No. 15,199. Universal Picker (Nipper.)

(*Pince universelle.*)

Melchior Brazeau and Alphonse Brazeau, Montreal, Que., 26th July, 1882; for 5 years.

Claim.—1o. Un instrument se composant des branches A A E E F F, des viroles G C D, et du capitonnage M M, et d'une mouche H. 2o. Un instrument se composant des pièces décrites en combinaison avec la corde I I, les anneaux *b b*1 et J et le bouton K.

No. 15,200. Improvements on Millstones.

(*Perfectionnements aux meules des moulins.*)

Auguste Gardel, Sherbrooke, Que., 26th July, 1882; for 5 years.

Claim.—The plate A with the grooves B B, also the rim F and the plate C, all combined.

No. 15,201. Improvements on Machines for Reducing Grain to Flour. (*Perfectionnements aux moulins à blé.*)

Edward L. Baker, Red Wing, Min., U. S., 26th July, 1882; for 5 years.

Claim.—1st. A mill stone dress composed of two series of furrows, an inner series of furrows arranged tangential to the eye of the draft and a second series of furrows at the skirt, arranged more nearly radial than the inner series, and dressed with the short side of the furrow for the leading edge. 2nd. A disintegrating or granulating mill for breaking grain for after milling, having grinding surfaces formed of dress metal disks, provided with detachable metal segments at their skirts whose faces are arranged in horizontal planes, and are provided with a series of furrows dressed with a shorter bevel for the leading edge, and arranged more nearly radial than the inner series of furrows. 3rd. The combination of the milling disk A recessed at its skirt to receive the segmental sections B, said segmental sections butting against each other at their ends throughout the entire periphery and provided with undercut slots *b b* opening at their ends into the adjacent slots, and the bolt *c* having their heads seated in the said undercut slots and fastened on top of the disk by nuts *d*.

No. 15,202. Improvement on Wire Stretchers. (*Perfectionnement des appareils à tendre les fils métalliques.*)

Reuben Elwood, (co-inventor with William C. Watkins,) Sycomore, Ill., U.S., 26th July, 1882; for 5 years.

Claim.—1st. In a wire stretching apparatus, the frame provided with the roller B and hooks *b* and *d* on the opposite side, in combination with the chain D attached to one of the hooks, and adapted to engage the other, and the wire clamping device attached to the frame between the two hooks 2nd. The combination, with the frame A having the upwardly projecting shoulder *m* of the swinging excentrically pivoted piece F provided with the lip *n*, for forcing and pressing the fence wire down between the holding faces of the clamping pieces and overlapping the shoulder *m*. 3rd. In combination with the frame A, roller B and rope *e*, the wire clamping device E connected with the rope and composed of the piece *f* having the projecting lip *h*, and the swinging excentrically pivoted piece *g* having the lip *i*, for forcing or pressing the fence wire down between the holding faces of the clamping pieces and overlapping the lip *h*.

No. 15,203. Improvements in Apparatus for Actuating the followers of Wood Pulping Engines. (*Perfectionnements aux machines à mettre en mouvement les roues motrices des machines à pâte à papier de bois.*)

Walter Jones, Niagara Falls, N. Y., U. S., 31st July, 1882; for 5 years.

Claim.—1st. A gear or pulley composed of an outer part or rim and a central or inner part within said rim, and a clutch for locking the two together. 2nd. The combination of a driven wheel or device, and a driving wheel or device, with a clutch for locking said wheels or devices, and means for releasing said clutch automatically at determined intervals on their rotation. 3rd. The combination of the inner wheel with notches on its periphery, with the outer rim and locking pin carried by said rim. 4th. The combination of the inner wheel, the outer rim, locking pin spring and lever. 5th. The combination of a gear or pulley composed of two parts, one within the other, with a spring clutch, a lever for releasing said clutch, and a track or projection in the path of said lever for operating the same. 6th. The combination, with a gear or pulley composed of an outer rim, an inner wheel and clutch for locking them, of a power shaft geared with said rim, a belt pulley fastened to said inner wheel, and mechanism, as indicated, for driving the belt pulley and inner wheel from saidshaft, when the aforesaid clutch is released independent of the outer rim.

No. 15,204. Improvements on Electric Cables. (*Perfectionnements aux câbles électriques*)

Patrick M. Delany, New York, N.Y., U.S., 31st July, 1882; for 15 years.

Claim.—1st. An electric cable composed of a series of insulated wires in practically the same plane and inclosed by a close fitting flat flexible lead pipe. 2nd. An electric cable composed of a series of insulated wires in practically the same plane inclosed by a flexible lead pipe and separated by walls of a conducting material. 3rd. An electric cable composed of a series of insulated wires in practically the same plane and inclosed in a flexible lead pipe opposite walls of which extend and meet between the said wires. 4th. An electric cable composed of a series of insulated wires in practically the same plane and enclosed in a flexible lead pipe, portions of the opposite walls of which project toward each other between the said wires. 5th. The method of forming an electric cable by introducing the covered wires into a lead pipe, and then compressing the pipe and forcing opposite portions of the wall thereof between the said wires. 6th. An electric cable composed of a number of insulated wires braided or plaited together, inclosed in a metallic tube and having a conducting substance in the meshers, between the wires and in contact with the tube. 7th. In an electric cable, the combination, with a number of insulated wires in a flat braid or plait and crossing and recrossing each other at short intervals, of the flat flexible metallic tube *b*4, inclosing said braid or plait and having its opposite inner surfaces metallically connected through the meshers of said braid or plait.

