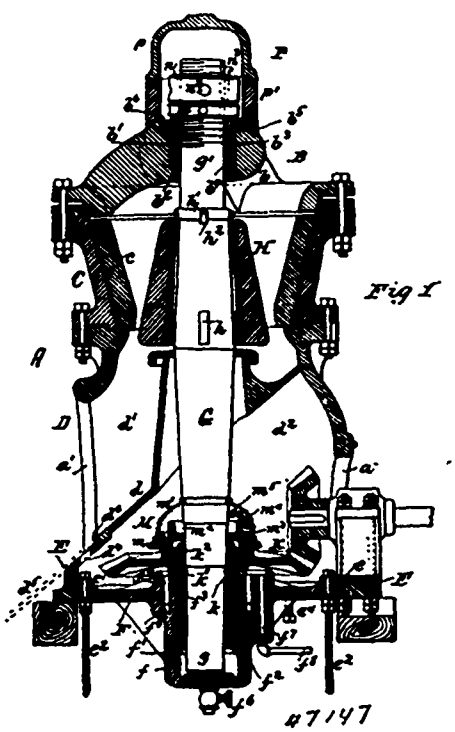
and lowered. 20th. In a can-making machine, the combination with the can head feed chute, the spring-actuated dog secured thereto for regulating the feed of the can heads, and a movable guide, secured to the lower end of the can head feed chute, for receiving the can heads from the can head feed chute, and conveying same to the clamping jaws of the can machine. 21st. In a can-making machine, the combination with the clamping jaw, of the feed chute, a movable guide device for receiving the heads from the chute, and placing same within the jaw holding same in place therein until the jaw is closed, and devices for closing the jaw and raising the guide from the same. 22nd. In a can-making machine, the combination, with the carrier-wheel, said wheel composed of two discs, one of which is provided with a series of notches around the periphery thereof, clamping jaws held between the discs, cam carrying spring-actuated catch for engaging the notched disc of the carrier-wheel, mechanism for reciprocating the cam in order to impart an intermittent motion to the carrier-wheel, and of devices for closing and opening the clamping jaws during the rotation of the carrier-wheel in order to form the can and discharge the same from the machine. 23rd. In a can-making machine, the combination, with the carrier-wheel, said wheel composed of two discs, one of which has a series of vertical slots cut therein, a clamping jaw secured between the discs, said jaws composed of hinged sections, straps connecting the sections of the jaws, axle to which the free ends of the straps are secured, said axle extending through the vertical slots in one of the discs of the carrier-wheel, a roll secured to the outer end thereof, a reciprocating cam for raising said roll in order to close the clamping jaw, and of mechanism for operating said cam. 24th. In a can-making machine, the combination, with the can head feed chute, of the crimper rolls, one of said rolls provided with a circular groove, and the other with a circular flange which fits therein, and one provided with a longitudinal lip, and the other with a longitudinal groove into which said lip fits, said circular grooves, flanges, longitudinal lip and groove, forming side grooves and outwardly and inwardly hooked ends to the body blank when passed therethrough. 25th. In a can-making machine, the combination, with the carrier-wheel, a mandrel, mandrel casing secured to the carrier-wheel, mandrel rod, mechanism for forcing the mandrel rod in or out of the can, and devices for raising and lowering the mandrel.

No. 47,147. Crushing Machine. (*Machine à broyer.*)



Robert McCully, Philadelphia, Pennsylvania, U.S.A., 3rd October, 1894; 6 years.

