of slips by drawing the record or registry slips, substantially as described. 3rd. In a registering or recording apparatus, the combination of one or more dispensing spools or rollers, a storing spool or roller and gripping or feeding rollers mounted independently of each other, and moved simultaneously to give off a plurality of slips, and wind up one or more of them by moving the said storing spool or roller, substantially as described. 4th. In a registering or recording apparatus, the combination, with the independently mounted dispensing spools, storing spool and gripping rollers or wheels, of means for moving a transfer slip at right angles to the path of the slips travelling from the dispensing spools, substantially as described. 5th. In an automatic registering or recording apparatus, the combination, hereinbefore described, of the dispensing spools, guide rollers, grip or feed rollers and storing reel, all independently mounted in the frame, substantially as set forth. 9th. In a registering or recording apparatus, substantially such as described, the combination, with the frame, of the removable independently mounted dispensing spools and means for locking the same in place, substantially as described. 7th. In a registering or recording apparatus, the combination, with the independently mounted dispensing and storing spools, of means for preventing too free running of the dispensing spools and backward movement of the slips, whereby a proper tension of the slips is maintained, substantially as described. 8th. In an autographic registering or recording apparatus, the combination of the dispensing spools, guide rolls, tablet or desk, gripping rollers, inclined window pane and storing reel, arranged to operate substantially as described.

No. 20,316. Picture Brace. (*Porte-Cadre.*)

Charles H. Gatchell and Gilbert W. Vanwart, Woodstock, N. B., 1st October, 1884; 5 years.

Claim.—1st. The adjustable clasps A, A, and their combination with a spring or slide D D, substantially as and for the purpose hereinbefore set forth. 2nd. The brace C, and its combination with a spring or slide D D, substantially as and for the purpose hereinbefore set forth.

No. 20,317. Car-Coupling. (*Accouplage de Chars.*)

James C. Mitchell, James A. Smith and Alden R. Tinkham, Lancaster, N. H., U. S., 1st October, 1884; 5 years.

Claim.—1st. The draw-bar having the head and the link-pin, combined with the elevating pawl, pivoted at its upper end upon the link pin and resting at its lower end upon the inclined plane of the head, the said pawl having its face inclined downward and backward from the corner 3 to its lower end, whereby the link when striking the inclined face of the pawl is prevented from passing under the pawl without also lifting the link-pin in unison with it, substantially as described. 2nd. The draw-bar, its head and a lifting pawl adapted to lift the link-pin, combined with a link-pin provided at its front side with a web or spline to a point opposite where the link bears against the said pin, as shown, to strengthen the same in the direction of the greatest strain thereon, substantially as described. 3rd. The draw-bar, its head provided with the groove $e3$ and the link-pin, combined with the elevating pawl to operate, all substantially as described. 4th. The draw-bar, its head provided with the inclined plane, and the link-pin provided with a spline at its front side and extended thereon to a point opposite where the link meets, the link-pin and the elevating pawl d pivoted upon the said pin, combined with the rock shaft having arms g, $g3$ by which to lift the said pin, substantially as described.

No. 20,318. Machinery for Cutting Metal, &c. (*Appareil pour Couper le Metal, &c.*)

Joshua E. L. Bradeen, South Berwick, Me., U.S., 1st October, 1884; 5 years.

Claim.—The combination of the standard B, having the bed c, the lever A carrying the cutter a and fulcrumed to the standard B at b, the pedal lever D and links l connecting the lever D, and the lever A, all constructed, arranged and combined as and for the purpose set forth.

No. 20,319. Process and Apparatus for Annealing, Cleaning and Galvanizing Wire Continuously. (*Procédé et Appareil pour Recuire, Nettoyer et Galvaniser le Fil de fer Continument.*)

Charles S. Hall, Calvin M. Whitcomb and William J. D'Ewart, Worcester, Mass., U. S., 1st October, 1884; 5 years.

Claim.—1st. In the art or process of annealing, cleaning and galvanizing or plating wire or wire-rods by a continuous operation, the improvement consisting in gradually cooling said wire or wire-rods after annealing and prior to introduction into the acid cleaning-bath, substantially as described. 2nd. In the art or process of annealing, cleaning and galvanizing or plating wire or wire-rods by a continuous operation, the improvement consisting in exposing the said wire or wire-rods to the atmosphere for a space of time sufficient to cool the same gradually before introducing them into the cleaning-bath, substantially as described. 3rd. In the process of annealing, cleaning and galvanizing or plating wire or wire-rods, continuously cooling said wire or wire-rods gradually until they are nearly or quite cold or at least considerably below an extreme black heat after the annealing and prior to the cleaning operation, by passing the same over suitable guide-rolls or their equivalents, so that they may be exposed to the action of the atmosphere, substantially as shown and described. 4th. The combination, with the annealing bath or furnace and the acid cleaning-bath, of means, as described, for gradually cooling the wire or wire-rods under treatment after annealing and previous to their introduction into said acid bath without interrupting the continuous process of annealing, cleaning and galvanizing, as set forth. 5th. The combination, with the annealing bath or furnace and acid cleaning-bath for carrying out the process of annealing, cleaning and galvanizing or plating wire or wire-rods continuously, of two or more rolls or their equivalents for supporting and conducting said wire or wire-rods back and forth, so as to expose them to the action of the atmosphere between the annealing and cleaning operations, substantially as and for the purposes set forth.

