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**INVENTIONS PATENTED.**

NOTE—Patents are granted for 15 years The term of years for which the fees have been paid, is given after the date of the patent.

**No. 24,626. Shingle Jointer.**  
(*Colombe à Bardeau*)

Joseph Kearney, Woodstock, N.D., 2nd August, 1886; 5 years.  
*Claim.*—The combination of a table B, balanced by a weight or spring, with a saw A, substantially as and for the purpose hereinbefore set forth.

**No. 24,627. Heating Drum and Ventilator.**  
(*Poêle Sourd et Ventilateur.*)

John Springer, Clinton, Wis., U.S., 3rd August, 1886; 5 years.  
*Claim.*—1st. In a combined heater-drum and ventilator, the combination with the drums A, D, and flue G, arranged within the drum D, of the flue L communicating with the drum A, and the flue K arranged within the flue L and communicating with the drum D, substantially in the manner and for the purposes specified. 2nd. In a combined heater-drum and ventilator, the combination of the drums A, D, smoke flues B, C and G, air-flues J, K and L, damper H and spiral flue strip M, when constructed, arranged and operating substantially in the manner and for the purposes specified.

**No. 24,628. Steam Boiler for Agricultural and other purposes.** (*Chaudière à Vapeur pour l'Agriculture et autres fins.*)

Charles S. Shepard, Chorr, Creech, N. Y., U. S., 3rd August, 1886; 5 years.  
*Claim.*—1st. In a steam generator, in combination with the walls case and flues, constructed substantially as described, the cast iron flat disks or heads A, A', having circular V-shaped grooves therein for the reception of the ends of the case and flues, the rims a, a projecting beyond the walls of the case, and all parts held together by screw rods, f, passing through said rims outside of the case, all arranged as and for the purpose specified. 2nd. In a steam generator, the combination of the heads A, A', screw rods f, outer shell b, flues G, G' and the division plate A'', the latter having the circular grooves a, a', the central opening A and steam and water openings k, k', all substantially as specified. 3rd. The heads of a boiler for agricultural or other purposes made of flat disks and having cast therein, or formed thereon, grooves or circular rims for the reception of the ends of the case and flues, together with the screw rods passing through the rims of said disks or heads, and held together and tightened by the nuts g, g', all substantially as specified.

**No. 24,629. Drill Tooth Regulator.**  
(*Régulateur pour Dents de Semoir en Ligne.*)

John Outram, Easton, Md., U.S. 3rd August, 1886; 5 years.  
*Claim.*—1st. The combination, with a drill-tooth, of the shoe-supporting bar, the brace adjustably connected to the bar, and the shoe pivoted midway of its length to the rear end of the bar, substantially as described. 2nd. The combination, with a drill-tooth, of the shoe-supporting bar, the brace adjustably connected to the bar,

the shoe pivoted midway of its length to the rear end of the bar, and means, substantially as described, for limiting the tilting and rocking of the shoe on its pivot. 3rd. The combination, with a drill-tooth, of a rearwardly extending shoe-supporting bar, a shoe or runner pivoted midway of its length to the rear end of the bar, and means, substantially as described, for attaching the bar to the drill-tooth. 4th. The combination, with a drill-tooth, of the shoe-supporting bar, the brace adjustably connected to the bar, the shoe pivoted midway of its length to the rear end of the bar and provided on its underside with the rearwardly converging ridges, and means, substantially as described, for connecting the bar and brace to the drill-tooth. 5th. The combination with the drill-tooth, of the pivoted rearwardly extending shoe-supporting bar, the brace pivoted at the top of the tooth, and adjustably connected at its lower end with the bar, the shoe pivoted midway of its length to the rear end of the bar, and provided with the converging ridges on its underside and the guard on its forward end, and means substantially as described, for detachably connecting the shoe bar and its brace to the drill-tooth. 6th. The combination, with the drill-tooth, of the rearwardly extending pivoted shoe-supporting bar, the pivoted brace adjustably connected to the bar, the shoe pivoted midway of its length to the rear end of the bar, and provided with means, substantially as described, to limit its rocking or tilting movement on its pivot, and having the ridges on its underside and the guard on its upper front end, and the means described, for detachably connecting the supporting bar and its brace to the drill-tooth.

**No. 24,630. Stove and Furnace.**  
(*Poêle et Calorifère.*)

Charles Garlick, Syracuse, N.Y., U.S., 3rd August, 1886; 5 years.  
*Claim.*—1st. In a base burning stove or hot air furnace, the combination, with the base heating flue chamber, the fire pot and flue a, of a supplemental heating chamber located against the base heating flue chamber, and the hot air pipe H connecting said chamber with the fire pot, and having its discharge end located at the top of the fire pot, to feed hot air into the supplemental heating chamber into the products of combustion, substantially as described. 2nd. In combination with the fire pot B, the base heating chamber 2, flue a, supplemental heating chamber 1, and hot air feed pipe H, all constructed and arranged substantially as and for the purpose specified. 3rd. In a base-burning stove or hot air furnace, in combination, the fire-pot and combustion chamber B, the hot air pipe H extending above the fire-pot, the extension H' connected with the downward flue a, the damper K located between pipes H, H', for turning the hot air either into the fire-pot or flue a, the downward flue a and the smoke exit flue b, all substantially as and for the purpose specified. 4th. The combination, in a base heating stove or furnace, of a hot flue combustion chamber 2, and a supplemental heating air chamber 3 attached to said hot flue chamber, and a supplemental heating air chamber 1 located below said hot flue chamber and attached thereto, the hot air pipe H, the fire pot B, the downward flue a and the exit flue b, substantially as described. 5th. The combination, in a base heating stove or furnace, of a supplemental heating air chamber located below the ash-pit and above the hot flue chamber, the bottom thereof forming the top of the hot flue chamber, the hot flue chamber the bottom thereof forming the top of a supplemental heating air chamber located below said hot flue chamber, and the supplemental heating air chamber, the hot air feed pipe H passing through the hot flue chamber 2 and supplemental heating air chamber 3, the fire pot B, the flue a, the hot air conduits c, c', and smoke exit b, substantially as and for the purpose specified. 6th. The combination of the supplemental heating air chamber 1, provided with the divisions G, G', the inlet F, pipe H, the fire-pot and combustion chamber B, the downward flue a, the hot flue chamber 2 and the exit flue b, all substantially as and for the purpose specified.

**No. 24,631. Shirt Ironing Board.**  
(*Planche à Repasser les Chemises.*)

Margaret A. Leslie, Georgetown, Ont., 3rd August, 1886; 5 years.  
*Claim.*—The combination of the extension frame A having bends or notches B, B, B, with the staples C, C, C, C, as applied to short ironing boards, substantially as set forth and for the purposes specified.