Claim.—1st. In a crushing machine having an eccentrically gyrating shaft, a single supporting and adjusting screw rod directly engaging with the top of said shaft and having a bearing located at the top of the machine, substantially as described. 2nd. The combination, with the shaft G having top recess or bore, a tubular plug in said bore, a support T having a head t^3 in said bore and passing through said plug, top holding nuts or keys for said bolt or support, and oil passages, substantially as described. 3rd. In a gyratory machine, a crusher head shaft upheld from the top of the machine by a single axially located support having a direct connection with the upper end of the shaft, and mechanism on said support for vertically adjusting it and the crusher head on the shaft to take up the wear of the crushing surfaces or to graduate the degree of fineness of the crushing, substantially as described. 4th. In a crushing machine, the combination of a gyratory shaft having a cylindrical upper end, a bore or recess in said end, a hollow tubular screw plug in said bore, and a single tubular screw bolt or rod support engaging with the under side of said plug for supporting and vertically adjusting said shaft, substantially as described. 5th. In combination, with the recessed upper end of a gyratory crushing shaft, a tubular plug g^2 supporting and adjusting screw rod passing through and engaging with said plug, and a support or bearing for said screw rod, substantially as set forth. 6th. The combination, with a gyratory shaft and frame of a crushing machine, a single supporting screw rod located at and having a bearing on the top of said frame, and engaging directly with the top of the shaft, substantially as set forth. 7th. In a crushing machine having a gyratory shaft, a freely suspended and adjustable single supporting device T engaging with the top of the shaft, and oiling channels for the bearing surfaces of said shaft and supporting devices, substantially as set forth. 8th. In combination, with shaft G, having recess g^4, tubular plug g^2, screw rod T, having nut t, with depending flanges t^1, and frame top plate having bearing for said nut, substantially as set forth. 9th. In a gyratory crusher, the combination, with the top plate or spider having a hub opening, a gyratory shaft, and sectional cover for the top of said hub opening, substantially as set forth. 10th. In combination with the spider or top plate hub opening, of a gyratory crusher, a two part or sectional cover, and rabbetted meeting edges for said sections and hub opening, substantially as set forth. 11th. In combination with a gyratory crusher, a removable bottom, short and long length securing bolts for said bottom, and set screws interposed between the bolts, substantially as and for the purpose set forth. 12th. In a gyratory crusher the combination of removable bottom F, bolts c^2 c^3, chute d, having opening d^4 and rabbett or recess d^6 and extension chute d^5, substantially as set forth. 13th. In a gyratory crusher the combination of a gyratory shaft having upper threaded end, supporting, adjusting and locking nuts at said end, and the threads of the shaft having different surface contact with the nuts, substantially as set forth. 14th. In a gyratory crusher a shaft having at its upper end superposed, adjusting and locking nuts, the threads of the upper nut sustaining the entire weight of the shaft and crusher head and downward pressure of crushing, and the threads of the lower nut being relieved of such weight and pressure, substantially as set forth. 15th. In combination with a gyratory shaft having an upper threaded end, an adjusting and a locking nut on said end, a key engagement between the adjusting nut and shaft, and a set screw for the locking nut, substantially as set forth. 16th. A gyratory crushing machine having the actuating devices for the shaft located or supported upon the bottom plate and the latter removable from the machine without dismantling the same, substantially as set forth. 17th. A gyratory crushing machine having a lower section D, with inwardly projecting bottom flange, and removable bottom F, secured to said flange, substantially as set forth. 18th. In a gyratory crushing machine the lower section or frame D having a chute, counter shaft and man-hole side openings, an inwardly projecting bottom flange, and a removable bottom F, secured to said flange, substantially as set forth. 19th. A lower section for a gyratory machine having an open bottom and an inwardly projecting flange and a removable bottom plate bolted to said flange, substantially as set forth. 20th. In combination with gyratory crusher shaft working eccentric and driving wheel, a cap m having a chain or equivalent connection with said shaft, substantially as set forth. 21st. In a crushing machine having a gyratory shaft, the combination of bottom F having well f, and inwardly projecting flange f^1, a bushing f^2 supported on said flange and actuating devices for the lower end of said shaft, substantially as set forth. 22nd. In a crushing machine the combination of a gyratory shaft having a cylindrical upper end, a bore or recess in said end, a hollow tubular screw plug in said bore, a single tubular screw bolt or rod support engaging with the under side of said plug for supporting and vertically adjusting said shaft, and a sleeve bearing for the cylindrical upper end of said shaft, substantially as set forth. 23rd. In a gyratory crusher, the combination of a gyratory shaft having an upper threaded end, supporting, adjusting and locking nuts at said end, the threads of the shaft having different surface contact with the nuts and a supporting sleeve bearing b^3 for said upper threaded shaft end, substantially as set forth.

No. 47,148. Electrical Signalling System.

(*Système de signal électrique.*)

Alfred Samuel McCaskey, Chicago, Illinois, U.S.A., 3rd October, 1894; 6 years.

Claim.—1st. In an electric-signalling system, the combination of a transmitting circuit-maker in the main line, a series of battery branch terminals in the path of said circuit-maker, a circuit-changer in each of said battery-branches, and a series of keys each operating a distinct combination of circuit-changers whereby signals composed each of a distinct arrangement of impulses may be sent to line, as set forth. 2nd. An electric signal transmitting device, comprising in combination a rotary main-line circuit-maker, a series of branches leading from a battery to terminals in the path of said circuit-