

block F being adapted to bear against the corner *g* of plate G, and the serrated lower end of the lever engaging with the serrations on the inclined face of plate H, for the purposes set forth.

No. 19,088. File for Papers.

(Boîte pour Dossiers.)

Horace J. Hoffman, Milwaukee, Wis., U.S., 7th April, 1884; 5 years.

Claim.—1st. A file-holder covering having sides *b*, *b* and hinged to the upper edge of the inside portion *c* of the end head C, in combination with file box having the sides *a*, *a*, whereby said cover can be turned back and made to rest on the upper rear edge of said head, so as to support the papers in a convenient position for inspection, as described. 2nd. In a file-holder, the bottom, sides and cover, combined with and secured on the reduced portion *c* of the head C, as shown and described. 3rd. The hinged cover B having sides *b*, *b* extending down over the box and to the rear of the pivot or hinge, whereby the cover will be guided in opening and closing as well as prevented from swinging laterally, when papers are on it for inspection.

No. 19,089. Improvements in Manufacturing Shoes. (Perfectionnements dans la Fabrication des Souliers.)

George W. Sleeper and William A. Reed, Westborough, Mass., U.S., 7th April, 1884; 5 years.

Claim.—1st. The hereinbefore described method of forming the upper of a shoe, consisting in first, cutting a blank, in substantially the form shown and described, then splitting the leather and forming the counters out of the split portions, all substantially as described. 2nd. A shoe upper formed of one piece split in the rear portion, the split portion being cut to form the counters, substantially as described.

No. 19,090. Harvester. (Moissonneuse.)

A. Harris, Son & Co., (assigness of John Harris), Brantford, Ont., 7th April, 1884; 5 years.

Claim.—In a harvester, in which the reel is journaled on a pivoted arm adjusted by a lever, and held at different altitudes by a notched quadrant or other device, a joint formed between the lever and arm, in combination with a device by which a rigid connection may be formed between the arm and lever while permitting the angle to be altered between the two, substantially as and for the purposes specified.

No. 19,091. Hydro-Carbon Vapour Stove.

(Foyer à Gaz d'Hydrocarbures.)

Adelbert M. Brainard and The Cragin Manufacturing Company, Chicago, Ill., U.S., 7th April, 1884; 5 years.

Claim.—1st. In a hydro-carbon vapour stove, the combination of a frame, an elevated burner, a reservoir below the burner and in communication therewith, and an air pump connected by a valved passage with the reservoir, said reservoir being supported by the frame which carries the burner, substantially as described. 2nd. The combination, in a hydro-carbon vapour stove, of a frame, an elevated burner, a liquid reservoir arranged within and supported by the frame, an air pump, a pipe arranged to receive from the air pump and to discharge into the reservoir, a valve in said pipe accessible to the operator, and a valved pipe leading from the reservoir to the burner, substantially as described and for the purposes set forth. 3rd. In a hydro-carbon stove, the combination, with the stove frame and an elevated burner or burners, of a reservoir for hydro-carbon liquid located wholly beneath the burner, said reservoir being supported by the frame and provided with an inlet for the hydro-carbon liquid located at a considerable distance below the top, so as to have a relatively large air space above the liquid therein when fully supplied, means for compressing air into said air-space, means for retaining the air when so compressed, and a pipe leading from the bottom of the reservoir to the burner or burners provided with a suitable cock or cocks, whereby sufficient air may be compressed and retained in the reservoir when fully supplied with liquid to force all of said liquid to the burners *a*, substantially uniform pressure. 4th. In the hydro-carbon gas stove described having the cast-iron frame A A', elevated burner or burners B, reservoir R, pump P and the connections described, the reservoir and pump rigidly secured to the frame beneath the top A and between the legs A', substantially as and for the purposes set forth.

No. 19,092. Harvester Rake.

(Râteau de Moissonneuse.)

The McCormick Harvesting Machine Company, (assignee of Henry E. Primrose), Chicago, Ill., U.S., 7th April, 1884; 5 years.

Claim.—1st. The combination, substantially as hereinbefore set forth, with the gate-latch which holds the switch or gate positively closed against the stress of its controlling spring, of a jointed trip lever adapted to be rocked upon its main pivot by the tappets on the rake arms as they pass to release said latch, and a connection between the driver or attendant, whereby said member may be swung out of the path of the tappets on the rake arms that the latch may not be released by them. 2nd. The combination, substantially as hereinbefore set forth, of a switch or gate, a gate latch which holds it positively closed against the stress of its spring, a jointed trip lever actuated by tappets on the rake arms to release said latch, and means whereby connection with the other to remove it from the effective path of said arms. 3rd. The combination, substantially as hereinbefore set forth, against the stress of its spring, a lever arm to release said gate latch, a laterally adjustable stop on the free end of said lever, and tappets of varying lateral length on the successive rake arms, whereby the lever may be arranged to be operated by any one or more of said rake arms by adjusting the stop. 4th. The combination, substantially as here-

