

another layer of molten composition with a backing of fabric, the layer of composition and the backing being in each case applied in the manner substantially as described, and the composition used being substantially of the kinds set forth in the following claims. 2nd. As a composition for the negative, I claim a mixture of 1 to 2 parts of strong solution of salt of copper, 1 to 2 parts of a chromate or bichromate in weak solution and 1 to 1½ part of glycerine with 5 to 7 parts of liquid glue. 3rd. As a composition for the imitation material, I claim either a mixture of 2 to 4 parts of drying oil thickened to gelatinous consistence of chlorine, 1 to 3 parts of caoutchouc solution and 2 to 3 parts of colouring matter, or the same mixture with 5 to 8 parts of glue or gelatine and 1 to 2 parts of glycerine. 4th. As another composition for the imitation material, I claim a mixture of 10 to 12 parts of glue or gelatine, 2 to 4 parts of vaseline, not more than two parts of glycerine, 1 to 2 parts of a salt of copper, less than 1 part of a chromate or salt of iron along with colouring matters, and with or without a very small addition of alkali.

No. 17,576. Compound Metal or Alloy for Deoxidizing and Coating Metals. (*Alloi composé pour désoxyder et enduire les métaux.*)

John B. Jones, Brooklyn, N. Y., U.S., 1st September 1883; 5 years.

Claim.—An alloy for coating iron, consisting of lead, tin and zinc with metallic sodium added, substantially in the manner and proportions specified, whereby the alloy is rendered electro-positive to iron, its melting point reduced and oxidation destroyed, arrested or prevented, as set forth.

No. 17,576. Compound to be Employed as Substitute for Barm. (*Composé destiné à remplacer le levain.*)

Alexander Esilman, Manchester, Eng., and Henry Esilman, Glasgow, Scotland, 1st. September, 1883; 5 years.

Claim.—1st. The use of phosphate of ammonia in company with alkaline or earthy carbonates of the nature herein indicated in the making of unfermented bread, biscuits, pastry and similar food. 2nd. The use of phosphates of ammonia and carbonates of soda or potash, or other carbonates in the preparation of baking powders or liquid preparations for use in lieu of barm or ordinary baking powders. 3rd. A mixture of phosphate of ammonia and bi-carbonate of soda or potash, with or without other substances, for the purposes set forth and indicated. 4th. The employment of phosphate of ammonia with suitable carbonates of the indicated nature in the preparations of "self-raising flour."

No. 17,577. Seed Drill and Fertilizer. (*Semoir-traceur et fertilisateur.*)

Horace M. Keith, Commerce, and Joel P. Harger, Pontiac, Mich., U. S., 1st. September, 1883; 5 years.

Claim.—1st. The combination, substantially set forth, in a seed drill, of a hopper having interior vertical seed conducting tubes or chutes provided with top inclined trays, with feed-wheels having internal buckets adapted to operate in relation to said trays, for the purpose specified. 2nd. The combination, substantially set forth, in a seed drill, of a hopper having interior vertical seed conducting tubes or chutes provided with top inclined trays, with feed-wheels having internal buckets and means for laterally adjusting said feed-wheels in relation to the trays, for the purpose specified. 3rd. In combination, the hopper, the fixed vertical tubes or chutes therein, the open feed-wheels having internal buckets, the shaft upon which they are fixed and means for effecting the endwise adjustments of said shaft, and the feed-wheels therein consisting of the screw-stems *i*, the coupling plates *ii*, the screw-nuts *j*, and the spring *ji*, arranged at the end of the hopper whereby to set the feed-wheels towards and from the fixed hopper tubes, for the purpose specified. 4th. The feed-wheel band *d* mounted at one edge upon spokes *dt* and having buckets *e*, arranged upon the interior wall of said band, in combination with a fixed tube or chute having a tray extending within and beneath the said band toward its spoked side and below the path of the buckets, and the hopper through the bottom of which the said chute passes, substantially as described for the purpose specified. 5th. The combination, in a seed-drill, of the hopper for the fertilizer having longitudinal side slots *k* on a plane with its bottom, with feed-arms *r* passing into and through said slots and having a reciprocating movement across and upon the bottoms of the hopper, and means for producing said movement whereby to effect the feed of the fertilizer from both sides of the hopper, substantially as described. 6th. The hopper for the fertilizer adapted to have an endwise movement, and provided with longitudinal side slots *k* on a plane with its bottom, and means for operating both the hopper and the said feed-arms, substantially as described for the purpose specified. 7th. In combination, the hopper for the fertilizer adapted to have an endwise movement, and having longitudinal side slots *k* on a plane with its bottom, feed-arms *r* adapted to operate within said slots upon and across the hopper bottom, bell-crank levers pivoted to the frame and serpentine cams *p* for operating said levers, the said feed-arms being carried by a bar pivoted to said levers and operated, in the manner and for the purpose specified, by suitable drill driving-gear connections. 8th. The hopper for the fertilizer adapted to have endwise movement, having longitudinal side slots *k* and side strips *s* adapted for vertical adjustment in relation to said slots, the scraper *G* upon the rear side of the hopper, and the feed-arms *r* adapted to operate within said slots upon and across the hopper-bottom and, beneath the said regulating strips *s* and the scraper, all constructed and combined with the seed drill tubes and with the chutes *b*, substantially as described for the purpose specified. 9th. The combination, with the drill tubes, of a seed-planter, of the hopper for the fertilizer, the guide *l* for said hopper, the serpentine cam *m* for operating said hopper, the feed-arms *r* operating through slots in the sides of the hopper, the bell-crank levers pivoted to the carrying bar of said feed-arms, the serpentine cams *p* and the shaft *n* operated by the drive gear of the drill, the said serpentine cams being arranged in

