

H, provided with the circular multiple jaws H¹ and adapted to fit into a clutch G, whereby it may be attached to the plate Bz.

No. 12,015. Improvements on Joint Couplings. (*Perfectionnements aux embrayages des joints.*)

Joseph Walker, Scranton, Pa., U. S., 24th November, 1880; for 5 years.

Claim.—1st. The combination of two shafts having grooved ball heads on their ends, cup-shaped intermediate sections jointed to said ball heads by means of pins and grooves, outer sections to which the adjustable intermediate sections are also jointed by means of pins and grooves, and a revolving block or connecting part for uniting the two outer sections, so that the motion of one will be communicated to the other. 2nd. The combination of the shafts A B, having the grooved ball heads *a*, with the intermediate cup-shaped sections F F' carrying the series of pins *f* and the series of pins *f*¹, the outer grooved sections G and the revolving connecting block or spindle H. 3rd. The combination with the sections F of the pins *f* and *f*¹, provided with flat sided heads and having cylindrical shanks which fit loosely in perforations in said sections. 4th. The combination with the two shafts coupled and set at an angle to each other, of the bearings for the shafts, the segmental arms upon which said bearings are mounted, and means for clamping the segmental arms together. 5th. The combination of the shafts, their bearings, the adjustable segmental arms, the stationary arm D and the set screw E. 6th. The connecting block or spindle H mounted in the arm D, and combined with the outer sections G, the shafts A B and the parts by which the sections G are connected to said shafts.

No. 12,016. Improvements in the Production of Electric Light. (*Perfectionnements dans la production de la lumière électrique.*)

George Sweeney, Montreal, Que., 24th November, 1880; for 5 years.

Claim.—1st. The combination of the disk B provided with points of contact D and rest C, with the disk provided with hollow rib L, carrying spindle M provided with box N and contact maker R. 2nd. The combination of the shaft F provided with disk K carrying contact maker R, with the disk H having rib S carrying spindle M and box N provided with contact maker R, and with movable disk B, having point of contact D. 3rd. The generator A in combination with a stationary disk H provided with a swinging con-

tact maker, the revolving disk K also provided with a swinging contact maker, and a movable disk B provided with points of contact D.

No. 12,017. Improvements on Grain Car Doors. (*Perfectionnements aux portes des chars à grain.*)

James Miller and Francis C. L. G. Susemihl, Detroit, Mich., U. S., 24th November, 1880; for 5 years.

Claim.—1st. The combination of the door F, with the lever J, the long arm *b*, which carries the door, and the short arm *b*¹, which is constructed so as to bear against the side of the car, or against a block or plate secured thereto, and thereby prevent lateral displacement of the lever or door. 2nd. The combination of the door F, the lever J having a projecting end *f*, a support for the door, and the catch *m* to which the said projecting end of the lever is adapted when the door is open.

No. 12,018. Improvements in Water Gauges. (*Perfectionnements aux indicateurs d'eau.*)

The Extension Water Gauge Company, (Assignees of John R. Nunn and Frederick M. Clough,) Cheshire, Ct., U. S., 24th November, 1880; for 5 years.

Claim. 1st. A boiler indicator consisting of tubular extensible metallic sections and one or more glass tubes held therein, whereby the fragment or fragments of a water glass may be utilized. 2nd. Mutually-interchangeable metallic sections and a glass section, whereby said glass section may be shifted to an upper or lower position at will. 3rd. Sections *b b*¹ *b*² provided with fixed nuts or grasping pieces E, in combination with glass tube C, and nuts and stuffing boxes.

No. 12,019. Improvements on Hay Presses. (*Perfectionnements aux presses à foin.*)

Auguste Monpetit, St. Thomas d'Alfred, Ont., 24th November, 1880; for 5 years.

Claim.—The combination of the press bar A, slide B, spaces C, winch pulley D, friction rollers E, discharge door F, top frame H, compound lever I I, chains J J, chain rollers K and ratchet wheel L with shipper handle M.

List of Patents issued up to 15th January, 1880, but not yet Officially published in the Patent Office Record.

No. 12,172. Addison Reynolds, of Burlington, Mich., and John Richards of Windsor, Ont., "Straw Cutter," Dec. 23rd, 1880.

No. 12,153. Edward N. Henry, of Montreal, Que., "Buggy Top Attachment," Dec. 23rd, 1880.

No. 12,154. Charles Brewster, of Montreal, Que., "Improve Skate," (extension of patent No. 5,680,) Dec. 23rd, 1880.

No. 12,155. Richard Vose, New York, "Railway Springs and Spring Cap," Dec. 23rd, 1880.

No. 12,156. John L. Babu, of Greenland, West Virginia, "Neck Yoks for Horses," Dec. 23rd, 1880.

