

No. 27,382. Spirally Formed Metal Pipe.*(Tuyau Métallique en Spirale.)*

William S. Church and Hannah M. Root, (Administrators of the estate of John B. Root,) Rochester, N.Y., U.S., 9th August, 1887; 5 years.

Claim.—1st. The herein described process of making metal pipe, which consists in spirally winding a strip or blank of sheet metal into cylindrical form, with its opposite edges overlapping, bringing the overlapping edges only of the blank to a welding heat, and then welding such edges together by the application of pressure thereto, substantially as described. 2nd. The spirally formed metal pipe hereinbefore described, made by winding a blank spirally into cylindrical form, heating the overlapping edges of the blank by the application of heat to the edges only, and then welding such edges together by requisite pressure, substantially as described.

No. 27,383. Spiral Pipe Machine.*(Machine à tuyau en spirale.)*

William S. Church and Hannah M. Root, (administrators of the estate of John M. Root,) Rochester, N. Y., U. S., 9th August, 1887; 15 years.

Claim.—1st. In a spiral pipe machine, the combination of spirally reciprocating and clamping and welding mechanism for shaping the blank and uniting its edges, and a heating jet applied to the edges of the blank at their point of junction for bringing them to a welding condition. 2nd. In a spiral pipe machine, the combination of blank forming and welding mechanism, a heating jet and a furnace or other structure, arranged to confine the action of the jet to the parts of the blank to be welded together. 3rd. In a spiral pipe machine, the combination of spirally-reciprocating blank shaping and welding mechanism, a furnace or heating structure arranged to apply a welding heat to the edges of the blank at or near their point of junction, said shaping and welding mechanism and said furnace structure being provided with water passages for the purpose of keeping the parts cooled. 4th. In a spiral pipe machine, the combination of spirally-reciprocating blank shaping and welding mechanism, and a fixed former for shaping and supporting the blank. 5th. In a spiral pipe machine, the combination of spirally-reciprocating blank feeding and shaping mechanism, and a guide for giving the blank its proper inclination. 6th. In a spiral pipe machine, the combination of spirally-reciprocating pinchers, arranged and operated to seize the blank and carry it forward, and a guide for directing the blank into the machine at the proper inclination. 7th. In a spiral pipe machine, the combination of spirally-reciprocating pinchers, arranged and operated to seize the blank and carry it forward, and a guide located along the spiral path of the blank for directing and shaping the blank as it is fed forward. 8th. In combination in the herein described spiral pipe machine, the spirally-reciprocating pincher shaft carrying the blank pinching and shaping mechanism, a rotating driving shaft, and connections between said shafts, whereby the pincher shaft receives its circular reciprocating motion from the driving shaft. 9th. In combination, the spirally-reciprocating lever, pinchers borne upon the end of the pincher shaft, and the main shaft located within the pincher shaft and having connections with and for operating said pinchers. 10th. In combination, the spirally-reciprocating pincher-shaft carrying blank feeding and shaping mechanism, the fixed guide by which the shaft is made to move rectilinearly, the rotating main shaft and its connections with the pincher shaft through which said pincher shaft receives its circular reciprocating motion. 11th. In a spiral pipe machine, the combination of spirally-reciprocating blank clamping and shaping mechanism adapted to forming the blank cylindrically with its opposite edges overlapping, and a hammering mechanism arranged to operate upon the overlapping edges of the blank for the purpose of welding the same together. 12th. In a spiral machine, the combination of spirally-reciprocating blank-shaping mechanism, heating devices for bringing the edges of the blank to a welding condition, and hammering mechanism for welding such edges together. 13th. In a pipe machine, the combination of spirally-reciprocating blank-shaping lever jaws, oppositely-arranged hammers constructed to operate upon both sides of the blank for the purpose of welding the edges of the same together, and having spiral motion with said jaws, and heating devices for bringing the edges of the blank to a welding heat. 14th. In combination in the herein described spiral pipe machine, the spirally-reciprocating pincher shaft, the pincher levers and hammers borne thereon, the rotating main shaft, and the connections by which said pinchers and said hammers are operated from said main shaft. 15th. In combination, a machine for welding together the edges of pipe blanks, a blow-pipe furnace arranged to bring the edges of the blank to a welding heat, and an air heating device connected with said furnace and adapted to heat the air supplied to said furnace. 16th. In combination, the herein described pipe forming and welding machine, the blow-pipe furnace and the air-heating stove provided with the spiral air passage and heating lamp.

No. 27,384. Welding Machine.*(Machine à souder.)*

William S. Church and Hannah M. Root, (administrators of the estate of John M. Root,) Rochester, N.Y., U.S., 9th August, 1887; 15 years.

