

MECHANICS' AND INVENTORS' GUIDE.

We have lately published a new and convenient volume, of 108 pages, upon Mechanics' Patents and Inventions, which promises to be of much value to all who are of a scientific or inventive turn of mind. Although the proportions of this book are not equal to Webster's dictionary, still we venture to say that so large an amount of valuable information has seldom been collected within so small a compass.

The book contains all the patent laws in full, except repealed or salary sections; the principal official rules and directions for conducting business at the Patent Office; 112 engravings of the best mechanical movements, with descriptions, of great value to mechanics and inventors who study the best construction for machinery; a chapter upon the steam engine, with an engraving of the common condensing engine, with letters of reference and nomenclature of all the parts; instruction in practical geometry; table of the effects of heat upon bodies; table of the pressure and temperature of steam; of the electrical conducting power of various substances; forms for assignment of patents; instructions how to obtain patents and caveats; practical directions and best methods for selling patents; hints upon the value of patents; how to invent; information upon the rights of inventors, patentees, assignees, partners and employers; advice as to foreign patents, extensions, reissues, infringements, together with a variety of other highly useful scientific and mechanical facts and calculations, the whole abundantly illustrated with engravings. Price only 25 cents. Address Munn & Co., 37 Park Row, N. Y.

THE "WINOOSKI" AND "ALGONQUIN."

These two vessels, which have been so long written and talked of, are about commencing their trial for economy of power. It is hardly necessary to recite again all the conditions under which they are to be run—this matter has been alluded to in previous numbers of this journal—suffice it to say, that on Friday last the preliminary trials of the engines took place; that is, the five-hour runs to get ready, and immediately thereafter the ninety-six hour trial was to be entered upon. At the time of our visit the *Algonquin* was turning her wheels vigorously, while the *Winooski*, the naval vessel, was lying still, steam not having been raised. Mr. Dickerson deserves commendation for the energy he displays in looking after his interests; he runs his own engine, aided by others, and takes off his coat and goes at it with a will. The boilers on the *Algonquin* work admirably. The fires were started at 10:18 A. M., and steam started at 10:37; one boiler was cold, the other had water at 120° in it; 1,100 pounds of wood, and 2,000 pounds of coal were consumed in so doing. At 11:45 the engine was started with 45 pounds pressure, and, when we left, was making 16 turns per minute, with 60 pounds of steam, cutting off at points between half stroke (4 feet 4½ inches) and ten inches. We shall publish the results in our next issue.

PASS THEM AROUND.

We have received a number of letters from correspondents in various parts of the country, inclosing a printed puffing circular of "Morton's No-ink Pens," purporting to have been patented in June, 1865, and alleged to be a perfect substitute for ink, and requesting people to remit. The circular contains a strong recommendation, pretended to be quoted from the *SCIENTIFIC AMERICAN*. C. V. Morton & Co., No. 21 John street, Jersey City, N. J., is one name under which the humbug is conducted.

In reply to our several correspondents, we have to say that no such patent has been granted, nor have we given any such recommendation. On inquiry in Jersey City, that no such firm or place of business was to be found. We further ascertained that the police were on the watch for the scamps, which has caused them to depart from Jersey City. When we last heard of them, their victims were directed to address them at Tarrytown, N. Y.

We hope the postmasters at places where these fellows have been or may be operating will take the necessary steps for their arrest. They have swindled hundreds of people.



ISSUED FROM THE UNITED STATES PATENT OFFICE
FOR THE WEEK ENDING SEPTEMBER 19, 1865.
Reported Officially for the *Scientific American*.

Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the *SCIENTIFIC AMERICAN*, New York.

49,959.—Breech-loading Fire-arm.—E. S. Allin, Springfield, Mass.:

I claim, first, the combination of a solid recoil block, A, with a piston, U, and rack, m, the first tooth, s, of which is hung on a spring, O, of unusual position, arranged for the purpose described.

Second, Revolving the front end of the recoil block at c', and forming a corresponding bevel, c, on the barrel, as and for the purpose described.