relation to each other to operate simultaneously the hopper and the feed-arms to deliver the fertilizer from both sides of the hopper. 10th. The combination, substantially set forth, in a seed-drill, of the drill-tubes thereof with a supplemental drill-point or cutting edge adapted for attachment to said drill-tube and operating in front thereof, for the purpose specified. 11th. The supplemental drill device consisting of an arm *n* having a yoke and a dip *ni* whereby it is secured to a drill-tube, and a narrow point or cutting edge *n* carried by said arm in front of and below said drill tube, substantially as described for the purpose specified. 12th. The combination, substantially set forth, of the seed conducting tube with a thin narrow cutting blade or point *n* and a covering device, substantially as described, and adapted to travel in the slit made by said narrow cutting blade, for the purpose specified. 13th. The combination, substantially set forth, of a seed conducting tube and an attachable thin or narrow cutting blade or point *n* with an attachable covering blade *nc*, constructed substantially as described, and adapted to travel in the slit or narrow opening made by said cutting blade, for the purpose specified. 14th. The combination of the seed-conductor with the arm *v* extending in front thereof, the clip *vi*, the narrow drill forming point *n*, a clamp *vi* therefor and a covering disk-shaped wheel *vc*, substantially as described for the purpose specified. 15th. The combination, in a seed-drill, of a seed-conductor, a thin or narrow cutting blade or point *n* and a covering blade *nc*, as described, with the seed-hopper *C*, a feed-device for feeding the seed continuously and a chute *c*, substantially as and for the purpose specified. 16th. In combination, in a seed-drill and fertilizer, the hopper *C*, its feed device, the hopper *B*, its feed device, means, substantially as described, for connecting and operating the feeding devices of said hopper, means for rendering the feed devices of the hopper *A* non-operative, a drill-forming point or cutting-blade adapted for attachment to the drill-tube, and a covering device adapted to travel in the out made by the drill-forming point, substantially as described.

No. 17,578. Seed Cleaner. (*Nettoyeur de grain.*)

Alpheus R. Appleman, Newark, Ohio, Assignee of Jefferson Grube, Auburn, Ind., U. S., 1st. September, 1883; 5 years.

Claim.—1st. A seed cleaning machine consisting of the frame *A* having hopper *B*, agitating shaft *Bt*, fan-shaft *C*, having eccentric connection *d*, the shoe *D* and the spring arms *E*, as and for the purpose set forth. 2nd. The described seed-cleaner, in combination with an *a* attached to the thrashing machine or clover huller, substantially as shown and described.

No. 17,579. Saw Mill Log Holder. (*Soutien de billot pour scierie.*)

Ezra B. Eddy, (Assignee of George H. Millen), Hull, Que., 1st. September, 1883; 5 years.

Claim.—The combination with the saw-gang, saw carriage, of posts *E* *E*, on opposite sides of the carriage in advance of the saws and provided with racks *F*, shaft *H* carrying pinions *G*, pressure roller *I* bearing on the log and drum wheel *K* provided with winding rope *L*, having a weight *W*, whereby the log is prevented from rising during the upward movement of the saws by the resistance of weight *W*, applied.

No. 17,580. Store Service System. (*Système de distribution automatique.*)

Gilbert R. Elliott and Milton Clark, Boston, Mass., U. S., 1st. September, 1883; 5 years.

Claim.—The improved store service system, hereinbefore described, consisting of one or more wires extending from a cashier's desk to one or more salesmen's counters, having one of their ends fixed and their other ends adapted to be raised and lowered, in combination with a car adapted to travel by gravity and arresting stops, one near each end of each wire, substantially as set forth.

No. 17,581. System for Conveying Cash and Parcels in Stores. (*Système de transport de monnaie et paquets dans les magasins.*)

Gilbert R. Elliott and Milton Clark, Boston, Mass., U. S., 1st. September, 1883; 5 years.

Claim.—1st. The store service system, described, consisting of a wire stretched taut between fixed supports and having two arresting stops secured to it, in combination with a carrier adapted to be propelled from one stop to the other in either direction by a push of the hand, substantially as set forth. 2nd. The holder, described, consisting of a spring controlled roller mounted in a frame, in combination with a web or sheet adapted to be wound up by the roller, substantially as and for the purpose set forth.

No. 17,582. Process of and Apparatus for Extracting Gold and Silver from their Ores. (*Procédé et appareil à extraire l'or et l'argent de leurs minerais.*)

Richard Barker, London, Eng., 1st. September, 1883; 15 years.

Claim.—In apparatus for extracting gold and silver from their ores by the combined action of electricity, mercury and water, the branch cathodes and anodes arranged to extend across the rille vat or trough and to lie in the water, and above the mercury, substantially as described and shown, and for the purpose set forth.

No. 17,583. Bottle and Fruit Jar Stopper. (*Bouchon de bouteille et de jarre à fruit.*)

Gregory Duoro, Buffalo, N. Y., U.S., 1st. September, 1883; 5 years.