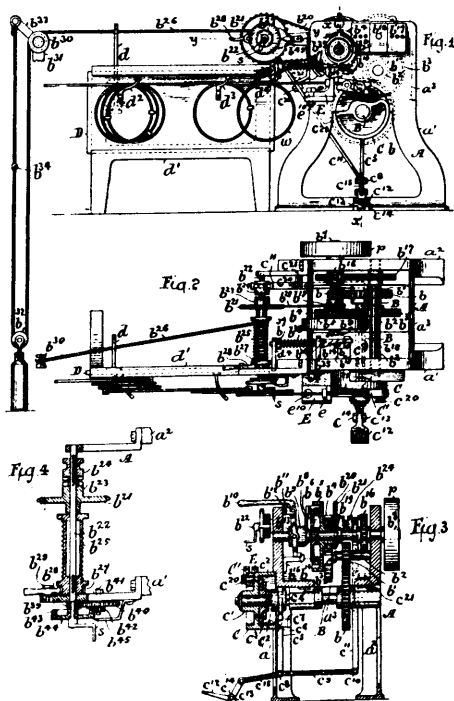


recess in the exposed face thereof and a series of strips bearing the time scales, carried in said recess, said strips being interchangeable with one another, and rigid stops upon the arm and extending across the end edges of said strips for retaining said strips against longitudinal displacement. 3rd. In combination with a blackboard, a drawing instrument of the class described, comprising an arm, a number of detachable strips carried by said arm and extending longitudinally thereof, each strip having a different scale marked thereon, rigid stops upon said arm and extending across the end and side edges of said strips for retaining said strips against longitudinal and lateral displacement, a marker carried by said arm and adjustable longitudinally thereof, and means for pivotally connecting said arm at one end to said blackboard, substantially as described and for the purpose set forth. 4th. In combination with a base, of an arm having a pivot point at one end in line with one side edge thereof, a series of strips carried by the exposed face of said arm, said strips being interchangeable with one another, each strip bearing a scale consisting of a series of equal divisions radiating from said pivot point and extending one beyond the other and off set from one another, and a series of equal divisions concentric of said pivot point and sub-dividing said radial divisions, the divisions and sub-divisions of the scale upon each strip differing from the other strips, a marker carried by said arm and movable longitudinally thereof and means for pivotally connecting said arm, at said pivot point to said base, substantially as described and for the purpose set forth. 5th. In combination with a black board 3, having a frame 4, of an arm having a longitudinal recess in the exposed face thereof, and a series of strips *b*, bearing time scales, carried in said recess, said strips being changeable with one another, a hinge plate 7, pivotally connected to one end of said arm, a thumb screw 5, for connecting said hinge plate to the frame 4, and a slidable block *m*, having a notch *n*, and a diagonal hole *p*, for a chalk marker *O*, substantially as described and for the purpose set forth.

No. 66,845. Machine for Stringing Drawing Dies upon Wires. (*Machine pour enfilier les dés à laminage sur du fil de fer.*)



66845

The Ansonia Brass and Copper Company, assignee of Charles A. Cowles, all of Ansonia, Connecticut, U.S.A., 23rd May 1899; 6 years.

Claim.—1st. In a machine for stringing dies upon wire, the combination with a drawing head capable of rotation in two directions, means for rotating said head in one direction to draw the wire through a die, a device for controlling said means to stop the further rotation of the head and permit the head to rotate freely in a reverse or opposite direction to relax the tension upon the wire, and automatic means for gripping and releasing the end of the wire, substantially as described. 2nd. In a machine for stringing dies upon wire, the combination of a drawing head capable of rotation in two directions, jaws carried by said head for gripping the end of the wire as the head is rotated in one direction, means for rotating said head in one direction to draw the wire through a die, a ratchet clutch in said means adapted when thrown into action to instantly start said

