

**No. 15,588. Improvements in the Art of Coloring and Finishing Pictures.** (*Perfectionnements dans l'art de colorer et finir les images.*)

Charles H. Myers, Phelps, N. Y., U. S., 9th October, 1882; for 5 years.

*Claim.*—The process of coloring and finishing pictures, by first rendering the paper upon which they are painted or photographed, semi-transparent, by treating the paper to a compound of the following ingredients: sugar of lead one and one-fourth ounce, spirits of turpentine one quart, Canada balsam one pound, second, applying the color to the back, third, cementing the picture to a suitable backing, fourth, securing it to the backing by great pressure, and fifth, finishing it on the surface.

**No. 15,589. Improvements on Washing Machines.** (*Perfectionnements aux machines à laver.*)

Robert H. Cornett, Emporia, Kansas, U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. In combination with the roller supporting frame B<sub>1</sub>, the vertical rollers B<sub>2</sub> journaled for the purpose of delivering the clothes freely from the washing rollers. 2nd. In combination with the supporting frame A and the tub, the arms U pivoted between the rear upright B, and the frame B<sub>1</sub> carrying the washing rollers, the said frame at its sides being secured to the said arms at their lower ends. 3rd. In combination with the arms U and the frame A for supporting the tubs and working parts of the apparatus, the hoop for supporting the frame B<sub>1</sub> out of the tub.

**No. 15,590. Improvements in Water Closets.** (*Perfectionnements aux latrines.*)

George C. Phillips, Boston, Mass., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. The combined water closet bowl and hopper, having its ventiduct extended upward alongside of, and against the outer surface of the hopper and formed in part by the hopper. 2nd. The bowl extended downward within the hopper, in combination with the hopper provided with the ventiduct leading out of the lower part of it, and also with the passage or duct *d* leading from the hopper into the ventiduct from the space *e*, about the extension of the bowl within the hopper. 3rd. The bowl and hopper in one piece and provided with the ventiduct projecting upward from the hopper and formed in part thereby and having main and auxiliary openings leading into it from the hopper.

**No. 15,591. Improvements on Heating Apparatus.** (*Perfectionnements aux calorifères.*)

Ulric Beaupré, Montreal, Que., 9th October, 1882; for 5 years.

*Claim.*—In a boiler, either circular or square, or of any other shape whatever, for the heating of water, for the warming of buildings, the combination of the independent separated horizontal sections A B C and D, the inlets *b<sub>2</sub>* *b<sub>3</sub>* and outlets *d<sub>3</sub>* *d<sub>4</sub>* bound together by the bolts *d<sub>4</sub>*, the independent shell E and self-feeding apparatus L and tumbling fire-grate S.

**No. 15,592. Improvements on Car Wheels.** (*Perfectionnements aux roues des wagons.*)

George W. Miltimore, Chicago, Ill., U. S., 9th October, 1882; for 15 years.

*Claim.*—1st. The method of making car wheels, by placing the spokes in position within the rim, then passing them outward by fixing a mandrel between their converging end, then cutting the shoulders on the spokes so that they will form a circular seat and then inserting and securing on each side hub plates of such size that they will bear upon the shoulders of all the spokes. 2nd. The metal wheel consisting of a rim, spokes provided with bearing shoulders against which hub plates rest upon opposite sides, the inwardly projecting ends of which spokes bear upon the axle. 3rd. A spoke 2 made of bar iron, twisted by a quarter turn to form shoulders 11, cut away at its inner end so that the ends of all the spokes will form a common bearing. 4th. A spoke 2 made of bar iron, twisted by a quarter turn to form shoulders 11 and provided with a hole 3 located so as to cut the longitudinal axis of the spoke at the point of the twisting. 5th. In a car wheel, a solid rim having its periphery mortised to receive the tenons of the spokes and cut away to form flat seats for the shoulders of the spokes. 6th. In a car wheel, the combination of the solid rim, having its inner periphery mortised to receive the tenons of the spokes and cut away to form flat seats for the shoulders of the spokes, and the spokes having tenons and flat or square shoulders 19.

**No. 15,593. Improvements on Machines for Grinding and Amalgamating Ores.** (*Perfectionnements aux machines à broyer et amalgamer les minerais.*)

William H. Howland, San Francisco, Cal., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. In a machine for grinding ore, the combination, with the pan A, having a central hub for the drive shaft, of the flaring bonneted frame C, fixed in the rim of the said pan and having a screen at the ring-shaped die *c* formed with the flange *c'*, and the grinding blocks E connected with the driver. 2nd. In ore grinders, the grinding blocks E made rectangular in cross section and provided with lugs *g g* in the opposite ends, one above and the other below the central horizontal line. 3rd. In grinding machines, the hollow driver B formed with web *d* and having perforations *i*, and the air or water pipe *h*, combined

with the pan A provided with the grinding surfaces *c c*. 4th. In ore amalgamators, the rotating yoke *g* carrying the arms *a* combined with the pan A provided with the ring *o*. 5th. In ore amalgamators, the curved ring *n* combined with the pan F, the inner ring or case *o* combined with the pan F and rotating stirrers. 6th. The inner ring or case *o* combined with the pan *f* and rotating stirrers.

