

**No. 12,276. Improvements on Carriage Tops.**  
(*Perfectionnements aux soufflets des voitures.*)

Joseph Simpson, (Co-inventor with Joseph Best,) Montreal, Que., 28th January, 1881; for 5 years.

**Claim.**—1st. The brackets F having socket terminations provided with cam lever G, for holding the shifting rail E to the seat. 2nd. The combination of the shifting rail E having arms H, brackets F having socket terminations receiving said arms, and cam lever G or equivalent holding d-vice. 3rd. The combination of prop K, spring lever L, with the rail E for supporting the top.

**No. 12,277. Method of and Machine for Rolling the Threads of Screws.** (*Méthode et machine pour cylindrer les fils des vis.*)

Hayward A. Harvey, Orange, N. Y., U. S., 28th January, 1881; for 5 years.

**Claim.** 1st. The method of forming screw threads consisting in subjecting the blank to two or more progressive rolling operations between successive pairs of dies, the respective pairs of dies having ridges on their working faces relatively varying in depth or width, the primary dies forming a shallow spiral groove upon the body of the blank, and the subsequently following pair or pairs of dies deepening and enlarging such grooves until the thread is finished. 2nd. A rotating die and a stationary curved die, for forming the threads of screws or bolts, in which the working faces for impressing the thread upon the body of the blank are transversely notched at intervals. 3rd. In machines for forming screw threads jointly, two or more pair of dies, each pair consisting of a rotating die and a stationary curved die, the respective pairs of dies having the ridges on their working faces relatively varying in depth or width, for the purpose of forming the thread of a screw or bolt by a series of two or more progressive operations, the primary dies forming a shallow spiral groove upon the body of the blank, and the subsequently following pair or pairs of dies successively deepening and enlarging such groove until the thread is finished. 4th. The combination of pairs of dies with transferring mechanism for conveying the blank from one pair of dies to the next following pair of dies consisting of the wheel C and the guide C'. 5th. The oscillating arm H, connected with the stationary guide provided with the tripper H', in combination with the spring H' and guide H', and with the actuating pin H'. 6th. The hollow cylinder I, affording upon its exterior the bearing for the milling wheel L, in combination with the shaft D, extending eccentrically through the hollow cylinder I and carrying the rotating die A.

**No. 11,278. Improvements in Processes for Coating and Finishing Walls.**  
(*Perfectionnements aux procédés pour enduire et finir les murs.*)

John W. O'Bryan and John W. Cook, Petersburg, Ill., U. S., 20th January, 1881; for 5 years.

**Claim.**—The method of ornamenting the outer surfaces of building by first aligning, and then applying a compound of putty, white lead and Japan varnish, to form raised joints projecting from the plane of the surface.

**No. 12,279. Improvements on Horse Shoes.**  
(*Perfectionnements aux fers à cheval.*)

William Jones and William Glen, Toronto, Ont., 28th January, 1881; for 5 years.

**Claim.**—1st. A horse shoe B provided with lips or projections C and plate D, located and shaped as described, in combination with the semi-circular band E, arranged to fit the hoof. 2nd. A horse shoe provided with a clamping plate at its toe, in combination with a band fitting the hoof and connected to the heel of the shoe.

**No. 12,280. Improvements in Pneumatic Economizers for Ice Making or Refrigerating Purposes.** (*Perfectionnements aux régulateurs des machines pneumatiques pour faire la glace ou pour refroidir.*)

Simon B. Hunt, New York, U. S., 29th January, 1881; for 10 years.

**Claim.** 1st. The expanding cylinder C having the air chest and valve chamber D, forming a part thereof, in combination with cut off shaft S, and pedals 5 6 7 8, gate N, valves 1 2 3 4 and lever V, all operating by the main crank shaft F, so that the elastic force of compressed air, in the cylinder C, of the expanding engine, will act as an auxiliary power to the driving engine A. 2nd. The steam piston rod W geared to the outer face of the fly wheel Y, and the piston rod in expanding cylinder C to the outer face of the fly wheel Y, in such a manner that the said piston operates alternately in opposite directions to the steam piston in cylinder A, by which means the compressed air in the cylinder C assists in operating the driving crank shaft F, which operates the compressors B, in combination with the valves 1 2 3 4, pedals 5 6 7 8, shafts S, lever V.

**No. 12,281. Apparatus for Producing Dry Atmospheric Air for Refrigerating.**  
&c. (*Appareil pour produire l'air atmosphérique sec pour refroidir, &c.*)

Simon B. Hunt, New York, U. S., 29th January, 1881; for 10 years.

**Claim.** 1st. An air trap for the production of cold dry atmospheric air under pressure. 2nd. The air trap T having a blow off valve and pipe N, extending into and near the bottom of said trap, and pipes P' S', in combination with the coil chamber A, expanding engine C, C', egress pipe S'.

**No. 12,282. Art of Reducing the Temperature of Atmospheric Air for Freezing Water or Refrigerating Purposes.**  
(*Art de réduire la température de l'air atmosphérique pour geler l'eau ou pour refroidir.*)

Simon B. Hunt, New York, U. S., 29th January, 1881; for 10 years.

