

common to both gangs by which their angle to the line of draft may simultaneously be adjusted, and mechanism for disconnecting one gang from said lever so that the other gang only will be affected by the vibration of the lever, for the purpose set forth. 22nd. The combination, substantially as set forth, of the frame, the disk gangs arranged on opposite sides of the frame, the hand lever directly connected with one gang, the supplemental lever with which the other gang is directly connected, and mechanism for locking said supplemental lever with the hand lever to simultaneously operate both gangs or disconnecting said supplemental lever from the hand lever to operate one gang only. 23rd. The combination, substantially as set forth, of the frame, the disk gangs arranged on opposite sides of the frame, the hand lever, the adjusting rod connecting said lever with one gang, the supplemental lever and the rod which connects it directly with the other gang, the bracket *o*, shoe *o*, latch *P* and loop *p* on the hand lever. 24th. The combination, substantially as set forth, of the frame, the disk gangs arranged on opposite sides of the frame, a lever for adjusting the angle of the gangs relatively to the line of draft, a cutting tooth located between the gangs, and mechanism for automatically raising or lowering it as the gangs are adjusted. 25th. The combination of the pole, the opposing gangs and the adjustable cultivator or harrow tooth located between the gangs. 26th. The combination, substantially as set forth, of the gang of cutting disks, the scraper beam, the bifurcated standards which support the beam on the gang.

No. 21,482. Combined Wooden Sheathing and Lath. (*Revêtement en Bois et Latte Combinés.*)

Edwin M. Byrkit, Indianapolis, Ind., U. S., 21st April, 1885; 5 years.

Claim.—In a combined wooden sheathing and lath, the combination of the boards *A*, *A*, having grooves in their faces, worked to form a key for the plastering, and of one or more cuts *c*, *c* in the back side of the boards *A*, *A*, substantially as described and for the purpose specified.

No. 21,483. Saw Mill Set Work.

(*Galet de Chariot de Scierie.*)

Robert R. Parsons, Montgomery, Miss., U. S., 21st April, 1885; 5 years.

Claim.—1st. In head-blocks for saw-mills, the combination, with the head-block having on its under side a rack, and the setting shaft geared with said rack, of the shaft, having its bearings in the head-block, and geared with said rack, and a spring applied thereto and to the head-block, substantially as and for the purpose set forth. 2nd. In a saw-mill head-block, the head-block having on its under side a rack, the setting shaft geared with said rack, and the shaft geared with the said rack, and having a spring applied thereto, and to the head-block, in combination with the ratchet wheel whose shaft is geared with the setting shaft, and the hand lever having a toothed segment gearing with the rack, of a sliding bar carrying the ratchet-wheel operating mechanism, substantially as and for the purpose set forth. 3rd. In a saw-mill head-block, the combination, with the setting-shaft geared with the head-block, and the shaft having a spring applied thereto and to the head-block, said shaft being geared with the head-block rack of the stop wheel having a series of pin-holes, and the buffer slide having a horn, a buffer spring and a supplementary spring to return the buffer slide to its normal position, after the movement of the horn out of the plane of movement of the stop-wheel, substantially as and for the purpose set forth. 4th. In a saw-mill head-block, the setting shaft geared with the head-block, and with the shaft carrying a ratchet wheel, and the shaft geared also with the head-block, and having a spring applied thereto, and to the head-block, in combination with the sliding bar having stops one on each side of one of its guides, and carrying a lever provided with pawls engaging with said ratchet wheel, the hand lever having a toothed segment gearing with a rack on said sliding bar, the stop wheel having a stop pin and the spring buffer bar having a horn, substantially as and for the purpose set forth. 5th. In a saw mill, the combination, with the pawl arms connected centrally to the axis of the ratchet wheel and to a centrally pivoted lever, and spring catches fitted to slide vertically in the pawl arm heads of the slides fitted to slide in the latter and in the catches at right angles to the plane of movement of said catches, and having at intermediate points between their ends notches or recesses with inclined surfaces, said slides being connected to a hand lever centrally pivoted upon the aforesaid lever, substantially as and for the purpose set forth. 6th. In a saw-mill head-block, the combination with a stop wheel having a stop pin and gearing with the setting shaft of the sliding spring buffer-rod having the horn and the supplementary re-adjusting spring connected to a fixed point and to the sliding buffer-rod, substantially as and for the purpose set forth. 7th. The stop wheel *t*, having a series of pin-holes *k*, and the buffer slide *o*, having horn *n*, and a buffer spring *l*, in combination with the setting shaft *i*, and the knees *c*, having springs *g* for shifting the knees back said wheel *i* being geared with said setting shaft, substantially as described.

No. 21,484. Journal for Axle Boxes.

(*Fusée d'Essieu.*)

Louis Goullioud, Charles Pagé, Montreal, and Ashley Hibbard. St. Armand East, Que., 22nd April, 1885; 5 years.

Claim.—1st. In railway and other rolling stock, the combination, with a journal, of a ring of greater diameter than the axle and rotated by it, substantially as herein set forth and for the purposes described. 2nd. The combination, with the journal, of a ring rested on and rotated by same, forming bearing surface for brass and acting as lubricator, all substantially as herein set forth. 3rd. The ring *C*, with bearing surfaces *c*, *c*, and teeth *C*, in combination with the journal *B*, with bearing surfaces *b*, *b*, and teeth *B*, as and for the purposes set forth. 4th. The brass *F*, with flange *F*, as herein set forth.