Third, The projection, X, in combination with the lever, f, and hammer, V, substantially in the manner and for the purpose described.

49,960.—Cut-off for Water Conductors.—James Ash, Sterling, Ill.:

I claim the adjustable tube, B, applied in combination with the conductor, A, and discharge pipes, D D', substantially in the manner and for the purpose set forth.

[This invention relates to certain improvements in conductors of water in buildings, and its object is to change the direction of the current from one outlet to another with little trouble or loss of time.]

49,961.—Steam Gage.—Chas. Barnes, Cincinnati, Ohio:

I claim the provision in a steam gage of two or more springs, G H, of unequal tension, arranged and operating in the manner and for the purpose set forth.

49,962.—Mowing Machine.—L. M. Batty, Canton, Ohio:

First, I claim the sliding shifter, L, in combination with the hand lever, d, and the intermitting lever, d', the pinions, k and k', the double clutch, j, and the shaft, z, as herein described, for the purposes set forth.

Second, I claim the swivel-jointed stay rod, E, the upright guide rod, N, with the set bolt and nut, n, and the shoe, H, in combination with the swivel joint, v, when operating as and for the purposes set forth.

Third, I claim the cam lever, F, with the standard and flexible joint, as herein set forth.

Fourth, I claim the arrangement of the outer shoe, J, block, T, and set screw, z', for raising and lowering the shoe independently of the cutter guard, substantially as set forth.

Fifth, I claim the coiled supporting spring, e, with the set screw, f, in combination with the frame, B, as herein described, for the purpose set forth.

49,963.—Harvesting Machine.—L. M. Batty, Canton, Ohio:

First, I claim the seat irons, E, with the set bolts, F, when used as described, for the purposes set forth.

Second, I claim the arrangement of the bevel cogs, G, in combination with the driving wheels, H and H', shafts, I and J, the pinion, K, and clutch, K', the double spur wheel, L, pinion, M or M', and the crank shaft, N, all connected and operated substantially as set forth.

Third, I claim the hand lever, o, with the spring, together with the shifting rod, A, the coiled springs, R and R', in combination with the pinion, K, and clutch, K', when operating conjointly, as described.

Fourth, I claim the arrangement of drag bar, T, with the filling, r, the hook, V, the pin, W, the hanging irons, S and S', the swivel, U, the runner, A, the standard, g, with the slots, g and p', and flange, j, the set screw, W', and slot, d', the ring, Z, the bolt, Z', the shoe, G', the bed roll, a, the bolts, b, in combination with the finger beam, c, and the lever, d, as set forth, when operating as described.

Fifth, I claim supporting the reel post, e, and carriage, n, by the standard, K fastened by a wedge, v, as described.

Sixth, I claim the segment lever, p', the rack, y', and the plate, r, in combination with the reel carriage, n, and reel post, e', in the manner and for the purpose set forth.

Seventh, I claim the arrangement of the folding arms of the reel, in connection with the tubular shaft, substantially as described.

Eighth, I claim the springs, v, in combination with the folding arms, S' and arm holders, u, in the manner and for the purpose set forth.

49,964.—Rake Attachment to Harvesters.—L. M. Batty, Canton, Ohio:

First, The wrought-iron carriage, E, with its pin, h, and box, i, as and for the purpose set forth.

Second, I claim the arrangement of the crooked arm, D D, in combination with the peculiar guides, L and I, for operating the rake, substantially as set forth.

49,965.—Machine for Beveling Picture Frames.—Otis T. Bedell, New York City:

First, I claim the use of mechanism, substantially as herein described, for the purpose of beveling the edges of photographic picture frames by machinery, in contradistinction to performing the labor by hand.

Second, The combination of one or more knives, F, secured to a carriage, E, with the self-acting clamp, H, constructed and operating substantially as and for the purpose set forth.

Third, The vertical knives or cutters, J, in combination with the inclined knife or knives, F, and clamp, H, constructed and operating substantially as and for the purpose specified.

