

cover, the valve *a*, *a'*, and the escape pipe *h*, and gas inlet and exit pipes *i*, *i'*, projecting up into the chamber of the valve, all as described; 2nd. The improved gas apparatus formed of reservoir *D*, retort *A*, with funnel attachment *e*, *e'*, and pipe *f*, valves *E*, *E'*, purifiers *F*, and receivers *C*, all constructed and arranged to operate as specified.

No. 4244. MELLER BRAY, Boston, Mass., U. S., 8th January, 1875, for 15 years: "A Rivet." (Un rivet.)

*Claim.*—The improved rivet described, constructed with a tubular body, extending to the head and having a cutting extremity, for the purpose set forth.

No. 4245. JAMES BOYLE, Toronto, Ont., 8th January, 1875, for 5 years: "Iron Moulding Machine." (Machine à mouler le fer.)

*Claim.*—1st. The recessed table *A*, admitting the pattern *B*, as it may be constructed to the tapered out of the mould; 2nd. The combination with recessed table *A*, of the pinions *a*, *a'*, and racks *b*, *b'*, and handle *E*, of the frame with sliding bars *d*, *d'*, and handle *D*, of the core bench *F*, and barrel *G*, with handle *H*, for the purposes set forth.

No. 4246. CHARLES A. SHAW, Boston, Mass., U. S., (Assignee of H. Halvorson), 8th January, 1875, for 15 years: "Improvements on Lamp Wicks." (Perfectionnements aux mèches de lampes.)

*Claim.* A fibrous lamp wick charred or partially carbonized, as specified.

No. 4247. LÉONCE LETOURNEUX, Montreal, Que., 8th January, 1875 for 5 years: "Life Preserver." (Appareil de sauvetage.)

*Résumé.*—1o Le système de ceinture-bouée de sauvetage *A*, qu'elle soit en gutta percha, en cuir, ou en toile simple, etc., ou a double texture caoutchoutée ou vernie pour la rendre imperméable et étanche, ainsi et de même pour les petits tubes de gonflement *C*; 2o Un nombre plus ou moins grand de tubes bouées composant la susdite ceinture, ainsi qu'un plus ou moins grand nombre de ligatures attachant ces tubes bouées aux flancs du navire; 3o Le système de jointures des tubes de gonflement *C*, aux tubes bouées *A*, permettant dans le cas de rupture de l'un de ces derniers de dévisser le tube bouée, diamétralement appliqué sur l'autre flanc du navire de manière à pouvoir de suite rétablir la stabilité de flottaison du navire, un moment troublée par cette rupture accidentelle; 4o Le système de pouvoir placer les tubes de

gonflement *C*, sous le pont du navire afin de les préserver le plus possible des chocs qui pourraient les rompre; 5o La fixation à la machine à air comprimé en dessous de cette dernière; 6o Le système de faire traverser le bastingage aux parties étroites *B*, des tubes bouées pour les préserver également de tous chocs.

No. 4248. JUDSON L. THOMPSON and FRANCIS N. DAVIS, Beloit, Wis., U. S., 9th January, 1875, for 5 years: "Manufacture of Paper Barrels." (Fabrication des barils en papier.)

*Claim.*—1st. The method of forming a seamless paper barrel by first winding a web of soft paper pulp, to the requisite thickness upon an expanding cylinder, directly from the cylinder or coucher of a wet paper machine and then contracting and with drawing the former from the barrel while the latter is in a wet condition; 2nd. The process of hardening, compacting, smoothing and finishing the interior and exterior surfaces of the barrel; 3rd. The method of forming a seamless barrel from soft paper pulp, by first winding the web upon an expanding cylinder, to the requisite thickness, then removing and drying the package so formed and lastly hardening, compacting, smoothing and finishing its interior and exterior surfaces between rollers of less diameter than said barrel, as described; 4th. The method of preventing the web, after it is formed into a barrel, from peeling off or blistering while drying, by applying the greatest pressure to the first few layers or plies on the forming cylinder, and decreasing such pressure as the thickness of the barrel increases; 5th. The compound water weights applied to the web of pulp while being wound upon the former for the purpose of graduating the pressure upon such web; 6th. A paper barrel consisting of a body of wound paper pulp provided with hoops and heads.

No. 4249. ESEK RUSSEY, Troy, N. Y., U. S., 9th January, 1875, for 5 years: "Baseburning Stove." (Poêle à charbon.)

*Claim.*—1st. The combination of the following elements; the upper fire pot *E*, the lower fire pot *D*, and windows *I*, in the casing opposite or nearly opposite the space between the fire pots; 2nd. The combination of the following elements, the upper fire pot *E*, the lower fire pot *D*, the opening between the fire pots, the dead air-chamber *K*, and the windows *I*, in the casing opposite the dead air-chamber *K*, as described; 3rd. The combination of the upper fire-pot *E*, the lower fire pot *D*, and the dead air-chamber *K*, as described.

No. 4250. GEORGE WILLIAMS, Toronto, Ont., 9th January, 1875, for 5 years: "Improvements in Friction Pulley Blocks." (Perfectionnements aux moufles de poulies à friction.)

*Claim.*—A friction pulley block for wire rope, &c. the combination of the plates *A*, *A'*, grooved roller *B*, screws *C*, *C'*, and ferrules *D*, all arranged and operating as described.