No. 21,485. Cutting Apparatus of Mowing Machine. (*Scie de Moissonneuse.*)

Philip Pethick, (Assignee of Willard E. Clough,) Concord, N. H., U. S., 22nd April, 1885; 5 years.

Claim.—1st. In a cutting apparatus for mowing machines, the construction herein described, consisting in providing one more knife than there are guard fingers, substantially as and for the purpose specified. 2nd. The construction of a cutting apparatus for mowing machine, having cutters and guard fingers, substantially as described, in unequal numbers with each other, as and for the purpose set forth. 3rd. The cutting apparatus of a mowing machine comprising knives and guard fingers, so constructed respecting their numbers as that but two of the knives can be covered by guard fingers at one and the same time, substantially as and for the purpose described and set forth.

No. 21,486. Method of Casting Car Wheels. (*Méthode de Coulage des Roues de Chars.*)

William Wilmington, Toledo, Ohio, U. S., 22nd April, 1885; 5 years.

Claim.—The method of incorporating a desired quantity of the elements, composing rich ferro-manganese in varying quantities, in the molten iron forming the different parts of chilled tread cast iron car wheels, as described, which consists in reducing from a pig or cake condition to different degrees of fineness, rich ferro-manganese, then placing the same in a pouring ladle with molten chill, hardening cast iron at the time or just before commencing to fill the mould of a car wheel, and before the elements composing the whole of the ferro-manganese in the molten iron in the pouring ladle have become homogeneous with the same, then pouring the same, and continuing the pouring, while an increasing proportion of the ferro-manganese is being melted and disseminated, substantially as described and for the purpose set forth.

No. 21,487. Filter to be Attached to Cistern or Well Pumps. (*Filtre pour être attaché aux Pompes des Cisternes ou des Puits.*)

John Brokenshire, Kingston, Ont., 22nd April, 1885; 5 years.

Claim.—1st. The combination and attachment of the pump log or stem *A*, filter-box *B*, dove-tail *C* and clasp *G*, together with cleat *H*, substantially as and for the purpose hereinbefore set forth. 2nd. The construction and arrangement of slide-valves *F*, *F*, in connection with orifices *E*, *E* and cover *D* on filter box *B*, substantially as and for the purpose hereinbefore set forth.

No. 21,488. Machinery for Splitting Wood.

(*Machine pour Refendre le Bois.*)

Edwin A. Hildreth and Stanley B. Hildreth, Harvard, Mass., U. S., 22nd April 1885; 5 years.

Claim.—1st. The combination of the nut cheek or spanner *b*, applied as described, to the nuts *a, a*, of the pair of rods *F*, *F*, and bolted to the box *C*, of the driving shaft with such box and with the said rods applied to it and the frame *A* of the machine, substantially as set forth. 2nd. The combination of the braces or connecting bar *N*, and their fastening clips or devices, with the four rods *F* applied to the frame *A*, and provided with guides and axle carriers adapted to such guides, and with the rotary tables *L* and their supporting devices applied to such rods, all being substantially as represented. 3rd. The combination of each axle, provided with a rib *m* at its top, as represented, the axle carrier *P* socketed to receive such rib and provided with the arched opening *p*, and connected to the axle by screws *n*, as described, and the locking piece *o* applied to the heads of such screws and fastened to the said carrier, as set forth. 4th. The combination, with the pitman *u*, jointed to the axle carrier *P*, and with the crank wheel *O*, fixed on the driving shaft *B*, of the wrist *r* having its head inserted in a socket on the crank wheel *O*, the screw bolts *s* going through such wheel and wrist, and the nut *t* screwed on such screw, and grooved on its front, and having a key or pin *u* inserted into one of the grooves and into the bolt, all being substantially as set forth. 5th. The combination of the screw projection or nut *G*, applied to the two rods *F*, and provided with the flange *g*, extending down from it, as represented, and resting against the girt *d* of the frame *A*, with the cop plate *I* applied to the said rods *F*, and connected to the said nut *G* by screws *R*, having a lock *m* arranged with them and fastened to the said cop-plate, substantially as set forth. 6th. The combination of the frame *A*, provided with the two sets of rods applied to it, and the driving shaft boxes, as set forth, and with the cross-bars *N* and their fastenings or clips, with the two adjustable tables *L* and their supporting nuts *G*, and with the two axes and their carriers applied to each other, and the rods *F*, as explained, and with the two pitmen jointed to such carriers, and connected with the crank wheels of the main driving shaft, all being substantially as specified and represented. 7th. The combination of the locking shoes *i*, with the cross-bar *k*, and with the screws and nuts connecting the parts *d* and *e*, of the clamps, by which the pair of guides *R* are fixed to their support rods *F*, the said shoes being fastened to the bar *k*, by means as set forth.

No. 21,489. Foot Warmer. (*Chaufferette.*)

Edward B. Elrod, Flora, Ill., U. S., 22nd April, 1885; 5 years.

Claim.—1st. The heater and warmer, having a suitable base supported on legs, provided with an arched cover, closed on the rear side, and having open spaces at the forward side to admit the feet of the user, substantially as herein set forth. 2nd. The heater and warmer, having a suitable base supported on legs, and provided with the arched cover having the rear side closed, in combination with the reservoir beneath and the lamp therein, substantially as herein set forth. 3rd. The heater and warmer, having a hinged frame provided at its lower part with the horizontal plate, carrying the lamp chimney, and its upper part provided with a reflector, having centrally downturned wings for holding the lamp chimney, substantially as