

plate F at top, and journal and steady plate L at bottom; 7th In combination with the engine, of the shaft M with cog wheel O and pinion P attached for gearing, with the wheels H and J respectively. 8th The device described for sawing and discharging, or the equivalent thereof, consisting of the track B with an elevated pinion rack and K boiler A and engine with shafts D and cog wheels I and J, R, double clutch I, plate A and engine pulley T, plate L, lever Q pivoted on k spring b

**No. 9577. Cylinder Paper Making Machine.**  
(*Machine à cylindre pour la fabrication du papier.*)

Jonathan Hunt South Whitham, Ct., U. S., 22nd January, 1879, for 5 years.

*Claim.*—1st. The combination with the stationary part of the vat, of the cylinder revolving therein and the oscillating side pieces B, of the oscillating bottom E attached to the said side pieces. 2nd. The combination with the oscillating bottom E, the attached side pieces B, and the stationary part of a cylinder paper making machine of oscillating supports for the said bottom. 3rd. The combination with the oscillating bottom E, the attached side pieces B, and the stationary part of the vat, of the flexible connector F. 4th. The combination of the cylinder and vat of the cylinder paper making machine and the adjustable plate H for adjusting the transverse sectional area of parts of the channel between the bottom of the vat and the cylinder. 5th. The combination, with the receiving box for the mixed pulp, water and size having compartments for the separation of froth, of a gate O for regulating the head of said mixture in that compartment of the said box from which the said mixture flows to the vat. 6th. The combination, with the outlet of a cylinder paper making machine and a pump for conveying the overflow of the vat back to a receiving box, of a box J, having the compartments R and R, communicating by the passage P, the said compartment R being connected with the pump. 7th. The receiving box for mixed water, pulp and size placed higher than the general level of the liquid in the vat for maintaining a head of the said water, pulp and size in the said box. 8th. This receiving box for receiving pulp, water and size to be fed to the vat of the machine, provided compartments K, K, K, K, passages m, m and the perforated bottom floor or septum N. 9th. A cylinder for a paper making machine constructed of a shaft S, wheel spiders or rims T, bars U attached to, or inserted in the edges of the said wheels, spiders or rims and a wire basis V attached to the outer parts of the said bars for the support of the wire cloth of the cylinder. 10th. The combination of the blanket H, an eccentric roller J for producing uniform velocity of the current and regulating the velocity thereof. 11th. The combination with the pulp and water receiving box D of the perforated septum or partition E for distributing the pulp equally to the cylinder. 12th. The combination with the vat A and cylinder B of the apron G for preventing the deposit of pulp and the formation of paper on the cylinder before entering the current. 13th. The combination with the vat and the cylinder, of the dividing bar or partition K for preventing the drawing of the web off from the emerging portion of the cylinder. 14th. The combination with the vat of a cylinder paper making machine, of one or more oscillating side pieces in the sides of the said vat for producing lateral and forward movement of the water and pulp in the said vat.

**No. 9578. Improvements in Railway Brakes.**  
(*Perfectionnements aux freins des railroads.*)

Gavin Marshall, Hamilton, Ont., 22nd January, 1879, for 5 years.

*Claim.*—1st. In combination with a car wheel axle, the brake levers F F, thereon and provided with anti friction rollers c, said levers also being provided with pulleys G G, and the chain I passing from the arm of the lever F around the pulley G and secured to the pulley H, and the chain P passing from one arm of the lever P to pulley G on the opposite lever F to pulley H; 2nd. In combination with a car axle, a stationary central wheel A, the pulleys E E, and the grooved pulleys B B, the latter being provided with anti-friction rollers next the axle to prevent wear; 3rd. The pulleys C C, the same being connected to the pulleys B B by chains D D; 4th. In combination with a car truck, the brake beam levers J J, attached to shafts H H and H H, and operating the pulleys H H, with their respective chains connected thereto. 5th. The chains and springs S S, attached to shafts O and O, respectively, and end truck lever Z for countering the pressure on the pulleys C C; 6th. The chain M which passes from the lever J, to pulley K on the lever J to brake stem L. 7th. The chain T fastened to the chain M and passing around the pulley Y on the centre truck beam X of the last car of a train to the locomotive. 8th. The chain P attached to shaft O, and to the brake stem chain of the next car. 9th. The chain N attached to the shaft O and the brake beam lever Q. 10th. The chain I which passes from the pulley H around pulley G, to the end of the axle lever F, and chain I, which passes from pulley H around the pulley G to the end of the axle lever F, to operate said levers. 11th. In combination with the brake levers F F, the stay rods 3 3 3 securing said levers to the bottom of the car to prevent oscillation. 12th. The combination of the pulleys C C, B B, E E, wheel Z, brake levers F F, chains D D, I, M, T, P, S, S, to brake the axle in addition to the putting of the brakes on the wheels.

**No. 9579. Twist Drill Rolling Machine.**  
(*Machine à cintrer les drilles à vis.*)

Simon P. Graham, London, Ont., 22nd January, 1879, for 5 years.

*Claim.*—1st. A roll made in ring form and bored tapering, to fit the end of the shaft and held on the same by a nut. 2nd. The die formed in, by and being a part of, the rolls at an angle of about 45° so as to bring the cutting edges of the drill at the J int of the rolls, for the purpose of rolling a sharp edge on the drill or bit. 3rd. The combination of the sleeve P and journals M M, for the purpose of raising and lowering the rolls. 4th. The combination of block Q; 4th. The application of slide plate S with attachment of centre gear, for the purpose of throwing the bead rolls W at any angle, when rolling the twist in drills or bits.

