

scraper blades or cutters E having their rear portions 12 pivoted between the flanges *d* and adapted to strike the spool so as to limit the outward throw of their cutting edges 10. 6th. The body A provided with a steam passage or discharge exit *h*, for the purpose of conducting steam from the steam chamber to the space between the rotating spool D and its spindle or journal C.

**No. 11,680. Improvements on Ageing and Purifying Whisky and other Liquors.** (*Perfectionnements dans la méthode de vieillir et épurer le whisky et autres liqueurs.*)

George Goewey and George F. Godley, Philadelphia, Pa., U. S., 28th August, 1880; for 5 years.

*Claim*.—1st. The combination of an inner vessel of conical or other form, and an outer surrounding vessel of larger dimensions, whereby a continuous space is formed between the two vessels which is filled with atmospheric air at its natural temperature, the inner vessel being perforated to admit of the forcing of whisky, or other spirituous liquor, from the interior of the vessel at a temperature of from 120 to 165 degrees Fahrenheit through the perforations, whereby it is broken up into small particles or atoms before coming into the atmosphere at its natural temperature in said surrounding space. 2nd. The process of ageing and purifying liquors which consists in breaking up the whisky or other liquor in a heated state, and commingling it with atmospheric air at its natural temperature and withdrawing the excess of air from the liquor. 3rd. The combination of a perforated vessel F of conical or other form, air-tight jacket E, cylinder C, having a steam jacket E, and cylinder C' having a jacket E'. 4th. The combination of a series of cylindrical or other vessels C C' C'' with the tank A, perforated vessels F F' air jackets D D', air tank B having pipes *a* at air, and steam jacket E E' having in connection steam pipes *b* b'.

**No. 11,681. Improvements in Spring Scales.** (*Perfectionnements aux pesons à ressorts.*)

Chauncey C. Parker and Simon B. Parker, Brooklyn, N. Y., U. S., 28th August, 1880; for 5 years.

*Claim*.—1st. A spring scale having its outer casing formed from a continuous coil of wire, the coils being compressed together and secured by soldering. 2nd. The casing A, index bar *b* and spring *a*, in combination with the indicator consisting of the slide *h* and pointer *i*. 3rd. A spring scale consisting of the casing A, bar *b*, spring *a* and the slide *h*, with the pointer *i*, said bar *b* having pivoted to it the bail B.

**No. 11,682. Improvements on Pipe Crimping Machines.** (*Perfectionnements aux machines à cambrer les tuyaux.*)

Frank C. Packham, Mechanicsburg, Ohio, U. S., 28th August, 1880; for 5 years.

*Claim*.—1st. In a pipe crimping machine, the combination of two longitudinally corrugated rolls tapered in opposite directions, whereby they are caused to meet on a line at an angle to their axes. 2nd. The combination of a driving roll and a driven roll, both provided with longitudinal corrugations and made reversible end for end, arranged one with its small end opposite the large end of the other. 3rd. The combination of the two longitudinally corrugated rolls, one adjustable bodily to and from the other, and a supporting shaft for one of said rolls mounted on a pivot or bearing adjustable to and from the line of the axis of the other roll. 4th. In combination with the shaft having its end supported upon a point seated in a socket, the spring *e* bearing upon the shaft and serving to hold the point in its seat. 5th. In combination with the shaft provided with the screw *c* and spring *e*, the spring *f* for raising the shaft when relieved from pressure. 6th. In combination with the shaft G provided with spring *f* and screw *c*, the nut *d* serving both to retain the spring in place and as a jam-nut to prevent the screw from working loose. 7th. In combination with the shaft G provided with the screw *c* and spring *e* and mounted in the frame A, the detachable cap H. 8th. A crimping roll provided with one or more recesses in each end adapted to receive a pin or stud, whereby the roll is rendered capable of being turned end for end, and connected with the pinion in either position. 9th. In a machine for crimping pipe, the combination of a driving shaft, a non-rotating shaft, each furnished with a crimping roll, a pinion rigidly attached to the driving shaft and its roll, and a second pinion mounted loosely upon the non-rotating shaft, locked firmly to the roll thereon and gearing with the first pinion.

**No. 11,683. Method of and Apparatus for Drying Paper.** (*Méthode et appareil pour sécher le papier.*)

Nicolaus Kaiser, Grellinger, Switzerland, 28th August, 1880; for 5 years.

*Claim*.—1st. The method of drying paper or pasteboard in continuous sheets, that is by the direct action of the hot air, gases or vapours. 2nd. The apparatus for drying paper or pasteboard in continuous sheets, consisting of the drying chamber fitted with rows of rollers or carrying devices arranged in two or more lines and with the inlet and outlet passages for heated air or gases. 3rd. In apparatus for drying paper or pasteboard in continuous sheets, the plates *i* combined with the carrying rollers *g*.

**No. 11,684. Improvements on Pumps.** (*Perfectionnements aux pompes.*)

Julius Morlock, Stephen, Ont., 28th August, 1880; for 5 years.

*Claim*.—The combination of bracket C, rod D, lever E, rod F, bracket G and handle B as a new device for attaching and operating pump handles from the outside.

**No. 11,685. Improvements on Mechanical Musical Instruments.** (*Perfectionnements aux instruments de musique mécanique.*)

The American Automatic Organ Company, Boston, (Assignee of Oliver H. Arno, Wilmington), Mass., U. S., 28th August, 1880; for 5 years.

