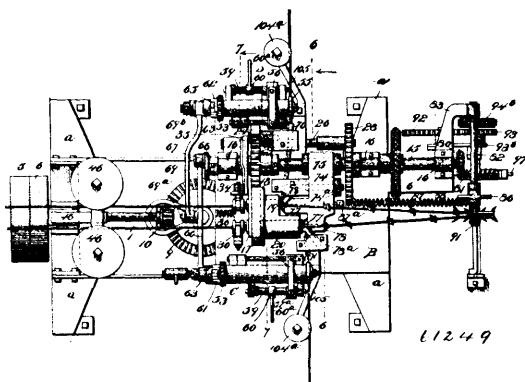


3rd. In a gas-making apparatus, the combination with a series of grates, of a series of retorts above the same, a cover over the retorts, an arch above this cover, a burner arranged to direct its products into the space between the cover and arch, and a series of heating-pipes supported upon the arch, substantially as described. 4th. In gas-making apparatus, the combination with a series of grates, of a series of retorts above the same, a cover over the retorts, an arch above this cover, a burner arranged to direct its products into the space between the cover and arch, a series of heating-pipes supported upon the arch, and a cover over these pipes, substantially as described. 5th. In gas-making apparatus the combination with a series of grates, of a series of retorts above the same, a cover over the retorts, an arch above this cover, burner arranged to direct its products into the space between the cover and arch, and a fixing retort at the end of the arch in the path of the products of combustion, substantially as described. 6th. The combination with a series of retorts supported above grates, of an arch above the retorts and heating coil above the arch, an oil and steam mixing apparatus having a pipe leading into the heating coil, a pipe connecting the coil and the retorts, an oil-supply pipe leading to the tubes cast in the bottom of the retorts, and connections between said tubes and the interior of the retorts, substantially as described. 7th. The combination with grates, of a series of retorts supported above the same, an arch above the retorts a fixing retort at the end of the arch, a heating coil upon the arch, connecting pipes between the coil and the retorts, and a connection from the end retort to the fixing-retort, substantially as described.

No. 61,249. Barbed-wire Machine.

(Machine pour fils métalliques à barbes.)



Benjamin M. Miller, Crawfordsville, Indiana, U.S.A., 23rd September, 1898; 6 years. (Filed 31st August, 1898.)

Claim.—1st. In a barbed-wire machine, the oppositely-rotating strand-carrying shells arranged with their working ends out of alignment one with the other and each having an inner reciprocating member carrying a barb-coiling finger slidably fitted to the outer shell-member, in combination with a driving shaft from which the two-strand-carrying shells are driven, means operatively connected with the inner members of said strand-carrying shells for imparting reciprocating play thereto, independent feed mechanisms for the respective strand-carrying shells, and cutter devices in operative relation to the disaligned working ends of said strand-carrying shells, substantially as described. 2nd. In a barb-wire machine, the combination of a barb-coiling mechanism having coiling fingers arranged in different vertical planes and situated one in advance of the other to be out of alignment transversely across the machine, mechanism for rotating said coiling fingers simultaneously, intermittent feed mechanisms arranged on opposite sides of the barb-coiling mechanism and having their respective pairs of feed rollers arranged substantially in alignment with the disaligned coiling fingers of the coiling mechanism, and a movable cutter mechanism embracing independent sets of knives arranged between the feed mechanism and adjacent to the working ends of the coiling mechanism, substantially as and for the purposes described. 3rd. In a barbed wire machine, a coiling mechanism comprising long and short strand-carrying shells having their working ends terminating in different vertical and transverse planes, each shell consisting of an outer member limited to rotation on its axis and an inner member capable of rotary and reciprocating play within said outer member, in combination with means for intermittently imparting reciprocating play to the inner members of said strand-carrying shells, in dependent feed mechanisms to deliver barb-forming wires to the working ends of said disaligned shells, and a cutter mechanism, substantially as and for the purposes described. 4th. In a barbed wire machine, a barb-coiling mechanism comprising long and short shells having their working ends terminating in different planes transversely across the machine, and each shell consisting of an outer member and an inner member arranged to reciprocate within said outer member and to rotate therewith, in combination with mechanism for imparting rotary motion simultaneously to both strand-carrying shells, mechanism for reciprocating the inner members of said strand-carrying shells, independent

