

having the back or base of the frame, the side walls, and ledges for retaining the tile, and the tongues for holding the tile in position, made integral with each other, in combination with the tiling, substantially as herein set forth. 13th. A holder for sectional tiles composed of a sheath strip of metal, curved in cross section, as shown, in combination with a screw headed bolt, the base plate and the tiling, substantially as herein set forth. 14th. A holder for sectional tiles composed of a sheath strip of metal, for holding the two adjoining edges of tiling as shown, in combination with a screw headed bolt, the tiling, the base plate having the walls, and ledges for holding the opposite edges of the tiling integral with the base, substantially as herein set forth. 15th. As a new article of manufacture, an adjustable tile frame holder having the base, side walls, overhanging ledges and adjusting tongues, all formed of one piece of metal, substantially as herein set forth.

**No. 41,189. Hammock. (Hamac.)**

Charles Johnston, Harriston, Ontario, Canada, 12th December, 1892; 6 years.

*Claim.*—1st. The combination of the galvanized steel spiral coil wire interwoven with the double or treble longitudinal coil wires A, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of steel coil woven wire O and A, with wooden cross end pieces B and C, with chain hangers D, and screw eyes E, substantially as and for the purpose hereinbefore set forth. 3rd. The insertion of the coil woven wire into the centre of the side of the wooden end pieces, as shown in figs. 2, 3 and 4, to prevent the tilting up from the level of the end pieces B, when the hammock is in use, substantially as and for the purpose set forth.

**No. 41,190. Method of Making Ale.**

(Méthode de faire de la bière.)

Andrew Worthington Billings, Brooklyn, New York, U.S.A., 12th December, 1892; 6 years.

*Claim.*—1st. The improvement in the manufacture of beer or ale, consisting in making a mash by mixing together raw grain and water and a portion of malt gradually heating the entire mass to about 146° Fah. and then rapidly raising the temperature and maintaining the higher temperature until the starch globules are liberated then at once cooling to a temperature below 165° Fah. then adding the remaining portion of malt required for the brew maintaining the temperature over 155° and subsequently filtering the wort, substantially as set forth. 2nd. The improvement in the manufacture of beer and ale from malt and raw corn consisting in making the mash, of the malt and grain, mixing the parts intimately together by mechanical action and discharging the entire mass at once into a filtering tub and there filtering the same, substantially as set forth. 3rd. The within described apparatus provided with a revolving shaft carrying blades arranged at angles to thoroughly mix the mash and with steam and water pipes whereby to inject steam into the mash and into a surrounding jacket, substantially as described and shown. 4th. The method and means of manufacturing ale and beer, substantially as hereinbefore described and shown.

**No. 41,191. Pumping Apparatus.**

(Appareil pour pomper.)

Donald Noble and John Arthur Brown, both of Leeds, York, England, 12th December, 1892; 6 years.

*Claim.*—1st. The arrangement and combination of valves and tubes, pump barrels and pistons, pedals and levers substantially as hereinbefore described by means of which the pumping apparatus may be worked by the heels of the operator's feet, that is to say the combination of the pump barrels B, B<sup>1</sup>, arranged within a water receptacle or platform as described having one or two pistons reciprocating therein with the pedals I, I<sup>1</sup>, hinged at their toe ends, lever I<sup>11</sup> alone, or levers I<sup>11</sup>, I<sup>12</sup>, I<sup>13</sup>, and shafts L<sup>1</sup>, L<sup>5</sup>, combined and c<sup>8</sup>, c<sup>9</sup>, c<sup>10</sup>, c<sup>11</sup>, and tubes connected therewith whereby water may be drawn out of a bucket or other receptacle into one pump barrel simultaneously with the ejection of water in a continuous stream from the other barrel. 2nd. In pumping apparatus, such as herein described, worked by the heels of the operator's feet, the oscillating shafts, such as L<sup>1</sup>, L<sup>5</sup>, arranged to pass within the water receptacle to which the pedals are jointed thereto at their toe or rear ends, for imparting the requisite motion to the pistons through levers such as I<sup>12</sup>, I<sup>13</sup>, mounted on said shafts, substantially as herein described. 3rd. In pumping apparatus, worked by the heels of the operator's feet, the arrangement and combination of parts, substantially as hereinbefore described, by means of which water admitted to the pump barrels, arranged within a platform or water receptacle, as described, may be admitted into the barrel at one end, and on the return stroke of the piston, passed to the other end of the barrel prior to being ejected therefrom, that is to say, the combination of a pump barrel, such as B, or B<sup>1</sup>, arranged within a water receptacle A, having the two pistons, such as H, H<sup>1</sup>, or H<sup>2</sup>, H<sup>3</sup>, reciprocating therein, with the hollow piston rod, such as H<sup>4</sup>, or H<sup>5</sup>, and valves such as c<sup>8</sup>, c<sup>9</sup>, and H<sup>6</sup>, or c<sup>10</sup>, c<sup>11</sup>, and H<sup>7</sup>, and the mechanism for reciprocating the pistons as herein described. 4th. In pumping apparatus, such as herein described, worked by the heels of the operator's feet the air vessels F, formed of tubes arranged to be fixed to or within the water receptacle or platform for strengthening purposes, or to be attached to the same for carry-

