

open scalloped and twisted single tube guides interpolated and co-acting, substantially as shown and described. 2nd. The combination of the match blank hopper bottom, and attached reciprocating side bar 5, its connecting rod 4<sup>a</sup> and driving shaft 3, the co-operating mechanism actuating the printing rolls, viz., racks 39, gears 40, ratchets 40<sup>a</sup>, and pawls 40<sup>b</sup>, the upper and lower printing rolls, the open scalloped, twisted single tube guides, substantially as shown and described. 3rd. In a printing mechanism applied to and co-operating with a match making mechanism, the combination of the match blank receiving hopper B, the platen B<sup>2</sup> with its operating mechanism comprising the driving shaft 3, the eccentric 4, connecting rods 4<sup>a</sup> and also bars 5, the four sided single tube, match splint guides, scalloped to admit the printing rolls, and said rolls, they being journaled and adjusted to operate through said scallops upon match splints within, substantially as described. 4th. In a printing mechanism applied to and co-operating with a match making mechanism, the combination of the hopper B, the platen B<sup>2</sup> with its operating mechanism as described, and the four sided, single tube match splint guides having upper and lower scallops to admit two or more pairs of upper and lower printing rolls, said single tube guides also having twisted sections located between the pairs of upper and lower scallops, substantially as and for the purpose described. 5th. The combination of the intermittently rotating printing rolls or cylinders, the single tube guides scalloped for the inter-action of said rolls upon match splints and twisted between the scallops, and the splint supplying and propelling mechanism, substantially as described and shown. 6th. In a match printing mechanism, the combination of a match making frame A<sup>1</sup>, bearing upper sets of printing rolls to print upper surfaces, a vertically movable and adjustable sub-frame 41 bearing lower printing rolls to print under surfaces, and a group of interposed match splints single tube guides, open scalloped for the inter-action of said rolls and twisted between the scallops, substantially as and for the purpose set forth. 7th. The independent, open scalloped and twisted single tube match splint guides, re-inforced or buttressed by table 11 and bearing 50, in combination with the inter-acting printing rolls, substantially as shown and described. 8th. The combination of a supporting frame A<sup>1</sup>, carrying printing rolls, a match blank propelling mechanism and an adjustable, vertically upwardly and downwardly moving frame 41 within the supporting frame A<sup>1</sup> also carrying printing rolls to print under surfaces, the intermediate match blank carrying single tubes and co-operative intermittent and simultaneously moving match splint propelling mechanism connectable and detachable as respects upper and lower printing rolls by means of the sub-frame 41, substantially as shown and described. 9th. In combination with a match printing mechanism, the reciprocating side bars 5, having the toothed racks 39, and the other parts named below, the secondary sub-frame 41 fitted to move up and down within the main frame A<sup>1</sup> and bearing the lower printing rolls 14<sup>a</sup> and 14<sup>b</sup>, which have segmental gears 40 toothed upwardly to mesh into said racks 39, elevating screws 54 and 55, gears 58 and cranks 57, whereby said racks and lower gears 40 are made to engage and disengage by the reverse movement of the cranks 57, and whereby the upper and lower printing rolls are brought into simultaneous operation at pleasure, substantially as shown and described. 10th. In a match forming and printing machine, the adjustable printing device located within the main frame A<sup>1</sup>, comprising in combination a platform 41 having four elevating screws 54 and 55 at the four corners geared to hand operating cranks 57, printing rolls 14<sup>a</sup> and 14<sup>b</sup> provided with shafts and bearings, free segmental gears 40 on said shafts carrying pawls 40<sup>b</sup> attached to said printing rolls, reciprocating racks 39 above, into which, when the table is elevated to the required point to produce printing contact of said rolls with surfaces to be printed, said gears engage and by the reverse movement disengage, substantially as shown and described. 11th. In combination with the main frame and a pair of several pairs of printing rolls, each pair printing upwardly and downwardly, the lower adjustable carrying table 41, its printing rolls 14<sup>a</sup> and 14<sup>b</sup>, and automatically engaging segmental gears 40, pawls 40<sup>b</sup>, ratchets 40<sup>a</sup> and a reciprocating rack 39, substantially as shown and described.