feed mechanism to deliver barb-forming wires to the working ends of the disaligned strand-carrying shells, and a cutter mechanism, substantially as and for the purposes described. 5th. In a barbed wire machine, a barb-coiling mechanism comprising long and short strand-carrying shells, each shell consisting of an outer member provided with a gear pinion, an inner member carrying a coiling finger which passes through a face plate on the outer member and has its rear end projected beyond said outer member, a pivoted spring-controlled frame adjacent to the projecting ends of the inner members of said shells and shipper forks carried by said pivoted frame, in combination with a cam to vibrate the pivoted frame, means for rotating the strand-carrying shells in opposite directions simultaneously, independent feed mechanisms, and a cutter mechanism, substantially as and for the purposes described. 6th. In a barb-wire machine, a duplex barb-coiling mechanism comprising long and short outer shells having their working ends arranged out of alignment one with the other and each provided with an inner reciprocating member which carries a barb-coiling finger that is slidably fitted in the working end of the outer shell to remain normally in engagement therewith, means operatively connected with the inner members of the two shells for giving reciprocating play simultaneously thereto within the outer shells to retract and extend the barb-coiling fingers, and gearing directly connecting the outer shells to rotate the latter in opposite directions simultaneously, in combination with independent feed devices to direct the barb-forming wires to the disaligned ends of the outer shells, and cutter devices in operative relation to said disaligned ends of the outer shells, substantially as described. 7th. In a barb-wire machine, the combination with a duplex coiling mechanism and a cutting mechanism adjacent to the working ends of said coiling mechanism, of independent feed mechanism situated on opposite sides of the coiling mechanism and having the feed rollers arranged to deliver the disaligned working ends of the coiling mechanism, and a driving device common to both feed mechanisms to impart uniform peripheral speed to the feed rollers thereof, substantially as and for the purposes described. 8th. In a barbed-wire machine, the combination with a barb-coiling mechanism and a cutter mechanism, of independent feed mechanisms situated on opposite sides of the coiling mechanism and having their feed roll shafts provided with ratchets, a driving shaft, and a pawl-carrying links or arms actuated by said driving shaft and arranged in relation to the feed roll shafts for the pawls thereon to engage with the ratchets, substantially as and for the purposes described. 9th. In a barbed-wire machine, the combination with a coiling mechanism, and a cutter mechanism, of a driving shaft provided with a crank disc, independent feed mechanisms situated on opposite sides of the coiling mechanisms and each having one of its feed roll shafts provided with a ratchet swinging arms adjacent with pawls which engage with said ratchets, a driven link attached to one swinging arm and to the crank disc, and a driven link pivoted to the other swinging arm and to the driven link at a point intermediate of its length, substantially as and for the purposes described. 10. In a barbed-wire machine, the combination of a coiling mechanism having the working ends of its rotary members arranged out of alignment with each other, and independent feed mechanism by which barb-forming wires are supplied to said disaligned working ends of the coiling mechanism, of a driving shaft having a knife-actuating cam 76, an irregularly-shaped knife carrier pivotally mounted to present its knives adjacent to the disaligned ends of the coiling mechanism and having a fork which embraces said cam 76 to be actuated thereby, movable knives mounted on said reciprocating knife block, and stationary knives in operative relation to the working ends of the coiling mechanism and the movable knives, substantially as described. 11th. In a barbed-wire machine, a coiling mechanism comprising long and short strand-carrying shells having their working ends arranged one in rear of the other and each shell provided with an inner member which is arranged to reciprocate within the outer rotary member thereof, in combination with mechanism for imparting simultaneous and reciprocating motion to the inner members of said strand-carrying shells, a reciprocating knife-carrier arranged adjacent to the disaligned working ends of the strand-carrying shells and provided with movable knives, fixed knives in operative relation to the movable knives of said knife carrier, and independent feed mechanisms arranged in alignment with the disaligned working ends of the strand-carrying shells and with the respective sets of knives of the cutter mechanism, substantially as and for the purposes described.

No. 61,250. Gate. (*Barrière*.)

Adelbert Field, Portland, Oregon, U.S.A., 23rd September, 1898; 6 years. (Filed 1st September, 1898.)

Claim.—1st. In a gateway, the combination of the swinging rails, comprising angularly extended arms adapted to be placed alternately at an angle and upon horizontal lines, and suspended gates depending from rollers engaging the said rails, and means for swinging the rails into position, substantially as shown and described. 2nd. In a gateway, the combination of a swinging rail, comprising two angularly extended arms adapted to be alternately placed in a horizontal and an angular position, and a gate suspended from the rail by means of rollers and rods, and posts for supporting the rail, and means comprising a combination of levers for moving the rail, substantially as shown and described. 3rd. In a gateway, the combination of four uprights, and a beam connecting the uprights together and rails to be attached to said uprights, the said rails