

the energy of the other source. 4th. The combination, in an electric metal-working apparatus, of two or more sources of energy supplying different parts of the work in parallel, and means for regulating the energy of the several sources independently of one another. 5th. The combination, with the two primaries having secondaries connected to different portions of the same work in parallel, of two reactive coils in the circuit, respectively, of said coils, and wound on the same core, and a regulating closed circuit of copper applied to said coils and core, as and for the purpose described. 6th. The combination, with two or more sets of primary and secondary conductors wound on the same core which is provided with magnetic bridges from one side to the other thereof, of a source of alternating current supply and reactive devices connected to the circuits of said primaries, whereby the current flowing in a primary coil may have its strength increased or diminished at pleasure. 7th. The combination, with the two reactive coils in different circuits, of a common iron core upon different portions of which said coils are wound, an armature, and one or more closed conducting bands or circuits adjustable with relation to the coils, so as to increase the self-induction of one and simultaneously decrease the self-induction of the other. 8th. In an electric metal-working apparatus, the combination, with the work of different sources of energy supplying the different parts of portions thereof in parallel, and means for varying the energy of said sources so as to control the relative heating of the several parts of the work. 9th. In an electric metal-working apparatus, a work-holder made in two or more parts insulated from one another and connected respectively with separate regulable sources of electric energy. 10th. In an electric metal-working apparatus, the combination, with a divided clamp or work-holder, of secondary bars or conductors in contact respectively with the divisions of the holder. 11th. The combination, in an electric metal-working apparatus, of a clamp-slide or base divided into sections insulated from one another on a longitudinal line, and two secondary bars with which the sides of the clamp-slide engage respectively. 12th. The combination, with the separate parallel secondary bars or conductors having a bevel at their inner sides, of a V-shaped clamp-slide bearing on said secondaries at their beveled portion, as and for the purpose described.

No. 38,664. Conveyor. (*Transport.*)

Ira Herman Gaiter, Alberton, and William L. Hammond, Hoods Mills, both of Maryland, U.S.A., 6th April, 1892; 5 years.

Claim.—The combination, with the polygonal sprocket wheels, of the endless conveyor, comprising the hinged or articulated plate sections, having therein series of apertures or perforations near their ends engaged by the short teeth of said wheels, said plate sections being armed with cleats or slats covering said apertures or perforations, substantially as set forth.

No. 38,665. Drive Chain. (*Chaîne sans fin.*)

Samuel H. Vinson and Mamie L. Vinson, both of Dayton, Ohio, U.S.A., 6th April, 1892; 5 years.

Claim.—A drive chain link formed from a blank of sheet metal, having a central rib, an opening on each side of the central rib, and ends of less width than the body of the blank, said link comprising a cylindrical end formed from the central rib of the blank bent upon itself, a body portion having a central opening, and a hook formed by the ends of the blank curved in the same direction, substantially as described.

No. 38,666. Railway Frog. (*Rail de croisement.*)

Charles U. Boyd, assignee of Nicholas Ratchford, both of Plain City, Ohio, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. The combination, with the main and side track rails, a movable frog rail, pivotally supported as described, adjacent to and above the main track rail, the sectional hinged and pivoted channelled operating rail adjacent to the inner side of the outer side track rail, and having its shorter arm pivoted to the latter, a lever 17, pivotally connected with the frog rail 5, and the longer arm of the bell crank 10, and means for returning the operating rail to its usual elevated position, substantially as and for the purpose specified. 2nd. The combination, with the intersecting main and side track rails, the pivoted frog rail supported as described, adjacent to and above the main track rail, a pivoted and jointed channelled operating rail 7, adjacent to the inner side of the outer side track rail 2, of a shaft 21, having a crank shaped inner end, the end of the latter journaled to the under side of the operating rail, the body of said shaft supported in a suitable boxing, as described, a weight upon the outer portion of said shaft, and a pivoted lever connection between the operating rail and the pivoted frog rail, by means of which the latter is forced laterally when said operating rail is depressed, substantially as described. 3rd. The combination, with the intersecting main and side track rails, the pivoted frog rail, supported as above described, adjacent to and above the main track rail, pivoted and jointed channelled operating rail 7, adjacent to the inner side of the outer side track rail 2, bell crank 10, fulcrumed adjacent to the operating rail, its upper and shorter arm pivotally connected with the latter, a lever 17, having its ends pivotally connected respectively with the longer arm of the bell crank 10, and the frog rail 5, of a shaft 21, having a crank shaped inner end, the

inner end of the latter journaled to the under side of the operating rail, the body of said shaft supported in suitable boxings, as described, a weight upon the outer portion of said shaft, substantially as and for the purpose specified.

