

tub, the combination, with a pail or tub provided with tongues, of a cover having its free edge bent into a groove or channel fitting over the rim of the tub, and then turned outward into a flange or projection, provided with slots through which the tongues pass in use, and a packing interposed in the groove or channel between the rim and cover, substantially as described. 5th. The combination, with a tub having a lid or cover, of a fastening hook and a pivoted piece or lever drawing such hook into position to hold the lid in place when turned under the hook, and freeing it when turned out from under the hook, substantially as described.

### No. 27,161. Car-Coupler. (*Attelage de chars.*)

Thomas Andress, Pittsville, Wis., U.S., 23th July, 1887; 5 years.

*Claim.*—1st. The combination of two longitudinally slotted draw-head, a hook pivotally secured in one of said draw-heads, a spring secured to the side of the opposite draw-head, a bolt secured in the free end of said spring, and a vertical rod provided with shank on its lower end and rigidly secured wheel on its upper end. 2nd. The combination of two longitudinally-slotted draw-heads, a hook pivotally secured in one of said draw-heads, a spring secured to the side of the opposite draw-head and having its free end provided with an elongated slot, a bolt suitably secured in said slot and a vertical rod provided with a shank on its lower end and rigidly secured wheel on its upper end. 3rd. The combination of two longitudinally-slotted draw-heads, a hook pivotally secured in one of said draw-heads, a removable bolt having grooved head, a lever having its free end fitting in the groove in the head of said bolt, a spring secured to the side of the opposite draw-head, a bolt secured in the free end of said spring, and a vertical rod having its lower end provided with a shank, and its upper end with a rigidly-secured wheel. 4th. The combination of two longitudinally-slotted draw-heads, a hook pivotally secured in one of said draw-heads and having extended lower portion, a bolt, a spring secured to the side of the opposite draw-head, a bolt secured in the free end of said spring, and a vertical rod having its lower end provided with a shank, and its upper end with a rigidly-secured wheel. 5th. In a car-coupling, the combination of a vertically slotted draw-head, a transverse bolt and a link having its ends in planes at right angles to each other, one end being adapted to be secured in said vertical slot, and the other end adapted to be secured in an ordinary draw-head.

### No. 27,162. Steam Boiler. (*Chaudière à vapeur.*)

George Kingsley, Leavenworth, Ks., U.S., 13th July, 1887; 5 years.

*Claim.*—1st. The combination, with the outer casing, of the boiler composed of an outer shell and inner shell, with flattened crown-piece, and drop-tubes communicating with the water-space and descending into the fire-space of the inner shell, horizontal partitions H, H dividing the space between the outer shell and the outer casing into said chambers I, I and bottom chamber J, the rear ends of the side chambers being in communication with the fire-chamber, and their front ends communicating with the bottom chamber, and the feed-water coil G arranged in the bottom chamber, substantially as and for the purpose described. 2nd. The combination of the outer casing, the boiler composed of an outer shell and inner shell with flattened crown-piece, and drop-tubes communicating with the water-space, and descending into the fire-space of the inner shell, the said boiler being set in the casing so as to form a partition separating the space between the boiler and casing into side spaces I, I and bottom chamber J, the rear ends of the side chamber being in open communication with the rear end of the fire-chamber in the boiler, and the side spaces I and bottom chamber J, being in open communication with each other at the front end, substantially as and for the purpose described. 3rd. The combination with the outer wheel A, having pipes P, connecting with a dry-steam chamber of the inner shell having flattened crown-sheet with drop-tubes, and braces communicating with said crown-sheet and extended up into and fastened to the inner periphery of the pipes P, substantially as and for the purpose described.

### No. 27,163. Ventilator. (*Ventilateur.*)

The E. & C. Gurney Company, (assignee of Edward Gurney and Charles W. Peniston), Toronto, Ont., 14th July, 1887; 5 years.

*Claim.*—1st. An air-flue provided with two valves acting upon two seats formed within the air-flue at a suitable distance apart, so as to leave a dead-air space between them when the valves are seated, in combination with mechanism arranged to connect the valves with a radiator or other heater, and so constructed that the increase or decrease of the temperature of the radiator is utilized for the purpose of opening and closing the valves located within the air-flue, substantially as specified. 2nd. The combination of the cap C having a passage *d*, and connected by a coupling with elbow pipe C<sub>1</sub> attached to a radiator, the expansion pipe B and the rod D which actuates a lever, substantially as described and for the purpose specified. 3rd. The combination of the bored cap C on which the expansion pipe B is sleeved, and connected by a coupling with the elbow pipe C<sub>1</sub> attached to a radiator, the rod D, bent lever E pivoted in bearings formed on the half sleeve F which is secured to the expansion pipe B and which communicates motion to valves in the air-flue, substantially as specified. 4th. The combination of the expansion pipe B, connected by a bored cap C and elbow pipe C<sub>1</sub> to a radiator, the rod D, bent lever E pivoted on bearings formed in the radiator, the cord *r*, pivoted lever *k*, handle *m*, valve-rod *n*, adapted to slide in suitable bearings formed in an air-flue H and carrying a valve which is moved from its seat by motion derived from the expansion of the pipe B when seated, substantially as specified. 5th. The combination of the bored cap C on which the expansion pipe B is sleeved, and connected by a coupling with the elbow pipe C<sub>1</sub> attached to a radiator rod D, bent lever E pivoted on a bearing formed on the half sleeve F attached to the expansion pipe B, the long arm *f* of the bent lever E being adapted to move between guides *g* also formed in said half sleeve F, and connected by the cord *r* to the pivoted lever *k* which is pivotally connected with an attachment formed at the inner end of the valve rod *n*, carrying by means of suitable bearings the valves