Claim.—1st. In a mechanism for welding sheet metal blanks together, the combination of a clamp for supporting the blanks, and holding them in position to be heated, blow-pipes for heating the edges of the blanks, and a furnace structure enclosing the blow-pipes and arranged to confine their action to the edges of the blanks, said blow-pipes and enclosing structure mounted upon travelling supports adapting them to be moved along the edges of the blank, substantially as described. 2nd. In a machine for welding sheet metal blanks together, the combination of a clamp for holding the blanks in position to be heated, a heating apparatus consisting of two halves composed of fire-brick constructed to enclose the edges of the blank, each half being arranged upon opposite sides of the blank, and mounted upon supports adapting the said halves to be moved to and

from the blanks, substantially as shown and described. 3rd. In a machine for welding sheet metal blanks together, the combination of a clamp for holding the blanks in position for heating, a heating apparatus consisting of two separate and movable parts or halves, each half being provided with a blow-pipe and being arranged upon opposite sides of the blank and mounted upon supports adapted such halves to be closed upon and swung away from the blank. 4th. In a machine for welding sheet-metal blanks together, the combination of a fixed clamp for holding the blanks in position to be welded, a hammering mechanism arranged to operate upon both sides of the blanks, and mounted upon travelling supports adapting it to be moved along the edges of the blank while operating to weld such edges, and stationary driving mechanism for operating said hammers and moving them along the blanks, substantially as described. 5th. In a machine for welding sheet-metal blanks together, the combination of a clamp for supporting the blanks and holding them in position to be operated upon, blow-pipes for heating the edges of the blanks, a furnace structure enclosing the blow-pipes and arranged to confine their action to the edges of the blanks, and hammering mechanism for welding the heated edges together, said heating and welding mechanism being carried on travelling supports adapted to move them across the blank, substantially as described. 6th. In a machine for welding sheet-metal blanks together the combination of a fixed clamp for holding the blanks in position to be operated upon, a furnace constructed to confine its heating action to the edges of the blanks, a hammering mechanism for welding the said edges together, travelling supports carrying said furnace and said hammers, and stationary driving mechanism for moving the furnace and hammers along the edges of the blanks and for operating the hammers, substantially as described.

No. 27,385. Shoe Fastening.*(Fermeur de soulier.)*

William M. Maxson, Henry Tucker and Charles M. Bauer, Akron, Ohio, U.S., 10th August, 1887; 5 years.

Claim.—The combination, in a shoe-fastening, of the strap having one end secured to the shoe below the meeting edges of the flaps, the strips A having their longitudinal central portions secured to the flaps near the meeting edges thereof, and the loops D having the openings b to receive the strap, and provided with the projecting tongues e and g for engaging with the free edges of the strips A, substantially as described.

No. 27,386. Combined Lock and Latch.*(Serrure-loquet.)*

John Sharpe and Jose A. Banfield, Toronto, Ont., 10th. August, 1887; 5 years

Claim.—1st. The combination, with a lock-case and spring latch of ordinary construction, of a single spindle connecting the inner and outer door-knobs, which spindle is adapted to be rigidly attached to the inner and outer knobs, as well as to permit the outer knobs to freely rotate axially without actuating the spindle, substantially as specified. 2nd. The combination of door-knob A, rigidly secured to the square end of the spindle E, and having a slot b formed in the shank thereof, together with pin B, recess c and slide D having lug q which is adapted to engage with the slot g¹ formed in the shank O of outer door knob P, and a corresponding slot g² in the cylindrical portion h of spindle E, so as to lock the outer knob to the spindle E which actuates a spring latch, substantially as specified. 3rd. The combination of door-knob A rigidly secured to the squared end of spindle E, and having slot b formed in its shank, together with pin J in circular recess q, pin B, recess c and slide D having lug q, which is adapted by the action of the pin B to become disengaged from the slot g¹ formed in the shank O of outer door, and a corresponding slot g² in the cylindrical portion h of spindle E, so as to permit the outer door-knob P to rotate freely on the cylindrical portion h of spindle E which actuates the latch without engaging with said spindle, substantially as specified. 4th. The combination, with an outer door-knob P, of knob cylinder L slotted to receive guard M with wards formed therein, cylinder tumbler N slotted at o and grooved to receive a key and slot t, lug K journaled in recess at cylindrical end h of spindle, and circular aperture in upper half of outer knob to receive reduced end of cylinder tumbler together with lug h¹ integral with spindle E, against which lug the key is adapted to engage after passing the wards in the guard M so as to rotate the spindle and unlatch the door, substantially as specified. 5th. A cylinder tumbler grooved axially, and with key-hole formed therein to receive a flat key, and journaled in a recess formed in the cylindrical end of spindle and in a circular aperture in the upper half of outer door-knob, so as to move freely in a cylinder formed in lower half of outer knob, slotted to receive a guard with wards which the key is adapted to pass, so as to engage with a lug integral with the spindle and cause it to rotate axially, so as to withdraw a lock from its haps, when a lug formed on a slide in spindle has been disengaged from a slot in shank of outer door-knob, and a corresponding slot in cylindrical end of spindle, substantially as specified. 6th. The combination of a spindle, connecting inner and outer door-knobs, of a recessed cylinder tumbler adapted to receive a key and journaled to move in a cylinder in outer knob guard, with wards, lug integral with spindle pin working in circular groove in cylindrical end of spindle, knob-rose slide with lug adapted to engage with and to become disengaged from slot in shank of outer knob, and slot in spindle when actuated by a pin passing through slide and adapted to rock in a recess in spindle, and inner door-knob rigidly attached to squared end of spindle having slotted shank for the pin which actuates the slide, the whole being arranged and operated to unlatch or unlock a door, substantially as described. 7th. The combination, with knob-cylinder L fixed in a slot in door and slotted to receive guard M with wards formed therein, of cylinder tumbler N suitably journaled to rotate in said cylinder and slotted at O and grooved to receive a flat key together with lug h¹ integral with spindle E against which lug the key is adapted to engage after passing the wards in guards M, substantially as described and for the purpose specified.