

heated state by means of a jet or jets of steam and atmospheric air combined, and the method of performing the same. 2nd. The improved process, as a whole, of manufacturing alumina, from alum, or other sulphates of alumina, or salts of alum.

No. 14,318. Improvements on Machines for Moulding in Wood. (*Perfectionnements aux machines à mouler dans le bois.*)

Freeman Hanson, Hollis, Me., U.S., 3rd March, 1882; for 5 years.

Claim.—1st. The combination of the horizontal shaft *a*, bevel gears *cd*, vertical shaft *ez*, pivoted step lever *f*, and table *g*. 2nd. The rotary removable table *g*, capable of being raised and lowered. 3rd. The reciprocating carriage *g'* having also a vibratory motion and a rotary cutter head *h*. 4th. The combination of the eccentric *i*, link *j*, and reciprocating carriage *g'*. 5th. The combination of the eccentric *i*, link *j*, reciprocating carriage *g'*, and vibrating track *R*.

No. 14,319. Improvements on Rotary Pumps and Ventilators. (*Perfectionnements aux pompes et aux ventilateurs rotatoires.*)

Lucien B. Villebonnet, Nancy, France, 3rd March, 1882;

Claim.—The construction of a rotary pump or ventilator consisting of two wings rotating at varying angular velocities, and which are driven by link rods of a wheel placed eccentrically to the axis of the cylinder, so that one wing always separates the inlet from the outlet port, and neither wing can enter either of the arcs between the ports before the other has quitted it.

No. 14,320. Improvements on Telephones. (*Perfectionnements aux téléphones.*)

William Hubbard, Elgin, Ill., U.S., 3rd March, 1882; for 5 years.

Claim.—1st. In an acoustic telephone, a diaphragm provided with means for the attachment of wires to both of its front and rear sides, whereby the instrument is adapted to the purpose of an exchange, and other purposes. 2nd. In an acoustic telephone instrument having a front plate *C* with a central opening and a raised rim and shoulder *cr*, whereby the internal chamber increases in size from the central opening toward the shoulder. 3rd. In an acoustic telephone instrument, the combination of the back plate, the diaphragm, and the dishing front plate having the central opening, a removable cap to inclose and confine the air in front of the front plate, said cap having a tapering tubular opening at its centre, and tubes which communicate with the diaphragm. 4th. The combination of the back plate, the diaphragm, the front plate and the cap, said cap having a tapering central tubular opening with a removable plate for closing it. 5th. In an acoustic telephone, the combination, with the wire *F*, of the tubing *as* composed of rubber, or other non-resonant substance, and enclosing the former.

No. 14,321. Improvements on Rollers for Covering Pamphlets and Books. (*Perfectionnements aux rouleaux pour couvrir les brochures et les livres.*)

Emma L. Miller and William H. Bohrer, Washington, D. C., U. S., 3rd March, 1882; for 5 years.

Claim.—1st. In a device for attaching covers to books, pamphlets, etc., after the application of paste thereto, consisting of two rollers, one arranged at right angles to the other, and both supported in a suitable frame. 2nd. In a device for pressing and attaching covers to pamphlets, books, etc., the combination of a frame work or handle with two rollers, supported therein at right angles to each other, one roller being made adjustable endwise whereby the device may be adapted for pamphlets of different thickness. 3rd. In a hand tool for pressing pamphlet covers, the combination of rolling surfaces at right angles to each other, one to act upon the side face and the other upon the edge of the pamphlet or book. 4th. In a device for pressing covers upon pamphlets, etc., the combination of a roll to act upon the edge of the pamphlet, and a second roller to operate upon the side of the same, the latter having its end bevelled or rounded. 5th. In combination with the body *C*, the roller *B*, the roller *A*, its supporting spindle and the adjusting screw *G*.

No. 14,322. Improvements on Stamp Cancellers and Daters. (*Perfectionnements aux machines à maculer et dater les timbres postes.*)

Hiram F. Gaines, Rouse's Point, N. Y., U. S., 3rd March, 1882; for 5 years.

Claim.—1st. In a cancelling stamp, the combination, with a suitable means of attachment to a handle *A*, of the cylinder *C*, collar sleeve *F*, head *G* and a spring *H*, the head provided with an abrasive surface and having an axial motion imparted by spiral grooves *F* *F* by impact of the head *G* with the paper stamp, and the yielding of spring *H*, whereby the face of the stamp will be torn and defaced for cancellation. 2nd. In a dating and cancelling hand stamp, the combination, with a suitable means for the attachment of a handle *A*, of a block *D*, having a socket to receive the stem of a dating stamp secured therein by set screw *I* and cylinder *C*, collar sleeve *F*, head *G* having an abrasive face, and yielding and rocking axially to destroy the paper stamp and apply a date in proximity thereto.

No. 14,323. Folding Washstand. (*Lavabo pliant.*)

Sydney Kinder, Amherst, (Assignee of David O. Parker, Liverpool), N. S., 3rd March, 1882; (Extension of Patent No. 1357.)