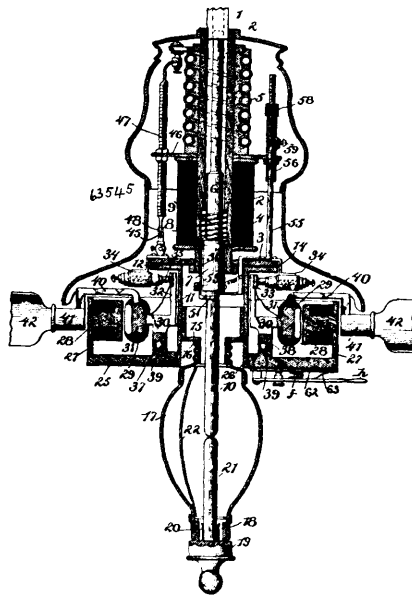
#### No. 63,545. Arc Lamp and Fan.

(Lampe et éventail électriques.)

Joseph Melzer, Frederick Haffner, and Martin Koch, all of Cleveland, Ohio, U.S.A., 3rd August, 1899; 6 years. (Filed 12th January, 1899.)

**Claim.**—1st. A combined arc lamp and fan comprising a lamp hanger having a carbon tube, a cup shaped motor field support having a central opening, a depending flange having its upper end supported by the carbon tube and its lower end connected within the said opening of the cup shaped motor field support, a vertically movable carbon in said tube, a mechanism for adjusting the carbon vertically, a lower carbon support, a lower carbon supported thereby, an annular armature within the cup shaped support, a bearing between the cup shaped support and the annular armature, fan support brackets carried by the armature, and electrical connections for the motor and the carbon, substantially as described. 2nd. A combined electric lamp and fan comprising a lamp support or hanger, a cup shaped motor field support carrying an annular motor field and having a central opening, an upwardly projecting flange connected to the wall of said opening at its lower end and at its upper end connecting with the lamp hanger, a globe socket within

the said tube, an annular armature surrounding the said tube and within the motor field, a bearing for the armature carried by the



cup shaped support, and electrical connections for the motor and the electric carbon or filament, substantially as described. 3rd. A combined lamp and motor comprising an electric lamp mechanism, cup shaped motor field support carrying the motor field on its inner vertical side, the bottom of the cup shaped support provided with an opening through which the electric lamp mechanism passes, an annular motor armature surrounding the said opening and within the said field, the bottom of the cup-shaped support and the motor armature provided with annular bearing surfaces, substantially as described. 4th. A combined electric lamp and fan comprising a lamp or fan hanger, a cup shaped motor field support having a motor field on the inner side of its vertical wall, the bottom of the cup shaped support having a central opening, a flange secured in said opening and projecting upward with its upper end attached to the lamp or fan hanger, the bottom of the cup shaped support having an annular bearing race, and the motor armature having a co-acting bearing race, substantially as described. 5th. An electric lamp comprising a solenoid, a hollow armature therefor, a carbon passing through the said solenoid, a spring arm carried by and within the armature, and adapted to engage the carbon, the spring arm carrying a magnet between the carbon and the inner wall of the armature, and adapted to be attracted by the solenoid armature and an electric connection therefor, substantially as described. 6th. An electric lamp comprising a solenoid, an armature therefor receiving a carbon, a clutch mechanism, a support for the armature limiting its downward movement, the support being vertically adjustable and having a longitudinal groove, and a platinum point engaging said screw and forming electrical connection, substantially as described. 7th. In electrical arc-light, the combination of a globe supporting socket in an electrical circuit, a globe carrying an open socket at its upper end and adapted to be detachably connected to said supporting socket and through which the upper carbon freely passes, a carbon socket at the lower end of the globe, and an electric connection within the globe having its end directly connected respectively with the sockets at the upper and lower ends of said globes, whereby the globe itself carries all connection necessary to complete the circuit when attached to said supporting socket, and can be detached without disturbing the connection, substantially as described.

#### No. 63,546. Grain Saving Device for Feed Boxes.

(Appareil pour économiser le grain dans les boîtes d'alimentation.)

Edward M. Pumphrey and Theodore F. Smithers, both of Indianapolis, Indiana, U.S.A., 3rd August, 1899; 6 years. (Filed 12th April, 1899.)

**Claim.**—1st. A feed box having a compartment separated from the body of the box by a resilient partition, a compartment thus formed having a hopped bottom, a resilient partition having a slotted opening opposite the bottom of the hopper and an agitator consisting of a curved plate or bar fastened between its ends to the resilient partition, substantially as shown. 2nd. A feed box having a compartment separated from the body of the box by a resilient partition, the compartment thus formed having a hopped bottom, a resilient partition having a slotted opening opposite the bottom of the hopper but said hopper bottom and opening being both above the bottom of the feed box to prevent a drain for the saliva away from the opening, substantially as shown. 3rd. A feed box having a compartment separated from the body of the box by a resilient