No. 38,667. Straw Separator for Threshing Machines.

(*Séparateur de paille pour machines à battre.*)

Joseph Edward Cook, Northville, and Elijah Vradenburg, Trenton, both of Michigan, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. In a straw separator, the combination of the screen E, the fan, the straw separating screen F, and the receiver G, arranged as and for the purposes described. 2nd. In a straw separator, the combination of the screen E, the fan, the receiver G, the straw separating screen F, located beneath the screen E, extending from about the middle forwardly to the receiver G, and the baseboard extending rearwardly to the conveyor, substantially as described.

No. 38,668. Bath Tub. (*Baignoire.*)

George Booth, Toronto, Ontario, Canada, 7th April, 1892; 5 years.

Claim.—1st. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing having a lining of copper, aluminum, or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, substantially as and for the purpose specified. 2nd. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing having a lining of copper, aluminum, or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, in combination with a capping extending over and secured to the upper edges of the bath tub; substantially as and for the purpose specified. 3rd. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing, having a head, central and foot sections, each section having a lining of copper, aluminum or other light flexible metal, the central section having an outwardly turned flange at each end, and the head and foot sections corresponding flanges to allow the sections being securely fastened together; substantially as and for the purpose specified. 4th. As an improved article of manufacture, a bath tub, composed of a smooth sheet metal casing, having a head, central and foot sections, each section having a lining of copper, aluminum or other light flexible metal, the central section having an outwardly turned flange at each end and the head and foot sections corresponding flanges, and having perforations in the flanges to allow of their being securely fastened together; substantially as and for the purpose specified. 5th. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing, curved in cross-sections so that its upper edges incline inwardly, a lining of copper, aluminum or other light flexible metal, being hammered, rolled or pressed into close contact with its outer casing; substantially as and for the purpose specified. 6th. As an improved article of manufacture, a bath tub composed of three flanged smooth sheet metal sections, lined with copper, aluminum or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, and secured thereto by forcing the lining through holes made in the flanges of the outer casing; substantially as and for the purpose specified. 7th. As an improved article of manufacture, a bath tub composed of three flanged smooth sheet metal sections, lined with copper, aluminum or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, in combination with a capping, extending over and secured to the flanges formed on the upper edges of the bath tub; substantially as and for the purpose specified. 8th. As an improved article of manufacture, a bath tub composed of three flanged smooth sheet metal sections, lined with copper, aluminum or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, and secured thereto by forcing the lining through holes made in the flanges of the outer casing, in combination with a capping extending over and secured to the flanges formed on the upper edges of a bath tub; substantially as and for the purpose specified. 9th. The combination with a bath tub made in three sections, joined by flanges, of feet having legs extending over and around the said flanges and secured to the bath tub immediately over and hiding the said flanges; substantially as and for the purpose specified.

No. 38,669. Electric Cable. (*Câble électrique.*)

The Eugene F. Phillips Electrical Works, Montreal, Quebec, Canada, assignee of William Henry Sawyer, Providence, Rhode Island, U.S.A., 7th April, 1892; 5 years.

Claim.—1st. In an electric cable, a series of insulated conductors, interbraided loosely with respect to each other into tubular form, each conductor being thereby held apart from its adjacent conductor, and practically surrounded by the air occupying the pores and interstices of said fibrous filling, whereby a high insulation resistance and a low inductive capacity is maintained for the said conductors, and means for centrally supporting the conductors of said series and for maintaining them in position, substantially as described. 2nd. The combination in an electric cable, substantially as hereinbefore described, of a central solid foundation core, and a tubular multi-conductor braid formed thereon, and supported thereby, the said