*Claim*.—1st. A music sheet, or a strip of paper or similar material pro-

vided with two parallel rows or lines of perforations successively alternating with each other. 2nd. A pair of levers arranged in relation to a valve, or its equivalent, and the strip of paper having a row of perforations for each lever, which rows of perforations are in parallel lines and otherwise disposed, as set forth, whereby one of said levers will operate to open the said valve D and the other to close the same. 3rd. The combination, with the pair of levers E E', of the filling lever H and of the valve D. 4th. The combination, with a pair of levers E E', of a sliding valve arranged and connected for operation. 5th. The combination with a perforated strip of paper, of a sliding valve to a reel, said valve being arranged to be operated by mechanism through the perforations of said paper.

**No. 11,686. Process for Obtaining Starch and Gluten from Indian Corn.** (*Procédé pour extraire l'amidon et le gluten du blé d'Inde.*)

Lewis J. Bennett and Thomas A. Jebb, Buffalo, N. Y., U. S., 28th August, 1880; for 5 years.

*Claim*.—The process of obtaining the glutinous and starchy substances from Indian corn or maize, which consists in whipping or beating the corn, whereby the glutinous portions of the kernels are broken into coarse fragments and the starchy portions are reduced to flour, and then separating the fragments of glutinous matter from the starch flour by suitable sieves or bolts.

**No. 11,687. Means for Preventing Explosions of Steam Boilers.** (*Moyens d'empêcher les explosions des chaudières à vapeur.*)

Daniel T. Lawson, Wellsville, Ohio, U. S., 28th August, 1880; for 5 years.

*Claim*.—1st. The method of preventing convective strains in boilers due to the intermittent escape of steam into the cylinder, which consists in retarding or prolonging the flow of the steam from the water to the steam space through a greater length of time than is allowed for the escape of the same quantity of steam from the steam space. 2nd. A steam boiler adapted to carry a permanent bulk of water, having a partition dividing the main steam space from the water space with an opening in said partition of less area than the opening through which the steam is led from the steam space to the cylinder.

**No. 11,688. Machine for Finishing Horse-shoe Nails.** (*Machine pour finir le clou à cheval.*)

Charles S. Watson, (Assignee of Charles W. Woodford,) Montreal, Que., 28th August, 1880; (Extension of Patent No. 7,065).

**No. 11,689. Machine for Finishing Horse-shoe Nails.** (*Machine pour finir le clou à cheval.*)

Charles S. Watson, (Assignee of Charles W. Woodford,) Montreal, Que., 30th August, 1880; (Extension of Patent No. 7,065).

**No. 11,690. Improvements in Heel Trimming Machines.** (*Perfectionnements aux machines à finir les talons.*)

Joseph Langlois, St. John, and Gustave Des Troismaisons, Montreal, Que., 30th August, 1880; for 5 years.

*Claim*.—1st. In a heel trimming machine the combination, with the trimming knife L, of rod H, provided with yoke *h* and levers *h* and *h*', sliding block I, provided with set screws *i*, and socketed block I', whereby the said knife is fixed in contact with the heel to be trimmed. 2nd. The combination with the knife L, knife frame L' and knife supporter K', of the plates I and I', the latter provided with pin *i*, socketed block I', and knife lever K provided with diagonal slot *i*', whereby the said knife L is adjusted in respect to the heel plate B. 3rd. The combination with the knife L, of the lever K, knife supporter K', provided with clamp and screw K', and adjustable arched knife frame L, whereby the said knife may be adjusted and inclined. 4th. The combination with the knife L, of the plate, block K', screws *i* and lever K, whereby the said knife is moved to centre at the heel plate B. 5th. The combination with the socketed block I', knife supporter K', levers *h* and *h*', yoke *h* and pins *h*, of the sliding block I' provided with set screw *i*, whereby the movement of the knife L toward the heel plate B is adjusted. 6th. The combination with the driving shaft F and sliding plate I, of the slotted eccentric M, slotted eccentric rod M' and adjustable fulcrum M'', whereby the said sliding plate and its attachments are reciprocated backward and forward. 7th. As a means for adjusting the fulcrum M'', the clamp and screw *m*, hand wheel *m*', cog wheel *m*'' and rack N. 8th. As a means for throwing the loose pulley F in gear, the combination of the shaft F, clutch gear *f*, rod G and stud O. 9th. As a means for throwing the loose pulley F' off gear, the combination of the shaft F', clutch gear *f*, rod G, levers P and Q and stud O. 10th. The combination with the frame A, of the revolving rod B, supporting heel plate B', rack B'', and curve C provided with rod C' and cog wheel *c*, holder E, clamp E', sliding block C'', rest *c*'''. 11th. As a means of holding a boot or shoe on the heel plate, the combination with the curve C and its attachments, of the lever D and rack B''.

**No. 11,691. Improvements on Grinding Mills.** (*Perfectionnements aux moulins à triturer.*)

George Raymond and Albert Raymond, Wapun, Wis., U. S., 30th August, 1880; for 5 years.

*Claim*.—1st. The combination of two grinding discs, one of which is provided with a peripheral flange, or a series of studs adapted an arc to turn upon or in close proximity to the face of the other disk, to serve the double purpose of preserving exact parallelism between the disks and preventing the contact of their faces. 2nd. The combination of the grinding disk having the annular meal space surrounding the grinding face, and the peripheral flange surrounding the meal space, and the co-acting disk adapted to run in close proximity to the flange to retain the meal, and provided with teeth *b*' traveling in the meal chamber. 3rd. The combination of the