J and K adapted to open and close the apertures in the valve-seats J<sub>1</sub> and K formed in the air-flue H, substantially as described and specified. 6th. The combination of the cord *t* which passes over pulley *u* having suitable bearings in the air-flue, and attached to the inner end of the valve-shaft *n* which is supported by brackets *o*, and the weight *v* adapted to reseal the valves in the air-flues when the radiator has become cooled, substantially as specified. 7th. A valve located in an air-flue and adapted to be moved from its seat by motion derived from expansion caused by a heated radiator, and a means for for automatically reseating said valve when the radiator has become cooled, substantially as specified. 8th. In combination with a radiator, an expansion pipe so formed and attached to the radiator as to cause by its elongation under the influence of heat derived from the radiator the movement of a rod which actuates a series of levers, connected together in such a manner as to give an increased lateral motion to a valve-rod, which moves a valve from its seat formed in an air-flue in a wall, substantially as and for the purpose specified. 9th. In combination, with a radiator, an expansion pipe so formed and attached to the radiator as to cause by its elongation under the influence of heat, the movement of a rod which actuated a series of levers, connected together in such a manner as to give lateral motion to a valve-rod adapted to slide in suitable bearings against the action of a weight or spring, and to move from their seats formed in an air-flue two valves, and also to permit of the reseating of the valves enclosing between them a dead-air space when the expansion pipe has become so cooled and contracted that the weight or spring may draw the valves back to their seats and exclude the cold outside air, substantially as specified.

### No. 27,164. Wood Screw. (*Vis à bois.*)

The American Screw Company, Providence, R. I., (assignee of Hayward A. Harvey, Orange, N.J. U.S., 14th July, 1887; 15 years.

*Claim.*—The improved screw herein described, which consists in a screw having a thread, the convolutions of which gradually increase in diameter from their point of commencement adjoining the unthreaded part of the shank, while the part of the core adjoining the unthreaded portion of the shank gradually decreases in diameter until the thread has acquired its full depth.

### No. 27,165. Wagon Gear. (*Train de wagon.*)

John Near, Thorndale, Ont., 14th July, 1887; 5 years.

*Claim.*—1st. A wagon gear, in which the axles are divided at or near the centre, substantially as shown and specified. 2nd. The divided axles E, pivoted at G to beam C, and having square inner ends H, provided with flanges L, which abut against curved outer faces of guide-plates I, J, and in combination therewith, substantially as shown and specified. 3rd. The combination, with divided axle E, of guide-frame M, bar O and tongue B, substantially as shown and specified.

### No. 27,166. Fan Attachment for Sewing Machines. (*Éventail pour machines à coudre.*)

Christian W. Cook, West Jordan, U. T., U. S., 14th July, 1887; 5 years.

*Claim.*—1st. The combination, with the fan, its shaft and the pulley on said shaft, of the clutch head or clamping head J of a sewing machine, and the pulley A constructed to fit onto said head and provided with screws for attaching it removably to said head J, whereby said clutch may be operated to release the needle driving sheave without the necessity of removing said pulley. 2nd. The combination, with the fan, its shaft and the pulley on said shaft, of the clutch-head or clamp-head J of a sewing machine, the pulley A mounted removably on said clutch head, and provided with two grooves of different depths to receive the belt *l* and the said belt connecting the pulley A with the pulley on the fan-shaft, substantially as described. 3rd. The combination, with the elastic bracket D and its clamp, of the fan shaft mounted rotatively in bearings carried by said bracket, the fan and pulley mounted on said fan-shaft, the clutch-head J, the pulley A mounted on said clutch head and the belt *l* connecting said pulley A with the pulley on the fan-shaft, substantially as set forth.

### No. 27,167. Churn. (*Baratte.*)

William H. Lynch, Danville, Que., 14th July, 1887; 5 years.

*Claim.*—1st. In combination with the body of the churn, the ventilator G having apertures H, pipe J and screw cap I or equivalents, as shown and described for the purpose set forth. 2nd. In combination, with the body of the churn, the pipe D having perforations K on its inner end, and a hook F on its outer end closed at the inner end and open at the outer end, and constructed to fit in the bung-hole of the churn and for the plug to fit in itself, as shown and described for the purpose set forth. 3rd. In a churn, the butter-milk strainer plug L made to fit the orifice O or the bung-hole through which the strainer is inserted, as shown and described for the purpose set forth.

### No. 27,168. Composition for Electrodes for Secondary Batteries. (*Composition pour électrodes de piles secondaires.*)

Silvanus L. Trippe, St. Louis, Mo., U.S., 14th July, 1887; 5 years.

*Claim.*—1st. A composition, for which an electrode for a secondary or storage battery may be made, consisting of one ingredient to be withdrawn from the others by electrical or chemical action of another ingredient constituting the active agent of an electrode, and a third ingredient serving to hold such second ingredient together, as set forth. 2nd. A composition of metals, from which an electrode for a secondary or storage battery may be made, which consists of lead, zinc and silver, whereby when the zinc is withdrawn from the mixture by chemical or electrical action, and the lead is oxidized, an