulted are honorable men, the inventor may safely confide his ideas to them: they will advise whether the improvement is probably patentable, and will give him all the directions needful to protect his rights.

Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN, have been actively engaged in the business of obtaining patents for over twenty years—nearly a quarter of a century. Over fifty thousand inventors have had benefit from our counsels. More than one third of all patents granted are obtained by this firm.

Those who have made inventions and desire to consult with us, are cordially invited to do so. We shall be happy to see them in person, at our office, or to advise them by letter. In all cases they may expect from us an honest opinion. For such consultations, opinion, and advice, we make no charge. A pen-and-ink sketch, and a description of the invention should be sent, together with stamps for return postage. Write plainly, do not use pencil nor pale ink. All business committed to our care, and all consultations, are kept by us secret and strictly confidential. Address MUNN & CO., 37 Park Row, New York.

In Order to Apply for a Patent, the law requires that a model should be furnished, not over a foot in dimensions, smaller, if possible. Send the model by express, pre-paid, addressed to Munn & Co., 37 Park Row, N. Y., together with a description of its operation and merits. On receipt thereof we will examine the invention carefully and advise the party as to its patentability, free of charge.

The model should be neatly made of any suitable materials, strongly fastened, without glue, and neatly painted. The name of the inventor should be engraved or painted upon it. When the invention consists of an improvement upon some other machine, a full working model of the whole machine will not be necessary. But the model must be sufficiently perfect to show, with clearness, the nature and operation of the improvement.

New medicines or medical compounds, and useful mixtures of all kinds, are patentable. When the invention consists of a medicine or compound, or a new article of manufacture, or a new composition, samples of the article must be furnished, neatly put up. Also, send us a full statement of the ingredients, proportions, mode of preparation, uses, and merits.

Preliminary Examination.—In order to obtain a Preliminary Examination, make out a written description of the invention in your own words, and a rough pencil or pen-and-ink sketch. Send these with the fee of \$5 by mail, addressed to MUNN & CO., 37 Park Row, and in due time you will receive an acknowledgment thereof, followed by a written report regarding the patentability of your improvement. The Preliminary Examination consists of a special search, which we make with great care, among the models and patents at Washington to ascertain whether the improvement presented is patentable.

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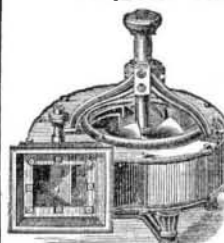
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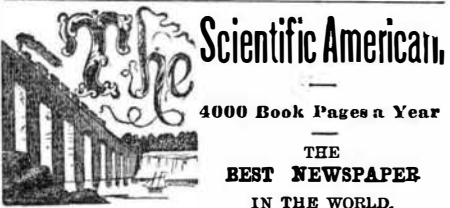
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