

Claim.—1st. An illuminating candle composed of a flat wick surrounded by a flattened or elliptical body. 2nd. The combination of animal charcoal and carbon oil with wax or its equivalent. 3rd. The composition of matter to be used for the manufacture of candles composed of carbon oil, animal charcoal and wax in the proportions specified or any modification of them. 4th. In the manufacture of an illuminating composition of matter, the employment of animal charcoal.

No. 13,960. Improvements on Fruit Dryers.
(*Perfectionnements aux séchoirs à fruits.*)

Horace M. Dake, Nimda, N.Y., U.S., 9th January, 1882; for 5 years.

Claim.—1st. In an apparatus for drying fruits, vegetables, &c., in combination with the closed water bottom A, steam chambers B and tray spaces C, the pipes b and d for returning the condensed steam to the bottom A, the upper part b divided from the lower part d by a partition i, and receiving the steam from the dryer through pipe c. 2nd. The combination of the dryer A B C having the alternate steam connecting pipes a a, the stay pieces f f, the combined steam and condensed steam pipe b b, steam pipe c and steam valve d.

No. 13,961. Improvement in Device for Catching and Holding Hogs.
(*Perfectionnement des appareils à prendre et retenir les porcs.*)

Orville Ewing, Decatur, Ill., U.S., 9th January, 1882; for 5 years.

Claim.—The hollow metallic tube consisting of the curved mouth or end A with concave lug B, side bars C C and the handle G, combined with the cord G and movable handle H.

No. 13,962. Improvements in Saddle Girths.
(*Perfectionnements aux sangles des selles.*)

William McNaught, jr., Cartersville, Ga., U.S., 9th January, 1882; for 5 years.

Claim.—The combination, with the girth sections A and B, of the pulleys F and G and the rope H or equivalent, the ring J and the hooks L.

No. 13,963. Improvements in Disintegrating Mills. (*Perfectionnements aux moulins à désagréger.*)

Lewis J. Bennett, Buffalo, N. Y., U.S., 9th January, 1882; for 5 years.

Claim.—1st. In a disintegrating mill, the combination of two or more concentric rows of square disintegrating pins arranged with their edges facing each other and shafts which cause the several rows of pins to rotate in opposite directions, whereby the flat working faces of the pins in the inner row drive the material squarely against the flat working faces of the pins in the next outer row, and whereby rapidly contracting and enlarging spaces are formed between the pins which insure a thorough disintegration of the material, and prevent the material from lodging between the pins. 2nd. The combination, with the disks E and F and ring H supported on the disk F, of the square pins G G and rings O P M attached respectively to the disk E and ring H, and provide I with square recesses in which the pins are removably secured. 3rd. The combination, with a stationary breaker arm I, of an endless row of separate disintegrating pins G arranged alternately at a greater and less distance from the axis of rotation, the breaker arm being arranged within the endless row of pins, whereby shoulders of unequal depth are successively formed between the rotating pins and breaker arm, and the thorough breaking of the material and its escape outward through the spaces between the pins is insured. 4th. The combination, with the disk F and annular plate H, of the protecting plate H, pins G G, sectional cast rings m m and wrought rings n n. 5th. The combination, with the disk E provided with protecting plate E, of the pins G G, sectional cast rings o o and wrought rings p p. 6th. The combination, with the disk of a disintegrating mill, of a marginal protecting ring provided with one or more removable balancing plates Q forming part of the protecting ring, and provided with depressions for the reception of balancing material. 7th. The combination, with the disk E, of the ring P applied to the inner side of the disk near the edge thereof, for the reception of the outer row of disintegrating pins, and the protecting ring P attached to the outer side of the disk E near the edge thereof. 8th. The combination, with the lower side pieces A A provided with flanges r and recesses r, of the upper side pieces R provided with angle irons r, and projecting edges r entering the recesses r. 9th. The combination, with the side pieces R R provided with rings T having grooves t, of the hoop S provided on its inner side with a removable wear plate S, and fitted in said grooves and secured by bolts v.

No. 13,964. Improvements on Animal Traps.
(*Perfectionnements aux pièges.*)

John H. Morris, Thomas D. Morris, Seward, Neb., U. S., (and the said John H. Morris, Administrator to the goods, chattels and effects of William Morris.) 9th January, 1882; for 5 years.

Claim.—The jaw A with its extended back plate a and treadle E, in combination with jaw A with its extended back B provided with the latch b.

No. 13,965. Single Plate Carriage Spring.
(*Ressort de voiture à une seule lame.*)

The Guelph Carriage Goods Company, (Assignee of John B. Armstrong.) Guelph, Ont., 9th January, 1882; (Extension of Patent No. 7012.)

No. 13,966. Improvements in the Manufacture of Boots and Shoes. (*Perfectionnements dans la fabrication des chaussures.*)

Willard Comey, Westboro, Mass., U.S., 9th January, 1882; for 5 years.