ing purposes, and to communicate with the valve box or boxes, substantially as herein described. 5th. In pumping apparatus, such as herein described, worked by the heels of the operator's feet, the combination of two pump barrels B, B<sup>1</sup>, and their pistons and valves, boxes and tubes arranged within a water receptacle with an air vessel F, and with the pedals I, I<sup>1</sup>, hinged at their toes, shafts I<sup>1</sup>, I<sup>5</sup>, and levers I<sup>11</sup>, I<sup>12</sup>, I<sup>13</sup>, substantially as and for the purposes described. 6th. In pumping apparatus, such as herein described, worked by the heels of the operator's feet, the adjustable lever I<sup>11</sup>, jointed to cranks L, L<sup>1</sup>, mounted within the platform on trunnions, and operated from the outside of the platform by a lever, such as L<sup>2</sup>, substantially as herein described and set forth. 7th. In pumping apparatus, such as herein described, worked by the heels of the operator's feet, the combination of the pump barrels B, B<sup>1</sup>, pistons H, H<sup>1</sup>, valve box J, and parts connected therewith, and air vessel F, with pedals I, I<sup>1</sup>, hinged at their toes, connecting links K, K<sup>1</sup>, jointed respectively to the pedals and pistons and adjustable lever I<sup>11</sup>, and mechanism for operating the same, whereby the pistons may make a stroke the full length of the pump barrel, substantially as described. 8th. The improved pumping apparatus, worked by the heels of the operator's feet, substantially as herein described and illustrated in the accompanying drawings.

**No. 41,192. Convertible Camera and Graphoscope.**

(Camera et graphoscope convertible.)

William Vivian Esmond and Alfred C. Kemper, both of Chicago, Illinois, U. S. A., 12th December, 1892; 6 years.

*Claim.*—1st. A convertible camera and graphoscope, comprising in combination, a light tight inclosing case, having an opening *t*, in the front side, an opening *u*, for the admission of light, a magnifying lens *l*<sup>1</sup>, and a shutter at the opening *t*, a removable light tight cover for the opening *u*, and a holder in the case, adapted to hold a strip of sensitized material for the taking of negatives, or a strip of finished pictures, to supplant the sensitized strip, substantially as described. 2nd. A convertible camera and graphoscope, comprising in combination, a light tight inclosing case having an opening *t*, in the front side, an opening *u*, in the line of vision through the opening *t*, a magnifying lens *l*<sup>1</sup>, and a shutter at the opening *t*, a removable light tight cover for the opening *u*, and rollers in the case, at opposite sides of the plane of the opening *t*, adapted to hold a strip of sensitized material for the taking of negatives, or a strip provided with transparencies to supplant the sensitized strip, and operative to move the strip across the field of view, substantially as described. 3rd. In a camera, the combination, with the inclosing case, of a removable and replaceable roll holder, forming the back and one side portion of the case, and rollers case, of a removable and replaceable roll holder, forming the back and one side portion of the case, and rollers carried by the roll holder and extending beyond the side of the case, said rollers being adapted to receive and hold a strip of sensitized material, and operative to move the same across the field of exposure, substantially as described. 4th. In a camera, the combination, with the inclosing case and film carrying rolls, of a resilient self adjusting mat in the case, having an opening through it, and pressing at opposite sides of its opening normally against the rolls, whereby as the film is unrolled from one roll upon the other, the mat by self adjustment will maintain contact with each roll, substantially as and for the purpose set forth. 5th. In a camera, the combination, with the inclosing case and film carrying rolls, of grooves *i*, *i*<sup>1</sup>, in the case adjacent to the rolls, and a mat *c*, in the grooves, provided with springs *b*<sup>1</sup>, operating to maintain the mat in contact with the rolls, substantially as and for the purpose set forth. 6th. In a roll holder for cameras, the combination, with the roll holder frame, and rolls supported therein, of stops in the frame, and a mat and springs confined in the frame between the said stops and rolls, the spring operating to press the mat normally against the rolls, substantially as described. 7th. In a camera, the combination, with the inclosing case provided with the opening *t*, of a swinging shutter, for the said opening, inside the case having the opening *r*<sup>1</sup>, a spring operating normally to maintain the shutter at the limit of its movement in one direction, and means for actuating the shutter, comprising a rocking pin which carries the shutter and extends to the outside of the case, a latch *r*<sup>2</sup> on the outer end of the pin, and a spring catch *q*, on the outside of the case, provided with a top *q*<sup>1</sup>, *q*<sup>2</sup>, adapted to engage the latch, substantially as and for the purpose set forth. 8th. A convertible camera and graphoscope, comprising in combination, a light tight inclosing case, having an opening *t*, in the front side, an opening *u*, in the line of vision through the opening *t*, a magnifying lens *l*<sup>1</sup>, and a shutter at the opening *t*, a removable light tight cover for the opening *u*, a holder in the case, adapted to hold a strip of sensitized material for the taking of negatives, or a transparency to supplant the sensitized strip, and a removable and replaceable diaphragm *w*, at the opening *t*, having an opening through it smaller than the opening *t*, to register with the latter, substantially as described.

**No. 41,193. Tapping Cock and Valve. (Robin et soupape pour barils.)**

Benjamin James Bacon, Sydney, New South Wales, Australia, 12th December, 1892; 6 years.

*Claim.*—1st. In cocks for tapping casks or other vessels containing liquid, a tapping cock alike applicable for attachment to a beer engine or pump, and serving the purpose of a draw off or bib cock, provided with a self acting air vent, and having an inner removable