[The object of this invention is a machine intended to bevel off the edges of pasteboard frames, such as are generally inserted in photographic album leaves. These frames are equal in thickness to two photographic cards of that class generally made for the purpose of inserting in photographic albums, and the opening or openings in them are cut out large enough to take in such cards. In order to be able to remove the cards, it is necessary to have one of the ends (generally the lower end) beveled off for if the edge is left square, and the card or cards inserted into the frame, they can only be removed with great difficulty.]

49,966.—Shipping and Unshipping Hind Boards to Freight Wagons.—Fred'k W. Bishop, West Haven, Conn. Antedated Aug. 31, 1865:

I claim the combination of the spring bolts, c and d, with the strap or loop bands, C and D, when the whole is constructed, arranged and fitted to produce the result substantially as herein described.

49,967.—Feeding Device for Sewing Machines.—James Bolton and Jerome B. Secor, Chicago, Ill.:

We claim, first, The combination of the turning feeding foot or dog and the turning feed guide, for the purpose of changing the direction of the feed of the material to be sewn from one line to another at right angles therewith, substantially as described.

We also claim, in combination with a turning feeding foot or dog the studs or arms, b, by arranged at right angles to each other, so that whether the feeding be longitudinally or laterally of the machine the said foot shall be in working condition with the rod, G, that gives it part of its feeding movement, substantially as described.

We also claim, in combination with a turning feeding foot or dog, the pivoted, slotted and oscillating carrier, M, for giving said foot or dog a part of its feed movement in any of its positions, substantially as described.

We also claim, in combination with a turning feed and the oscillating carrier, the stud or post, u, for guiding and directing the feeding foot, and allowing it to rise and fall thereon, substantially as described.

We also claim the pivoted and adjustable link, L, interposed between the rods, e, for the purpose of regulating the extent as well as the time of the motion of the carrier, M, substantially as described.

49,968.—Corder for Sewing Machines.—J. W. Brady, Baltimore, Md.:

I claim the corder, E F G H I, substantially as described and represented, and adapted to feed the cord underneath the main fold and into the angle formed between it and the secondary fold.

Second, I claim the combination of the devices, substantially as described, by which the corder shank is moved vertically, laterally, or backward and forward, according to the requirements of this work.

49,969.—Apparatus for Packing Rubber for Dental Purposes.—F. C. Brown, Palmyra, N. Y.:

I claim the combination of the piston, B, barrel, A, flask, G, heated bath, H, with the accessories, substantially as described, forming an apparatus for injecting rubber into molds.

I claim the combination of the flask, G, piston, B, barrel, A, and indicator wire, r, substantially as described and represented.

[The object of this invention is an apparatus intended to force rubber around the teeth in making artificial dentures.]

49,970.—Binding Attachment to Reaping Machines.—Jacob Behel, Rockford, Ill.:

I claim, first, The arrangement of the cog-wheel that transmits motion to the ring carrier of a binding apparatus upon the axle of one of the wheels, which holds the ring carrier in its place, substantially as set forth.

Second, The combination, in the same binding apparatus, of a ring carrier and a vibrating tenon arm to control the compressing strap, substantially as set forth.

Third, The combination of the ring carrier of a binding apparatus with a strap holder, of suitable size and form to seize and hold the knotted end of a rope-compressing strap, substantially as set forth.

Fourth, The combination of the detachable strap holder with an escapement, which permits the compressing strap to relax its grasp upon the grain and subsequently to be withdrawn from the shear, substantially as set forth.

Fifth, The combination of the twining cord holder with the ring carrier, substantially as set forth.

Sixth, The combination of the twining cord holder and ring carrier with the grooved case, substantially as set forth.

Seventh, I claim the combination of the cord spool and its friction apparatus with a swinging frame and cord guides, substantially as set forth, so that the tension is relaxed by drawing the twining material from the spool.

Eighth, The combination of the proving frame of the tying bill with the fixed framework of the binding apparatus by toggle-jointed links, substantially as set forth.