No. 14,324. Improvements on Bay Windows. (*Perfectionnements aux fenêtres en saillie.*)

William S. Garrison, Cedar Falls, Iowa, U. S., 6th March, 1882; for 5 years.

Claim.—1st. The combination of the blinds or sections of a blind *B* *D* and *E*, and the projecting floor *C*, the portion *B* being pivoted so as to be easily turned upon its journals, the arrangement of the parts with reference to each other being such as described, whereby they may be converted into a bay window and the parts *D* and *E* be made to serve as blinds for an ordinary window. 2nd. The combination of the projections *A* *C*, the pivoted blind *B* and the swinging blinds *E* and *E* with the frame of the window.

No. 14,325. Improvements on Stove Carriers. (*Perfectionnements aux porte-poêles.*)

George Dee, Dixon, Ill., U. S., 6th March, 1882; for 5 years.

Claim.—1st. The clutch *B* and sleeve *A*, the clutch being provided with teeth on its upper edge. 2nd. The combination of the sleeve *A* and clutch *B* with a lifting bar adapted to be run through the sleeve.

No. 14,326. Method and Apparatus for obtaining Starch from Grain for the Manufacture of Grape Sugar and Other Products. (*Méthode et appareil pour extraire l'amidon du grain pour la fabrication du sucre de raisin et autres produits.*)

Thomas A. Jebb and William T. Jebb, Buffalo, N. Y., U. S., 6th March, 1882; for 5 years.

Claim.—1st. An improvement in extracting starch from grain, the method which consists in first, reducing the grain with water, and then subjecting the reduced material to pressure, whereby the starch water is pressed out and separated from the bran and other coarse material. 2nd. In an improvement in the art of extracting starch from grain, the described method consisting in first, coarsely disintegrating the grain, and then reducing the grain in a separate machine to the proper degree of fineness, and then separating the starch water from the grain by pressure. 3rd. As an improvement in the art of extracting starch from grain consisting in first, reducing the grain with water, then separating the starch water from the grain by pressure, and then treating the starch water for the several stages of the desired product, the material passing through the production of the process continuously and without interruption. 4th. As an improvement in the art of extracting starch from grain, the described method which consists in first, reducing the grain with water, then separating the starch water from the grain by pressure, and then separating the remaining impurities from the starch water by sifting. 5th. As an improvement in the art of extracting starch from grain, the described method which consists first in reducing the grain with water, then separating the starch water from the bran and other coarse material, and treating the starch water for obtaining the desired product, then regrinding the bran and other coarse material and extracting the starch from this ground material separately. 6th. In an apparatus for extracting starch from grain, the combination of a reducing mechanism, whereby the grain is reduced to the desired degree of fineness with water, and a separating machine composed of an endless perforated or porous apron, and pressure rollers, whereby the starch water is separated from the coarse particles. 7th. In apparatus for extracting starch from grain, the combination of a reducing mechanism, whereby the grain is reduced to the desired degree of fineness, a separating machine whereby the starch water is separated from the bran, etc., and a subsequent separator whereby the remaining impurities are separated from the starch water. 8th. In an apparatus for extracting starch from grain, the combination of a reducing machine, whereby the grain is reduced to the desired degree of fineness, a separating machine whereby the starch water is separated from the bran, etc., and a subsequent separator which receives the tailings from the first separator, and which separates the remaining starch from the bran and the offal. 9th. In an apparatus for extracting starch from grain, the combination of a steep tube *B*, preliminary disintegrator *C*, grinding mill *D*, receiver *E*, separator *G* and subsequent separator *L*.

No. 14,327. Improvements in the Construction of Vessels and in the Apparatus Employed Therein, parts of Which are also Applicable to Other Structures. (*Perfectionnements dans la construction des vaisseaux et aux appareils pour cet objet, dont partie applicable à d'autres constructions.*)

C. A. H. C. de Winter, Paris, France, 6th March, 1882; for 5 years.

Claim.—1st. The system or mode of constructing ships or vessels by forming them essentially of saleable material. 2nd. The improved machine tools for shaping the wood and facilitating the operation of construction. 3rd. The impermeable wall formed of hard wood in a natural state, and soft green wood dried, compressed and interposed, constituting the sides and bottom of the ship, or employed for other structures. 4th. The combination of the consolidating iron work for binding together the whole of the hull and the cargo. 5th. The mode of construction consisting in building up the envelope, that is to say the sides of the ship around the cargo.

No. 14,328. Improvements in Middlings Purifiers. (*Perfectionnements aux épurateurs des gruaux.*)

Nicolas Weber, La Porte, Ind., U. S., 6th March, 1882; for 5 years.

Claim.—1st. In a middlings purifier, a horizontal rotating screen of disk form and means for imparting a vibratory motion thereto. 2nd. The combination of a suspended rotating screen having a central hub or boss, an eccentric located at one side of the hub, and a