**No. 9580. Machine for Cleaning Wheat.**  
(*Machine pour nettoyer le blé.*)

Wilson Ager, John W. Craig and George I. Hill, Washington, D. C., U. S., 22nd January, 1879, for 5 years.

*Claim.*—1st. A grain scouring machine having a revolving screen provided with grain elevators, and a stone or stones revolving and mellowing in the grain, the mechanism for producing and directing the blast or current of

air into and through the screen and falling grain. 2nd. The packing or its equivalent, for preventing the current of air from passing round between the screen and the case. 3rd. The slotted revolving discharge gauge for regulating the discharge and the amount of scouring while the grain is passing through the machine. 4th. The outer case closed at the bottom and having a dust chamber with dust discharge for removing the dust from the lower part of the machine or case.

**No. 9581. Machine for Rebating Tenons and Cutting Wedges.**  
(*Machine pour tailler les tenons et les coins.*)

John Costin, Brantford, Ont., 22nd January, 1879, for 5 years.

*Claim.*—1st. The saw frame D in combination with bars E and F and tightening screws G. 2nd. The combination of bars H fastened to the top and bottom of saw frame D with rod h forming a frame in which bars L, I work also radius block K moving on table I is moved rod M passing through it and the radius bars N, at each end of rod forming levers to sub bars F with saws as the work proceeds, also movable pin n. 3rd. The application of block O. 4th. The application of circular saw L combined with radius links V W and guide bar Y and worked by handle X.

**No. 9582. Improvements on Lubricating Pumps.**  
(*Perfectionnements aux pompes à lubrification.*)

Edward G. Felthousen, Buffalo, N. Y., U. S., 22nd January, 1879, for 5 years.

*Claim.*—The bowl A, cylinder C, piston G, and the shaft F formed with the bowl A and cylinder C in one piece said cylinder being passed through the bowl and provided with the filling aperture I.

**No. 9583. Improvements in Electric Fuses.**  
(*Perfectionnements aux fusibles électriques.*)

Henry J. Smith, Mountain View, N. J., U. S., 22nd January, 1879, for 5 years.

*Claim.* 1st. A metallic or other band connecting the fuse wires and holding them rigidly in place. 2nd. Tinning or coating the ends of the fuse wires. 3rd. The cap or shell E having safety bands formed therein. 4th. The combination of the fuse wires A with tinned ends A, tinned and grooved ends A, resistance wire B and band G. 5th. The combination of the fuse wires with tinned ends and grooved tips, resistance wire, securing band explosive shell or cap with safety band and cement filling.

**No. 9584. Improvements on Chromatrope Toys.**  
(*Perfectionnements aux jouets chromatrope.*)

James B. Erwin, Milwaukee, Wis., U. S., 22nd January, 1879, for 5 years.

*Claim.*—1st. The discs C C C and discs C C C, provided with color K L M and eyelets A A A; 2nd. The combination of two or more colored discs C C C constructed and arranged as specified. 3rd. The combination of the colored discs C C C, discs C C C, screws D, disc A, axle B cord E and circular frame I.

**No. 9585. Improvements on Quilting Frames.**  
(*Perfectionnements aux métiers à piquer.*)

Andrew W. Ritchie and William J. Hitchcock, Bardonia, N. B., 22nd January, 1879, for 5 years.

*Claim.*—The slotted adjustable extension bars E and clamp screws F G, in combination with the rollers C and legs A.

**No. 9586. Improvements in Horse Shoes.**  
(*Perfectionnements aux fers à cheval.*)

Granville C. Shaw and Samuel T. G. Morse, Washington, D. C., U. S., 22nd January, 1879, for 5 years.

*Claim.*—1st. In combination with a horse shoe and pad, sides and toe clips removably connected to both shoe and pad. 2nd. In combination with a horse shoe having the recesses a, of a removable side and toe clips attached to the shoe and supporting a pad lying in the opening of the shoe. 3rd. In combination with a horse shoe having the recesses a, of the pad D having flange a and recesses e, e, toe clip B and side clips C. 4th. A shoe having the clip C provided with the shoulder O and bent portions m n. 5th. A shoe having the toe clip B provided with the shoulder o and upward projection s. 6th. The pad D provided with the flange a and recesses e.

**No. 9587. Improvements on Sulky Ploughs.**  
(*Perfectionnements aux charrues à siège.*)

Joseph M. Payne, Dallas, Texas, U. S., 22nd January, 1879 for 5 years.

*Claim.*—1st. The combination of the plough beam A, axle D secured rigidly thereto, and having the segmental rack J and lever E pivoted to the axle D and carrying the wheel G upon its short arm; 2nd. The combination of the plate O having segmental rack Y, lever W having segmental rack V and spring catch Z sliding slotted rack R and castor wheel I swivelled in bearings in plate O and in the rack R. 3rd. The vertically adjustable wheel B arranged near the heel of the plough between the mould board and the land side. 4th. The wheel G adjustable by the crank lever E vertically adjustable castor wheel L and vertically adjustable wheel B, the latter arranged near the heel of the plough between the mould board and the land side.

**No. 9588. Improvements on Alarm Clocks.**  
(*Perfectionnements aux réveille-matin.*)

Henry J. Davies and Walter D. Davies, Brooklyn, N. Y., U. S., 22nd January, 1879, for 5 years.

*Claim.*—1st. In combination with the winding arbor b and main spring D, the ratchet wheels g and h having a fixed and loose relation respectively with said arbor and provided with one or more engaging studs or stops k and l, the loose main alarm driving wheel e and the pawls f. 2nd. The alarm setting spindle M made capable of independent adjustment in combination with the alarm releasing device or trip Q arranged to relate loosely upon