head in the drawing direction and when thrown out of action to instantly stop the rotation of the head to permit it to rotate freely in a reverse or opposite direction, and a lever mounted independently of said head for throwing said clutch into and out of action, substantially as described. 3rd. In a machine for stringing dies upon wire, the combination of a drawing head capable of rotation in two directions, means for rotating said head in one direction to draw the wire through a die, and a device for controlling said means to stop the further rotation of the head and permit the head to rotate freely in a reverse or opposite direction to relax the tension upon the wire, gripping jaws hinged together having cam surfaces, and a projection carried by the head and co-operating with said cam faces so that when the head rotates in the drawing direction the jaws are actuated to grip the wire and when the head rotates in the reverse direction they are permitted to release the wire, substantially as specified. 4th. In a machine for stringing dies upon wire, the combination with a rotating head provided with jaws, of a die holder, means for rotating the head, a ratchet clutch in said means for instantly stopping the rotation of said head, and a friction clutch also in said means for gradually starting the rotation of said head, substantially as specified. 5th. In a machine for stringing drawing dies upon wire, the combination of a rotating head carrying gripping jaws, means for rotating said head comprising a clutch, and a sliding piece for carrying the wire adapted to operate said clutch when drawn together, the head to prevent the further rotation of the head, substantially as described. 6th. In a machine for stringing drawing dies on the wire, the combination of a drawing head provided with gripping jaws, means for rotating said drawing head comprising a clutch, the die to be strung on the wire, and a piece adapted to slide toward the head at intervals and to operate the clutch to prevent further rotation of said head, substantially as described. 7th. The combination of a rotary head made heavier on one diametrical half than the other, a pair of jawl connected with the lighter diametrical half of said head, and means comprising a clutch for rotating said head, substantially as specified. 8th. The combination with a rotary head provided with jaws, means for rotating the said head in one direction and permitting it to move in another direction, of a piece carrying supports for wire threaded with drawing dies adapted to engage the means for rotating the head to stop the rotation of the head, and means independent of the wire for moving said piece towards the rotating head, substantially as described. 9th. The combination with a rotary head provided with jaws, and means for rotating the said head in one direction and permitting it to move in another direction, of a piece carrying supports for the wire threaded with drawn dies, means for moving said piece toward the head, and a clutch located in the said means for rotating the head adapted to be operated to prevent the further rotation of the head, substantially as specified. 10th. The combination with a rotary head provided with jaws, the means for rotating the said head in one direction and permitting it to move in another direction, of a piece carrying supports for wire threaded with drawing dies, said piece being movable toward and from the rotary head, and a stop mechanism for the rotary head operated by said movable piece, substantially as specified. 11th. The combination with a head provided with gripping jaws and capable of rotation in two directions, one to move a wire along and the other to relax the tension upon the wire, a sliding piece carrying a wire strung with drawing dies and adapted in its movement toward the head to prevent the movement of the head for drawing, and a scale for determining the forward movement of the piece, substantially as described. 12th. In a machine for stringing drawing dies upon wire, the combination of a rotary head provided with gripping jaws, means for operating said head, and a slide piece for supporting the wire threaded with dies, said piece being movable toward and away from the head and adapted when moved forward to stop the rotating of said head, substantially as described. 13th. In a machine for stringing drawing dies upon wire, the combination of a drawing head capable of rotation in two directions operating mechanism for said head comprising a clutch, a die holder and a device adapted to be moved toward the drawing head when the wire is being drawn for operating the clutch to stop the rotation of the head and allow it to rotate in a reverse direction, substantially as shown and described. 14th. In a machine for stringing drawing dies on wire, the combination of a drawing head capable of rotation in two directions, operating mechanism for said head comprising a clutch, a die holder, a device adapted to be moved toward the drawing head when the wire is being drawn through the die, and means in connection with said device for causing it to act on the clutch at a predetermined period to stop the rotation of the head in the drawing direction, substantially as described. 15th. In a machine for threading wire through dies, the combination of a die holder, means for drawing the wire through a die in said holder, means for pointing or swaging the wire preparatory to threading the wire through the die, said pointing or swaging means being driven by the wire drawing means, substantially as specified.

No. 66,846. Wire Manufacturing Machinery.

(*Machine pour la fabrication de fil de fer.*)

The Ansonia Brass and Copper Company, assignee of Charles A. Cowles, all of Ansonia, Connecticut, U.S.A., 31st March 1900; 6 years. (Filed 22nd May, 1899.)

Claim.—1st. An apparatus for conveying material to different places where it is to be treated, consisting of a track, a support