No. 20,320. Reduction Machine. (*Machine à Moudre.*)

The Case Manufacturing Company, (assignee of John M. Case,) Columbus, Ohio, U. S., 1st October, 1884; 5 years.

Claim.—1st. In a reduction-machine, the combination, with a pair of rolls, of a stationary grinding plate interposed between and extending above and below the horizontal plane of their axes, substantially as and for the purpose set forth. 2nd. In a reduction-machine, the combination, with a pair of rolls, of a stationary grinding-plate interposed between them, substantially in the manner set forth, and means for adjusting said stationary plate, so as to present different portions of its surface for action, as described. 3rd. In a gradual reduction machine, the combination of the casing, a pair of hopper spouts, a pair of grinding rolls, an interposed grinding plate and a pair of delivery spouts, all constructed and arranged, substantially as herein shown and described. 4th. In a grain-breaking or reducing machine, the combination of a pair of grinding rolls and a stationary grinding plate having parallel faces interposed between said rolls and extending above and below the horizontal plane of their axes. 5th. In a grain-breaking or reducing-machine, the combination, with a pair of rolls and a grinding-plate interposed between the adjacent faces of said rolls and extending above and below the horizontal plane of their axes, of means for adjusting said plate vertically, as set forth. 6th. In a grain-breaking or reducing-machine, the combination, with a pair of rolls, a grinding-plate interposed between said rolls and extending above and below the horizontal plane of their axes, and means for adjusting said plate vertically, of means for locking it in any position in which it may be set, as described. 7th. In a grain-breaking or reducing-machine, the combination, with a pair of grinding rolls and a stationary grinding-plate interposed between the adjacent faces of said rolls and extending above and below the horizontal plane of their axes, of means for adjusting the distance as under of the rolls. 8th. In a reducting-machine, the combination with two coils of a grinding-plate for use between them, constructed of a central frame and removable face or grinding-plates, as set forth. 9th. In a reduction-machine, the combination, with two rolls, of a grinding-plate for use between them, constructed of a central frame removable face or grinding-plates and suitable elastic packing interposed between said plates and frame, as set forth.

No. 20,321. Dynamo Electric Machine. (*Machine Dynamo-Electrique.*)

Joshua Gray, Medford, Mass., U.S., 1st October, 1884; 5 years.

Claim.—1st. The method of operating dynamo, or magneto electric generators, which consists in causing the ir armatures and field-magnets to pass with a rolling motion in close proximity to, but out of contact with, each other, substantially as described. 2nd. The method of operating magneto, or dynamo electric machines, which consists in rotating and revolving the armature through the field of magnetic force, and in close proximity to, but not in contact with, the field-magnets. 3rd. In dynamo, or magneto electric generators, the combination, with the field-magnets or armatures and means for causing the field-magnets and armatures to pass each other with a rolling motion in close proximity to, but out of contact with, each other, substantially as described. 4th. The combination, in a magneto, or dynamo electric machine, of the field-magnets and armatured and means for rotating and revolving said armatures in close proximity to but out of contact with, the field-magnets, substantially as described. 5th. The combination, with an external and internal field magnet, or pole, of rotating and revolving armatures, substantially as described. 6th. The combination, with an external and internal field magnet, or pole, of a series of rotating and revolving armatures and means for rotating the armatures and for collecting the current from the several armatures, substantially as described. 7th. The combination, with an external field-magnet, of a series of armatures revolving inside the magnet and an internal field-magnet loose upon its supporting-shaft, substantially as described. 8th. The combination, with the magnets having polar extensions and the cylinder attached thereto forming the external field of the internal field-magnet, the rotating and revolving armatures the commutators and collecting brushes and rings, substantially as described. 9th. The combination of a frame supporting the electro magnets and cylinder forming the external pole, of a shaft supporting the internal pole and carrying the armature supporting pieces or plates, and a gear-place for rotating the armatures, substantially as described. 10th. The combination, with the external field magnet, the internal field-magnet, the rotating and revolving armatures and means for rotating and revolving the same, of the commutators, collecting brushes and rings M, M, and of the rings O, O, and brushes P, P, substantially as described.

No. 20,322. Machinery for Finishing Boot-Legs, or other Seams. (*Appareils pour Finir les Tiges des Bottes ou autres Coutures.*)

Louis H. Allen, Farmington, N. H., U. S., 1st October, 1884; 5 years.

Claim.—In combination with two rollers A and B and their mechanism, as described, for revolving them at different rates of speed, and with the pressure spring and lever of the upper of said rollers, mechanism, substantially as set forth, for causing the actuating-worm of the upper roller to rise and fall in unison with the gear in engagement with it and fixed on the shaft of the said roller, such mechanism consisting of the lever H, the slide I and the two pivoted boxes q, r, all being arranged and adapted substantially in manner and to operate as represented.