**Claim.** 1st. The process of drying the compressed air while under pressure by means of a suitable trap, in combination with any suitable compressing apparatus cooling coil and expanding engine. 2nd. The process of discharging the compressed dry cold air broad cast into the refrigerating room, and then returning it to the cooling coil chamber.

**No. 12,283. Improvements on Steering Apparatus for Vessels.** (*Perfectionnements aux appareils à gouverner les vaisseaux.*)

James F. Guild, Dundee, Scotland, and Arthur E. Knights, New York, U. S., 29th January, 1881; for 5 years.

**Claim.**—1st. In apparatus for steering by steam or other power, one or more cylinders having pistons connected directly to the steering chains, and a valve fitted for movement by a hand wheel, for admitting steam or other fluid under pressure to either or both sides of the piston head, combined for operation as described. 2nd. The combination, with a cylinder and piston fitted to move the rudder, of an auxiliary cylinder or cylinders containing fluid and having pistons connected to the piston of the steam cylinder, and a valve or valves fitted to move simultaneously with the steam valve, to allow or prevent passage of the fluid from one end of the cylinders to the other. 3rd. In apparatus for steering by steam or other power applied to move a piston in a cylinder, a valve for regulating the pressure so constructed and combined with the mechanism that, when the piston is in its middle position, both parts are open for admission of steam to equalize the pressure on the piston. 4th. The steam cylinders B, steam chest D having pistons C and containing valve E, liquid cylinder A having passages G, chamber E provided with partition H and valves I, and pistons A connected with the steering chains combined together and provided with a hand wheel for giving simultaneous movement to the valves. 5th. In steering apparatus, the combination, with the rudder head and chains, of eccentrics C made in the double form as described. 6th. The shaft J fitted for operation by wheel G and carrying the crank E combined with the steam cylinder B, liquid cylinders A and their valves E, for the simultaneous operation of the valves.

**No. 12,284. Improvements on Machines for Nailing Barrel Hoops.** (*Perfectionnements aux machines à clouer les cercles des barils.*)

Lowell M. Palmer, (Assignee of Emerson Cole,) Brooklyn, N. Y., U. S., 29th January, 1881; for 5 years.

**Claim.**—1st. A hoop nailing apparatus consisting essentially of a curved anvil or bed for supporting the lapped ends of the hoop, and a moving clamping head, carrying nail or staple setters, provided with means for supplying them with nails or staples and driving or inserting the same through the hoop. 2nd. The combination, with a moving clamping head provided with nail or staple setters, having means for feeding nails or staples and driving the same into a hoop, of a former for determining the dimensions of the hoop, and a band for passing said hoop upon the former. 3rd. The combination, with a moving clamping head carrying nail or staple setters, of a former, co-acting with said head to properly support the lapped ends of a hoop or back plate projecting from said former, to sustain the inner edge of the hoop, and moving arms to operate against the outer edge of the hoop to even the same. 4th. The combination, with a moving clamping head carrying nail or staple setters, of a former co-acting with said head to properly support the lapped ends of a hoop, and a band for holding the hoop upon the former, during the operation of fastening the ends of the hoop ejectors, for removing the finished hoop. 5th. The combination of a moving clamping head carrying nail or staple setters, a former holding band and eveners co-acting therewith, to adjust and support the hoop during the operations of fastening its ends, and ejectors to remove the finished hoop. 6th. The combination, with the former 31, of the guide 37. 7th. The combination, with the former 31, of the ejectors 7. 8th. The combination of the former 31, band 10 and the ejectors 7. 9th. The combination of the former 31, band 10, eveners 2 and ejectors 7. 10th. The combination, with the former 31, of the elastically hung band 10. 11th. The combination, with the former 31 and head 40, of the band 10 and its carrying shoe 11. 12th. The combination, with the former 31 and the band 10, of the tappet 12 and one or more arms 35. 13th. The combination, with the former 31 and the ejectors 7, of the spring seated levers 8 and the cam 6. 14th. The combination, with the former 31 and arms 2, of the rods 1 and cams 13. 15th. The combination, with a spring seated plunger and a nail guiding channel in which said plunger reciprocates, of a nail directing recess and spring seated guides protruding into said channel and constituting a guide way, in continuation of that formed by the recess or the rails 47 48. 16th. The combination of a spring seated plunger 51, guiding channel 53, spring seated guides 18 19, and guide rails 47 48 that communicate directly with said channel and guides. 17th. The combination, with a hopper 22, of a spring seated plunger 51, guiding channel 53, spring seated jaws 18 19, guiding rails 47 48, and a head 40 having a nail directing recess as 23, of stops 9, whereby nails promiscuously received are fed forward in a row separated and set singly. 18th. The combination, with the guide rails 47 48, spring seated guides 18 19, spring seated plunger 51, guiding channel 53 and head 40, provided with a nail directing recess 23, of stops 9, whereby nails fed forward in a row are separated and set singly. 19th. The combination, with a moving head 40 furnished with a staple setting mechanism and carrying a guide 25, of a swinging horn 61 and a stationary horn 56, the swinging horn operating to pick up the staples from a hopper and direct them to the stationary horn for delivery to the guide 25. 20th. The combination, with the moving head 40 and the guide 25, of carries, of the stationary horn 56 and its spring seated hook 24. 21st. The combination, with the stationary horn 56 and the hopper 17, of the in-