Claim.—1st. The improved turned shoe described having its sole A channelled from, or near the edge inwards to the upper by a line of stitches passing through the upper and through that part of the sole under the channel flap a. 2nd. The improved mode of manufacturing turned shoes consisting in channelling the sole from or near its edge inwards, then folding back the channel flap towards the middle of the sole, then lacing the shoe with the channel flap of the sole against the sole of the last, then drawing the last and sewing, turning and finishing the shoe. 3rd. The improved shoe composed of the inner sole A channelled on the grain side, the upper B, the welt or middle sole and the outer sole F, the welt or middle sole, upper and inner sole being connected by stitches passing through the welt and upper and through the flesh part only of the inner sole, the lip of the channel on the grain surface of the inner sole lying over the loops of the stitches which connect the welt, upper and inner sole, and the outer sole being connected with the welt by a second line of stitches which pass through the flesh part only of the outer sole, the lip of the channel on the grain surface of the outer sole lying on the loops of the stitches which connect the welt and the outer sole. 4th. In a boot and shoe sewing machine, the combination, with a gauge or rest for the edge of the welt and the upper of a boot or shoe, of a sliding bar H adapted to be brought down upon the welt and having a lateral movement for pushing or pressing the welt outward, against the gauge or rest, and keeping it constantly in contact therewith. 5th. The combination, with the work supporting horn D and stitch forming devices, of the longitudinally and laterally moving push bar H and flanged guide roll M, adapted to form separate gauges for the outer edge of the welt and the contiguous edge of the upper or vamp, whereby the welt is maintained at the proper distance from the vamp throughout its entire length. 6th. The sliding push bar H with its spring p adapted to be moved downward in guides on the frame G, by the contact of projection with the spring, and upward by the contact of a projection 12 with a projection 13 on the bar H, in combination with the piece q having an inclined face 16, whereby the lower end of the bar H is caused to move obliquely to push the welt outward from the sole and keep it constantly in contact with the inner portion 18 of the gauge roll M. 7th. The combination, with the horn B and the sliding push bar H, of the guide roll M, with its central portion 18 and upper and lower flanges V W mounted upon a supporting arm L made adjustable on the frame work. 8th. The guide M, in combination with the tip of the horn, the one forming an outer and the other an inner guide, between which the upper of the shoe passes.

No. 13,967. Improvement in the Art of Brushing Gold Leaf from Book Covers. (*Perfectionnement dans l'art de brosser l'or en feuille des couvercles de livres.*)

James B. Waterston and William Zimmerman, Chicago, Ill., U. S., 9th January, 1882; for 5 years.

Claim.—1st. In a book binder's gold brushing machine, consisting of a box or chamber provided with a cylindrical revolving brush working over an adjustable platform, a longitudinal slot immediately above and parallel to said platform and an air escape. 2nd. The chamber A provided with cylindrical revolving brush B, in combination with the adjustable platform D, drawer or receptacle C and screened cover F. 3rd. The box or chamber A provided with cylindrical revolving brush, adjustable platform D, receptacle or drawer C, slot G provided with hinged door or valve e. 4th. A box or chamber A provided with a revolving brush B, elastic and adjustable platform D, receptacle C, slot G and an air escape guarded by screens. 5th. A box or chamber A provided with a revolving brush B, adjustable platform D, receptacle C, slot G provided with valve e, and air escape guarded by screens. 6th. A box or chamber provided with a revolving brush working over an adjustable platform, said platform made of open or wire work, a longitudinal slot immediately above and parallel to the platform and provided with a valve and an air escape.

No. 13,968. Improvements in Knit Fabrics.
(*Perfectionnements dans les tricotés.*)

John Penman, Paris, On., (Assignee of John Nelson, Rockford, Ill., U. S.) 9th January, 1882; for 15 years.

Claim.—A knit fabric composed of yarns differing in size or color interchanged in the fabric, with their ends overlapping, whereby a smooth even fabric is produced.

No. 13,969. Improvements on Grain Gleaners and Binders. (*Perfectionnements aux machines à glaner.*)

John F. Mahon, London, Ont., 9th January, 1882; for 5 years.

Claim.—1st. The application, to a grain binding machine, of the shaft r and the teeth K. 2nd. The application of the gear wheel S, in combination with the gear wheel t, the rollers l m and elevators u. 3rd. The application of the loose pinion u coupled with the fixed pinion t and stop pawl y, in combination with the gear wheel r. 4th. The application of the toothed segment e working in combination with the pinion f, the eccentric and pitman z and the rack g. 5th. The application of the stop pawl y and clutch u.

No. 13,970. Improvements on Freight Transfers. (*Perfectionnements aux passe-marchandises.*)

Alexander E. McDonald, Brooklyn, N. Y., 9th January, 1882; for 5 years.