Ninth, The combination of the slotted plate for holding the cord band with the guide plate for guiding it into the slot of the said plate, substantially as set forth.

Tenth, The combination with the cord holder of a movable projector, substantially as set forth.

Eleventh, The combination of the tying bill and movable knife, substantially as set forth.

Twelfth, The combination of the knife and the instrument for transmitting motion to the escapement of the compressing strap holder, substantially as set forth.

Thirteenth, The combination of a pair of spring dogs upon the ring carrier with a yielding strap upon the framework of the binding apparatus, substantially as set forth.

49,971.—Cork Machine.—Harris Boardman, Lancaster, Pa.:

First, I claim a chamber, C H I, made adjustable in itself, independently from the adjustability of the bed plate, A, operated substantially in the manner and for the purpose set forth.

Second, I claim the construction and operation of the spindles or graspers, V W, and their appliances, arranged and in combination with the cradle, Y, operating jointly, substantially in the manner and for the purposes set forth.

Third, I claim the employment of a tumbler, K o o, hanger, or its equivalent, substantially applied in the manner and for the purpose shown and described.

Fourth, I claim the raising and dropping of the knife, E, for the purpose of giving the finishing cut to the cork, actuated substantially in the manner specified.

49,972.—Coal-mining Machine.—E. K. Bruce and Jno. M. Bruce, Liberty, Pa.:

First, I claim the combination of the frame, B, shafts, E F, bevel gears, G, drill spindles, C, truck, A, toothed rack, I, and feed shaft, J, all constructed and arranged substantially as and for the purpose specified.

Second, The application to the drills of spiral flanges with gradually increasing pitch, substantially as and for the purpose described.

[This invention relates to a machine which consists of a series of horizontal drills laying parallel with each other, and rotating simultaneously by suitable gearing in the rear of the frame which forms their bearings. The frame moves back and forth, in suitable ways, in the side timbers of a truck, so that the frame can be fed toward or from the bed of coal to be excavated, while the truck rests on wheels, and can be moved in a direction at right angles to the motion of the drill frame.]

49,973.—Machine for Sowing Plaster.—Alpheus Bugbee, Elkhart, Ind.:

I claim the shape and construction of the double forks and stirrers, E, when arranged and combined with the slides, D, and operated as herein described and for the purposes set forth.

I also claim the shield, R, as arranged and combined with the stirrers, E, for the purposes set forth.

49,974.—Sorghum Evaporator.—Ransom Bullard, Litchfield, Mich.:

I claim the combination and arrangement of the slow evaporating section or compartment, b b, of the evaporating pan, the direct flue chamber, g, and the side flues, k k, extending through the brick work, so as to communicate the heat to the evaporating pan through the medium of a slow conductor, substantially as and for the purpose herein specified.

I also claim the described method of constructing and uniting the sections of the evaporating pan, A, substantially as described.

49,975.—Amalgamating Apparatus.—W. H. Butler, Chicago, Ill.:

I claim feeding the quartz into the amalgamating vessel by a forced feed, and holding it immersed or submerged therein by pressure, while it is thoroughly stirred and mixed with the amalgam, using therefor an apparatus constructed and operating substantially as herein described and represented.

49,976.—Harvester Rake.—Wm. J. and Rhutson Case, Pittstown, N. J.:

First, We claim the vibrating upright shaft, D, with rake, J, attached to it, as shown, in connection with the rope, e, connected to the bar I, and pulley, M, on shaft, N, all arranged either with or without the spring, F, to operate in the manner substantially as and for the purpose set forth.

Second, The arrangement of the wheel, H, provided at its upper surface with teeth, e, and the ledge, p, in connection with the pair pinion, o, and shaft, N, for the purpose specified.

[This invention relates to a new and improved automatic raking device for harvesters, and it consists in a novel means employed for operating the rake, and in a peculiar arrangement of the same, whereby the cut grain may be raked from the platform without materially increasing the draught of the machine, and without interfering with the other working parts thereof.]