**No. 15,594. Improvements on Bridle Bits.** (*Perfectionnements aux mors des brides.*)

James H. Jones, Lansingburg, N. Y., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. The bridle bit bar A of a bow shape and having keys or buttons on its ends adapted to receive and interlock with cheek-pieces, which are detachable from the said bit bar. 2nd. A cheek-piece for detachable bridle bit bar formed with a slot adapted to receive a button, or key on the said bit bar, and also with openings adapted to receive the bridle straps. 3rd. A bridle-bit consisting of a central part having at its ends locking buttons or keys, for engaging the bit bar with cheek pieces. 4th. The combination, with the bow-shaped bit bar, having terminal button or key-fastenings, of the cheek-pieces adapted to receive the bit ends and to admit of the same being turned so as to lock the cheek pieces to the bit bar. 5th. The combination, in a bridle bit, of the bow-shaped bit bar and two cheek-pieces formed separately and provided with devices for locking the same together. 6th. In an arched or bow-shaped bit bar, having wings, buttons or flanges on its extremities, shoulders *a a* and intermediate necks, in combination with plates having key-holes and slots through them, one or more rings or strap receiving slots.

**No. 15,595. Improved Apparatus for the Manufacture of Air Gas.** (*Appareil amélioré pour la fabrication du gaz d'air.*)

Daniel H. Martin, Ipswich, Queensland, 9th October, 1882; for 5 years.

*Claim.*—1st. The combination and arrangement of two double acting bellows for the purpose of supplying air to the gas generator. 2nd. So constructing air gas apparatus that the air is supplied under water above which is the carburetting liquid in what is called the gas generator. 3rd. The combination and arrangement of the cocks A<sub>3</sub> B<sub>3</sub> and F<sub>1</sub> with connecting rod E and hand handle E<sub>1</sub>, so that all said cocks may be opened or closed by one motion. 4th. The combination of the levers, pivot and rod marked from I to 14 inclusive, and the stopping mechanism marked from J to J<sub>6</sub> inclusive, with the radial arms C<sub>4</sub> for automatically stopping and resuming the manufacture of gas by the rising and falling of the gas holder H<sub>3</sub>. 5th. The combination of the radial arms C<sub>4</sub> and the stopping mechanism marked from J to J<sub>6</sub> inclusive, with the projecting piece E<sub>2</sub> on rod E to which the cocks A<sub>3</sub> and B<sub>3</sub> are connected. 6th. The combination of valve G<sub>4</sub> and its seat G<sub>5</sub> with the float G<sub>3</sub>. 7th. The combination and arrangement of the several parts of the apparatus in the relative positions, whereby a safe, cheap, efficient and compact air gas making machine is produced.

**No. 15,596. Improvements on Saw Mills.** (*Perfectionnements aux scieries.*)

Charles E. Lewis, Bay City, Mich., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. Pressure rollers for gang saw mills, composed of the cross head C, the double crank shaft F and the rollers D mounted on said shaft. 2nd. The combination, with the cross head C having downwardly projecting arms E, of the shaft F having crank G projecting in opposite directions, and the rollers D mounted on said shaft, whereby the said rollers can adjust themselves to apply equal pressure to logs of the same or different thickness. 3rd. The double crank shaft F constructed with a central journal K, whereby the adjacent ends of the rollers can be brought close together.

**No. 15,597. Improvements on Sheet Metal Pipes and Machines for Making the same.** (*Perfectionnements aux tuyaux en tôle et aux machines pour leur construction.*)

William Austin, Philadelphia, Pa., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. As a new article of manufacture, a sheet metal pipe having its body stiffened by means of a spiral rib formed by pressing up the metal. 2nd. The improved pipe sections, consisting of a single sheet of metal, folded into a tubular form, with its edges united longitudinally and having a spiral rib formed thereon. 3rd. A blank for a sheet metal pipe, consisting of the curved sheet of metal, having oblique ribs *b* formed thereon. 4th. The improved pipe blank consisting of a curved sheet of metal, having one folded end and one flat edge and having also oblique rib *b* formed thereon. 5th. In a pipe forming machine, the combination of two co-operating rolls provided, respectively, with a spiral groove and a spiral rib extending their entire length, or substantially so. 6th. The spiral roll C, the spiral grooved roll B co-operating therewith, said rolls being mounted and sustained at both ends by a supporting frame D. 7th. The spirally ribbed and spirally grooved rolls geared together, in combination with means for imparting motion thereto. 8th. The combination of the spirally ribbed and spirally grooved rolls B and C, one provided with a longitudinal groove K, to receive and retain the edge of the blank. 9th. In combination with the spirally grooved roll, the spirally ribbed roll provided with the groove K and with the flattened surfaces adjacent to said groove. 10th. In a pipe forming machine, two co-operating rolls, provided substantially their entire length with a corresponding rib and groove respectively, and also provided at their extreme ends with short male and female threads.