No. 15,205. Improvements on Electric Light Regulators. (*Perfectionnements aux régulateurs de la lumière électrique.*)

The Union Electric Manufacturing Company, (Assignee of Charles D. Haskins.) New York, N. Y., U.S., 31st July, 1882; for 5 years.

Claim.—The combination of the movable electrode of an arc lamp, an electro-magnet vitalized by the light producing current, and an intermediate regulating mechanism consisting of a drum mechanically connected with said electrode, and an armature and a clamping lever connected together and pendulously suspended from the axis of said drum, said clamping lever being adapted to act against the inner periphery of said drum.

No. 15,206. Improvements in Dynamo-Electric Machines. (*Perfectionnements aux machines électro-dynamiques.*)

Elihu Thomson, New Britain, Ct., U.S., 31st July, 1882; for 5 years.

Claim—1st. The combination of the magnet shells M M with openings O and recessed portions D1 D1 around the shaft, with a hollow spherical armature revolved between said shells upon the shaft. 2nd. The combination, with the field magnets of a dynamo-electric machine, of a permanently closed band or circuit encircling the same and of good conducting material. 3rd. Openings O in the field magnets approximately equal to half the diameter of the armature. 4th. The construction of a spherical armature core of end plates D D of iron, iron bands I and pins or projections of good insulating substance radially set in the exterior of the spherical armature core. 5th. The combination, with an armature wound with three coils of a commutator, the segments of which are constructed and mounted with respect to the brushes in the following manner, adjacent segments overlapping or brushes applied to the segments at angles 35° to 45° of revolution of the commutator. 6th. A spherical armature wound with three coils, one half the terminals of which are joined together, and the remaining three terminals carried successively to the commutator segments, three in number, and which segments are constructed to overlap from 35° to 45° in delivering current to the commutator brushes, or practically each segment contracting with brushes during 155° to 165° of revolution on each side of the commutator when revolved. 7th. The combination, with a straight slotted commutator with three segments, of two sets or pairs of brushes permanently displaced angularly from 35° to 45° around the commutator and connected into the circuit. 8th. In a dynamo-electric machine or electric generator combining the following elements, hollow field magnets with openings O, and recesses D1 D1 enclosing a spherical or similar armature A wound with three coils upon an iron core and a commutator, the segments of which overlap from 35° to 45° or practically cover 155° to 165° of revolution in delivery of current to the commutator brushes, one on each side of said commutator.

No. 15,207. Improvements on Belt Pulleys.

(*Perfectionnements aux poulies à courroies.*)

Philip Medart, St. Louis, Mo., U.S., 31st July, 1882; for 15 years.

Claim.—1st. The improvement in the art of manufacturing belt pulley spiders for composite belt pulleys by centering the pulley centre or spider, and then grinding the same concentrically with the axis of the pulley. 2nd. Centering the pulley centre or spider, boring it, grinding it concentrically with the axis of the pulley, and then securing the rim thereto. 3rd. Grinding the pulley centre or spider concentrically with the axis of the pulley, securing the rim thereto and then grinding the rim. 4th. Centering the pulley centre or spider, boring the hub thereof, grinding the centre or spider concentric with the axis of the pulley, securing the rim thereto, grinding the face of the rim concentric with the axis of the pulley and then grinding or securing the edges of the rim. 5th. Centering the pulley centre or spider upon a chuck or mandrel, and then subjecting it to the various operations in the process of manufacturing without removing it therefrom, whereby all the work is done from a common centre and absolute accuracy ensured. 6th. The belt pulley having the ends of the spider arms ground off concentrically with the axis of the pulley. 7th. A belt pulley in which the rim and the ends of the spider arms are ground off concentrically with the axis of the pulley. 8th. A composite belt pulley having the arm bracket of its spider or centre over which the rim joint is made, formed of a greater length than the other arm brackets of said spider. 8th. A belt pulley having the arm bracket diametrically opposite to that over which the rim joint is made of an approximate length or weight thereto, the balance of the arm brackets being of a lesser length and weight.

No. 15,208. Improvements in Ditching and Excavating Machines. (*Perfectionnements aux machines à fossoyer et à creuser.*)

Fawcett Plumb, Streaton, Ill., U.S., 31st July, 1882; for 5 years.

Claim.—1st. In a ditching machine, the combination, with the main frame of a cutting and excavating wheel mounted in a vertically adjustable swinging frame journalled at one end upon the shaft from which motion is imparted to said wheel, a gear wheel or pinion ar-