inbefore set forth, with the gate latch, of the slotted casting pivoted to the pin over which the latch takes and serving as a keeper or guide for its free end, and the lever arm pivoted to the top of said casting with its upper end arranged to be actuated by tappets on the rake arms, and its lower end provided with a lug which comes beneath the end of the gate latch to release it as said lever arm is moved by the tappets. 5th. The combination, substantially as hereinbefore set forth, with the gate latch, of the slotted casting pivoted to the pin over which the latch takes to serve as a keeper to its free end, a spring acting upon said casting to hold it in a normally vertical position, an arm pivoted to the upper end of said casting and held normally alongside thereof by spring pressure and having its upper end projected into the path of tappets on the rake arms, and its lower end provided with a lug which comes beneath the end of the gate latch, whereby said arm and casting will be moved bodily together on the pivot of the casting by the contact of a tappet upon a passing rake with the upper end of said arm and the gate latch will be lifted and released. 6th. The combination, substantially as hereinbefore set forth, with the gate latch, of the slotted casting moving pivotally upon the pin over which said latch takes, the lever arm pivoted to the upper end of said casting, the spring coiled about the pivot of the casting with one end seated against the rake cam and its other end extended and coiled about the lever arm pivot and finally bearing against the upper end of said lever-arm, whereby the casting is held in a normally vertical position with the lever arm alongside thereof, and the two will be moved together as of one piece by the contact of a tappet on a passing rake and the upper end of the lever arm. 7th. The combination, substantially as hereinbefore set forth, with the gate latch, of the slotted casting pivoted to the pin over which it takes, the stop on said casting to bear against the rake cam, the lever arm pivoted to the upper end of the casting and stopped by a projection thereover with a lug at its lower end extending beneath the end of the gate latch, and the spring which normally holds these parts in position determined by their respective stops. 8th. The combination, substantially as hereinbefore set forth, with the gate latch, of the slotted casting pivoted to the pin over which said latch takes and forming a keeper for its free end, the lever arm pivoted to the upper end of said casting and projecting thereabove into the path of the tappets upon the rake arms, the lug on said lever arm to disengage the gate latch, the spring holding said casting and lever arm in a normally upright position, one alongside the other in position for action, and the link or equivalent connection with mechanism controlled by the driver, whereby the lever arm can be rocked upon its pivot without disturbing the casting to throw its free end out of the effective path of the tappets on the rake arms. 9th. The combination, with the gate latch, of the casting pivoted to the pin over which said latch takes, the lever arm pivoted to the upper end of said casting projecting thereabove into position to be operated upon by tappets on the rake arms in their passage, the lug on the lower end of said lever arm coming beneath the end of the gate latch, stops for said casting and lever arm, and a single spring holding them together one alongside of the other in operative position determined by their respective stops, so that they may move as one when the lever arm is pushed by a rake arm.

No. 19,093. Sap Spout. (Bec de Sucrierie.)

Charles C. Post, Burlington, Vt., U.S., 8th April, 1884; 10 years.

Claim.—1st. A metallic sap-spout provided with an inclined shoulder D upon its top, and the point d upon its lower part, whereby when the spout is being driven into the hole B the inclined shoulder D will force the point d downward into the bark, substantially as shown. 2nd. A sap-spout, provided with a trap for the purpose of excluding the passage of air through the orifice for the escape of the sap, substantially as set forth. 3rd. A sap spout having its end closed or partially closed, and provided with a trap *g* and the opening *f*, substantially as described. 4th. In a sap-spout, the combination of the trap *g*, the partially closed end having the opening *f* through it, and the fins *e* which project into the hole in the tree, substantially as set forth. 5th. A metallic sap-spout provided with one or more ribs *i*, which extend lengthwise from its outer end, substantially as and for the purpose set forth. 6th. A metallic sap-spout having suitable fins *e*, for sustaining it in the tap hole, strengthened by suitable braces *o* near the outer extremities, substantially as shown and described.

No. 19,094. Torsion Spring for Vehicles.

(Ressort à Torsion pour Voitures.)

Daniel Budd, Penn Yan, N.Y., U.S., 8th April, 1884; 5 years.

Claim.—1st. The torsion-spring B, bent so as to form inverted U-shaped side springs *b*, and having its ends lapping and confined in the brackets *a*, *a*, at opposite sides of the bottom of the body, as set forth. 2nd. The spring B, bent so as to form inverted U-shaped side springs *b*, and having its ends secured in the brackets *a*, *a*, in combination with the rigid frame F G H, substantially as described. 3rd. In a wagon, the diagonal braces K, K holding the king-bolt *i* and attached to the side bars G, substantially as and for the purpose set forth. 4th. In a wagon, the flat spring J attached to the under side of the rear axle, linged to the wagon body and provided with the knee *d*, substantially as and for the purpose set forth.

No. 19,095. Axle and Axle Box.

(Essieu et Boîte à Huile.)

Robert C. Parvin, Mount Holly, N.J., U.S., 8th April, 1884; 5 years.

Claim.—1st. A metallic axle box with an inner central annular enlargement formed integrally with the box, and retained upon the axle by a collar *c*, and linch-pin, in combination with a series of loose or iron-journalled friction rollers extending nearly the entire length of the box and having central recesses, substantially as shown and specified. 2nd. The combination of the axle-box A, the internal annular central rib *f*, the friction rollers *g* having recesses *g'*, with the axle arm B having central collar *b*, the washer *c* and the collar *p*, all arranged and operating substantially as shown.