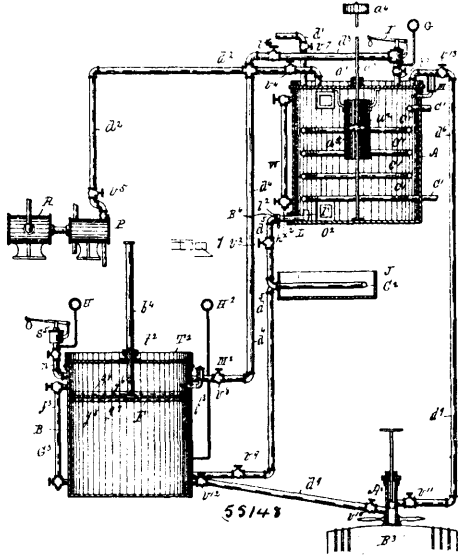


tration, substantially as set forth. 2nd. The herein described process of treating carbonated ales and other fermented liquors, which



consists in fully carbonating them for use, subjecting them to sedimentation under applied pressure, drawing them off from above the yeast sediment, cooling them to render the semi-soluble matters insoluble, then filtering them under a uniform circulating pressure equal to or in excess of the gas pressure in the carbonated liquors, substantially as set forth. 3rd. The herein described process of producing chilled and filtered ales and other fermented liquors, naturally carbonated for use, which consists in carbonating them by their own fermentation and drawing them off from the sediment precipitated during fermentation, then subjecting them to a cooling process to render the semi-soluble matters insoluble, then conducting them into a tight vessel and passing a filter downwardly through them, while under pressure and practically without agitation, thereby retaining all their gas and flavour and removing the insoluble matters from them, substantially as set forth. 4th. The herein described process of treating and preparing ales and other fermented liquors for use, which consists in confining the partly fermented liquor in a tight vessel at that stage of fermentation when nearly ready to rack into packages for use, or in casks for storage, subjecting it to sedimentation under applied pressure, and to carbonation by a continued fermentation, with its own gas, ripening it by continued fermentation, separating it from yeast and sediment precipitated during fermentation, cooling it to contract and more thoroughly retain the gas, as well as to render the semi-soluble matters insoluble, then filtering and racking it under a uniform circulating pressure, equal to or in excess of its own gas pressure. 5th. In an apparatus for treating malt liquors, the combination with a tank or cylinder provided with an inlet pipe for the entering liquor, and a pipe for its discharge, and an inlet pipe by which gas may be forced into said tank for pressure, of an observation window at the top and bottom of the tank formed in the cylinder sides, a coil arranged within said tank for the circulation therein of warm or cold water, a cylinder open at the top and bottom arranged within said tank, and a vertical shaft journaled in the top and bottom of said tank, and where passing through the interior cylinder, provided with a conveyer wheel whereby the liquor may be caused to circulate in said tank, substantially in the manner as and for the purpose set forth. 6th. The combination with the tank A, having the inlet pipes d^1 , d^2 , and at the pipe d^3 , provided with valves, and having the observation windows O^1 and O^2 , constructed and arranged substantially as described, of the interior cylinder a^2 , open at the top and bottom, and provided with the interior shaft a^3 , having thereon the conveyer or propeller wheel a^4 , said shaft being journaled in the top and bottom of the tank A, and the turn-down draw-off pipe L, connecting with said tank A, and the pipe d^3 , substantially as and for the purposes set forth. 7th. The combination with the tank A, provided with the supply pipe d^1 , and gas or air pipe d^2 , of the temperature regulating coil pipe C^1 , arranged within said tank A, the interior cylinder a^2 , open at the top and bottom, and arranged within said tank, the vertical shaft a^3 , centrally journaled in the top and bottom of said tank, the propeller a^4 , arranged upon said shaft where within the cylinder a^2 , and the draw-off cock or pipe L, constructed and arranged to operate substantially in the manner as and for the purposes set forth. 8th. The combination with a cylinder A, constructed and arranged to receive malt liquor from a tun or cask, and provided with an obstruction window at its side near its bottom, of the draw-off cock L, having an upturned end where within the tank and provided with a handle where extended through and beyond the tank, and a ball socket connected with a stationary conduit pipe, by which handle said upturned end of the pipe may be turned so as to draw liquor from the tank at different levels, substantially as shown and described.

