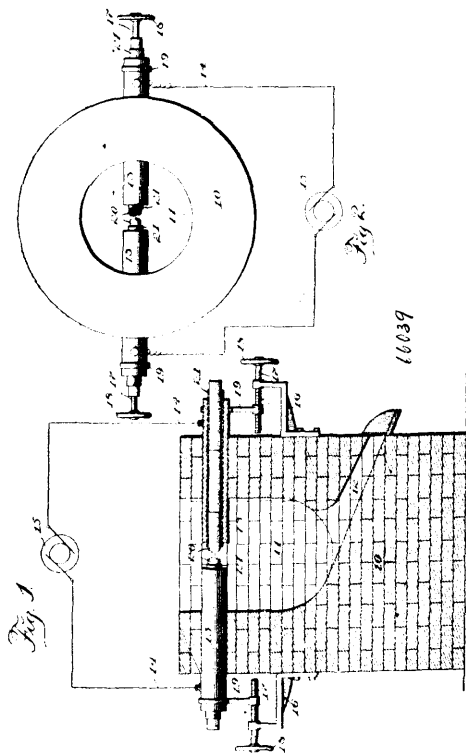


electric machine, which consists in exciting those portions of the field magnets under which commutation takes place with a magnetism independent of the magnetism exciting the remaining portions of the field magnets, and varying the said independent magnetism at will, independent of the conditions of the circuit, to vary the total flux of the armature. 6th. In an electric motor, in combination with the field magnets and armature, of means for adjusting and varying at will the magnetic flux passing through a portion of each or any pole piece, without greatly affecting the quantity passing through the portion of the pole pieces furnishing the field for the coils under commutation. 7th. In an electric motor, the combination with the field magnets and armature, a switch for increasing the flux passing through one tip of one of the pole pieces, and for at the same time diminishing the flux through the centre of the pole pieces to vary the speed of the motor without causing sparking. 8th. In an electric motor, the combination of a field magnet and armature, main field magnet windings, an auxiliary field magnet winding wound in a slot in one or more of the pole pieces in such a way as to embrace only a portion thereof, and a switch for varying the current in the auxiliary winding, substantially as described. 9th. In an electric motor, the combination of a field magnet and armature, main field magnet windings, an auxiliary field magnet winding surrounding a part only of one or more of the pole pieces, and a switch for varying and reverse windings the current in the auxiliary winding, substantially as described. 10th. In an electric motor, the combination of a field magnet, an armature, main field magnet windings, auxiliary field magnet windings, and a switch adapted to strengthen the field acting upon the coils under commutation and at the same time to weaken the total flux through the armature. 11th. In an electric motor, the combination of a field magnet, an armature, main field magnet windings, auxiliary field magnet windings, and a switch and a resistance adapted to gradually strengthen the field acting upon the coils under commutation and at the same time to weaken the total flux through the armature, substantially as described. 12th. In an electric motor, the combination of the two sources of magneto motive force, acting upon separate magnetic circuits terminating in a common pole piece, and means for varying at will within wide limits that one of the two sources of magneto motive force which does not furnish the flux for the coils under commutation to vary the speed of the motor without materially decreasing the flux through the coils under commutation, substantially as described.

**No. 66,039. Method of Producing Calcium Carbide.**

(Méthode de production de carbure de calcium.)

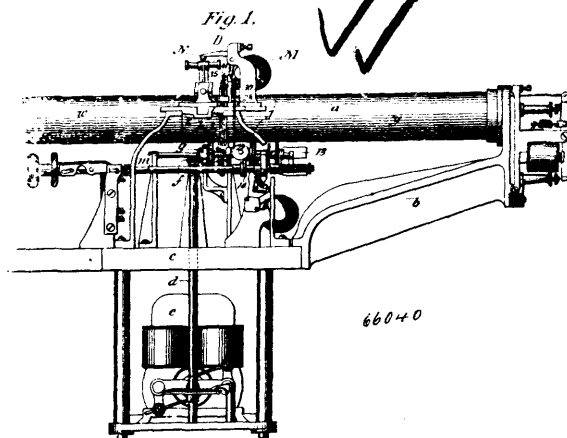


Corydon L. Wilson, Charles Muma, John W. Unger, Henry Schneckloth, Amos P. Brosius, Joseph C. Kuchel and Robert H. Smith, all of Holstein, Iowa, U.S.A., 31st January, 1900; 6 years. (Filed 26th May, 1898.)