No. 12,157. Charles C. Jerome, Chicago, Ill., "Piston Rod Packing," Dec. 23rd, 1880.

No. 12,158. Robert Campbell, of Wooster, Ohio, "Washing Machines," Dec. 23rd, 1880.

No. 12,159. John R. McPherson, of Jersey, New Jersey, Assignee of Albert N. Stevenson and Thomas F. McGrath, of Newark, New Jersey, "Stock Cars," (extension of patent No. 5,577,) Dec. 23rd, 1880.

No. 12,160. John R. McPherson, of Jersey, New Jersey, Assignee of Albert N. Stevenson and Thomas F. McGrath, of Newark, New Jersey, "Stock Cars," (extension of patent No. 5,577,) Dec. 24th, 1880.

No. 12,161. John T. Averill, of St. Paul, Minn., and H. M. Carpenter, of same city, "Paper Pulp," (extension of patent No. 6,352,) Dec. 31st, 1880.

No. 12,162. Francis Culham, of Blenheim, Ont., "Vehicle Hubs," Dec. 31st, 1880.

No. 12,163. Robert A. Bacon and Nathan Hart, of New York, "Means of Decorating Celluloid," Dec. 31st, 1880.

No. 12,164. Malcolm McLean, of Guelph, Ont., "Ploughs," Dec. 31st, 1880.

No. 12,165. Rubens H. Plass and Myron H. Chapin, of New York, "Plass' Pile Factories Splitting Machine," Dec. 31st, 1880.

No. 12,166. William H. Soune, of Chatham, Ont., "Improved Door Knob," Dec. 31st, 1880.

No. 12,167. Lauren E. Hogue and Wallace E. MacDonald, of Sandy Lake, Penn., "Hogue's Improved Injector," Dec. 31st, 1880.

No. 12,168. James N. Lander and Nathan P. Stevens, of Concord, New Hampshire, "Vacuum Relief Valve," Dec. 31st, 1880.

No. 12,169. John Manning and Charles W. Knowles, Windsor, N. S., "Improved Process in the Manufacture of Paper," Dec. 31st, 1880.

No. 12,170. Jacob Wagner, —the younger,—Louis Wagner, Charles Wagner and Edward Koch, of Chicago, Ill., "The Wagner Wire Sewing Machine," Dec. 31st, 1880.

No. 12,171. William Carter, Toronto, Ont., "Carter's Improved Over-all," Dec. 31st, 1880.

No. 12,172. William C. Cross, of Boston, Mass., "Cross' Paper Bag Machine," Dec. 31st, 1880.

No. 12,173. James W. Fenwick, of Patterson, Ont., "Spring Tooth Harrow," Dec. 31st, 1880.

No. 12,174. Jacob Bloom Yeazley, of Indianapolis, Indiana, "Looks," Dec. 31st, 1880.

No. 12,175. Nelson Smith and Thomas P. Saunders, of Adams, N. Y., "Smith's Improved Weather Strip," Dec. 31st, 1880.

No. 12,176. William C. Cross, of Boston, Mass., Assignee of Edgar B. Stocking, of Washington, "The Stocking Paper Bag Machine," Dec. 31st, 1880.

No. 12,177. Freeman Winslow, of Salem, Mass., "Kettles," Dec. 31st, 1880.

No. 12,178. Francis C. Cook, of Connecticut, "The Improved Fertilizer," Dec. 31st, 1880.

No. 12,179. James M. Van Horn, of Bridgewater, N. S., "Hat and Box Valise," Dec. 31st, 1880.

No. 12,180. James M. Van Horn, of Bridgewater, N. S., "Window Blinds," Dec. 31st, 1880.

No. 12,181. John W. Larabee, of Springfield, Assignee of John W. Larabee, of Woburn, Mass., "Atwood's Lock Nuts," Dec. 31st, 1880.

No. 12,182. Thomas B. Dooley, of Chelsea, Mass., "Printing Machine," Dec. 31st, 1880.

No. 12,183. Charles J. Levoy, of Palestine, Texas, "Attachment for Grinding the Knives of Wood Planing Machines," Dec. 31st, 1880.

No. 12,184. John S. Averill, of St. Paul, Minn., "Paper Pulp Process," (extension of patent No. 6,352,) Dec. 31st, 1880.

No. 12,185. Frank Bramer, of Little Falls, N.Y., "The Warrior Harrow," (extension of patent No. 5,616,) Jan. 3rd, 1881.

No. 12,186. Frank Bramer, of Little Falls, N.Y., "The Warrior Harrow," (extension of patent No. 5,616,) Jan. 4th, 1881.

No. 12,187. William C. Cross, of Boston, Mass., "Paper Bag Machine," Jan. 8th, 1881.