9th. In an apparatus for treating malt liquors under pressure, other than that generated by the fermentation of the liquor, the combination with a cylinder provided with intake means for liquor and pressure, and a safety-valve, a draw-off cock, an interiorly arranged circulating coil, through which warm or cold water may be passed to regulate the temperature, and having an interiorly placed cylinder, open at top and bottom, and a vertical shaft provided with a conveyer-wheel whereby a circulation may be maintained in the tank above the sediment, substantially as described, of a filtering cylinder arranged below the before-named tank, said filtering cylinder being provided with a piston-form filter operated to move downwardly through the liquor, and pipes connecting the filtering cylinder and the upper cylinder, whereby the pressure in both is equalized, substantially as shown and described. 10th. In an apparatus for treating malt liquors under pressure other than that generated by the fermentation of the liquor, the combination with a tank or cylinder having an inlet pipe for the liquor and a pipe for the gas producing pressure, both of which pipes are constructed with suitable valves, and provided with a safety-valve, observation windows, a draw-off cock, and having an interior coil for regulating temperature, and provided with an interior cylinder containing a vertical shaft and propeller-wheel for agitating the liquor above its sediment, of a filtering cylinder having a closed top below the before-named tank, and provided with a pipe leading from the upper tank or cylinder, and having a piston-form filter arranged to be passed downwardly through the liquor in the filtering tank, and a pipe connecting the upper tank and filtering cylinder, whereby the pressure upon the latter and the upper tank are equalized, substantially in the manner as and for the purposes set forth. 11th. In an apparatus for treating malt liquors under pressure other than that generated by the fermentation of the liquor, the combination with a tank or cylinder provided with an inlet pipe for entering liquor, and a pipe for its discharge, and an inlet pipe by which gas or air may be forced into the tank, said pipes having suitable valves, and a safety-valve on said tank, of a coil arranged within said tank whereby the use of warm or cold water therein the temperature of the liquor may be regulated, and an interior cylinder open at the top and bottom within said tank, said cylinder having an interiorly arranged conveyer or propeller mounted on a shaft whereby circulation of the liquor above its sediment may be had, a cooler connected with the pipe leading from said tank, a filtering cylinder located below the before-named cylinder and provided with a piston-form filter operated to descend through the liquor contained therein, a pipe connecting said cooler with the filtering chamber, and a pipe connecting said filtering cylinder with the upper tank whereby an equalized pressure is had upon both, substantially as and for the purposes set forth. 12th. The combination with the tank B, provided with an inlet pipe d^1 , for supplying malt liquor, and the pipe d^2 for delivering gas or air to produce pressure upon said tank, said pipes having suitable valves, of a draw-off pipe or cock L, connected to the lower side of said tank A, the filtering cylinder B, arranged below the tank A, and provided with the pipe d^5 , connecting said filtering cylinder with the draw-off cock L, the piston-form filter F, operated to be moved down through the liquor in the tank B, the pipe d^4 , connecting the top of the filtering tank with the top of the tank A, the pipe d^6 connecting with the filtering cylinder above the filter F, when moved downwardly to rest on the tank bottom, and also connecting with a racking apparatus, and a pipe d^7 , connecting the latter with the top of tank A, substantially in the manner as and for the purposes set forth. 13th. The combination with the tank A, provided with an inlet pipe d^1 , whereby gas or air pressure may be applied to the interior of said tank, of the safety-valve I connected to said tank A, the filtering tank B, provided with a safety-valve S^5 , the draw-off pipe L, the pipe d^5 , connecting said draw-off pipe with the tank B, the pipe d^3 , connected with the safety-valve I, on tank A, and with the tank B, by which any over-pressure on the tank A, may be transferred to tank B, and any over-pressure on the latter be discharged by the safety-valve S^5 , substantially as set forth. 14th. In an apparatus for treating fermented liquor and for barreling it, under pressure, the combination with the tank A, for the treatment and sedimentation of the carbonated liquor, of the cooler J, connecting with said tank A, the filtering cylinder B, and a pipe connecting the latter with said cylinder A, and a pipe connecting the top of the latter with the top of the tank B, a pipe connecting said cylinder B, below its filter with a racking apparatus, and a pipe connecting the latter with the top of the tank A, said pipes being provided with valves whereby an equalized pressure may be maintained in said tanks and racking apparatus and barrel, substantially as shown and described. 15th. In an apparatus for clarifying and barreling malt liquors under pressure, the combination with a tank for containing the liquor during the completion of the sedimentation and fermentation, and provided with a pipe for supplying pressure thereto, and also provided with a heating and cooling coil, a cooler, a filtering apparatus, a pipe connecting said tank with the cooler and provided with a valve, a pipe connecting said cooler with the filtering apparatus, and provided with a valve, a pipe provided with a valve connecting said filtering apparatus with a racking apparatus, and a pipe provided with a valve connecting said racking apparatus with the top of said tank, whereby the air pressure displaced in the barrel by the entering liquor will be conveyed to said tank, and the pressure upon the liquor within the barrel be retained, to prevent any loss of gas, substantially as and for the purposes set forth.