**Claim.**—1st. The process of producing calcium carbide which consists in first causing the base and sides of the furnace or receptacle

in which the process is carried on, to be lined with calcium carbide in granular form, and then causing a mixture of lime and carbon to be fed into the space between the electrodes or the said arc so that the molten product may run into the base and sides covered with calcium carbide. 2nd. The process of producing calcium carbide which consists in first causing lime and carbon, or their equivalents to be pulverized, then causing them to be commingled, then causing the mixture to be compressed into blocks or sticks, then causing the blocks or sticks to be connected, then causing the furnace or receptacle in which the calcium carbon is to be melted to be lined with pulverized or granulated calcium carbide, then causing an electric arc to be established, and finally causing the sticks or blocks to be fed into the said arc. 3rd. A apparatus for producing calcium carbide, comprising a furnace a lining of calcium carbide loosely arranged within the furnace wall, means for establishing an electric arc within the furnace and means for feeding lime and carbon into said arc, for the purposes stated.

**No. 66,040. Printing Telegraph. (Télégraphe imprimant.)**



Charles Luman Buckingham, New York City, and Emil Germann, Brooklyn, both in the State of New York, U.S.A., 31st January, 1900; 6 years. (Filed 23rd March, 1898.)

**Claim.**—1st. In a printing telegraph apparatus, a stationary tubular support, a sheet of paper formed into a tube having a row of holes perforated in the lap of said tube, an escapement wheel, a spur wheel meshing with said row of holes and a train of gearing for positively connecting the escapement and spur wheels together, as and for the purpose set forth. 2nd. In a printing telegraph, a stationary support, a paper tube having a row or series of perforations, a step-by-step wheel, a train of gearing positively connected with said step-by-step wheel and a spur wheel gearing with the holes in said sheet of paper which is positively driven with said step-by-step wheel and train of gearing, as and for the purpose set forth. 3rd. In a printing telegraph, a stationary tubular support, a sheet of paper formed into a tube movable thereon, a feed wheel positively engaging with said sheet of paper, a step-by-step actuating mechanism and a train of gearing for positively connecting said actuating mechanism with said wheel in engagement with said paper tube. 4th. In a printing telegraph, a tubular support for a sheet of paper, a paper tube upon which a message is to be printed, a wheel whose teeth engage with said paper tube, means for rotating said wheel circumferentially around said tubular support with a paper blank, means for rotating said wheel about its own axis for feeding said paper tube axially from one line position to the next, a step-by-step actuating mechanism and a train of gearing positively connecting said actuating mechanism with said feed wheel, as and for the purpose set forth. 5th. In a printing machine, a stationary support, a tubular blank adapted to be rotated thereon, having a row of holes along its seam, a feed wheel whose teeth mesh with said holes, a wheel carrying said feed wheel circumferentially around said tubular support and paper blank, a train of gearing connected therewith, an escapement for controlling the step-by-step action of said train of gearing and circumferential and inclined grooves cut in the periphery of said stationary support, as and for the purpose set forth. 6th. In a printing telegraph, the combination of a stationary support *a* having circumferential grooves *r*<sup>1</sup>, *s*<sup>1</sup>, *t*<sup>1</sup>, inclined grooves *r*<sup>2</sup>, *w*<sup>1</sup>, *x*<sup>1</sup>, gear wheel *l*, feed wheel *f*<sup>1</sup>, an escapement wheel *i* and a train of gearing for positively connecting wheels *l* and *f*<sup>1</sup> together, as and for the purpose set forth. 7th. In a printing telegraph, a stationary support *a*, a tubular blank upon which messages are printed in page form, a row of holes perforated in said blank parallel with its axis, a feed wheel for engaging with said row of holes, and an auxiliary wheel for carrying said feed wheel circumferentially around said stationary support, means for holding said feed wheel against rotation upon its own axis during the printing of lines, and cams for causing rotation of said wheel upon its axis between the end of one line and the beginning of the next, as and for the purpose set forth.