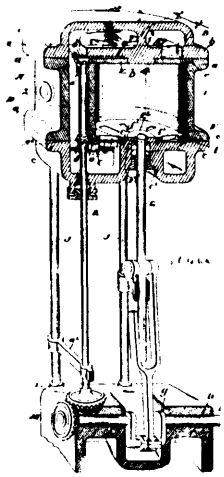
scribed. 2nd. In combination with a trace having a hooked end, free links secured to a chain encased within the hame-tug and adapted to engage with the hooked end of the trace, substantially as described. 3rd. A hame-tug, provided at the end farthest from the hame, with a suitable tongueless buckle, having within the hame-tug a chain provided with free links or loops which protrude through the hame-tug and are adapted to engage with the hooked end of the trace, substantially as described. 4th. A hame-tug B with its free loops *b* and buckle E in combination with the hook C upon the trace end, substantially as described.

No. 56,464. Steam Engine. (*Machine à vapeur.*)

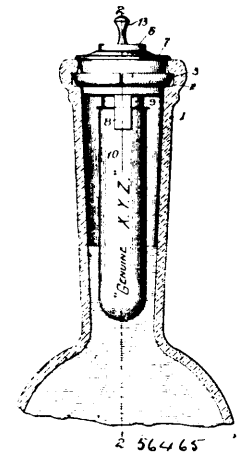


Johan Burchardt Opsahl, Toronto, Ontario, Canada, 2nd July, 1897; 6 years. (Filed 1st June, 1897.)

Claim.—1st. In an automatic cut-off high speed engine, in combination the cylinder, the piston and piston rods suitably connected to the shaft, the heads of the cylinder provided with radial steam ports, the inlet and exhaust chambers dividing the steam ports into two sections at each end, and the rotary valves provided with radial ports suitably driven from the main shaft, as and for the purpose specified. 2nd. In an automatic cut-off high speed engine, in combination the cylinder, the piston and piston rods suitably connected to the shaft, the heads of the cylinder provided with radial steam ports, the inlet and exhaust chambers dividing the steam ports into two sections at each end, the rotary valves provided with radial ports suitably driven from the main shaft and the segmental cut-off valves provided with suitable radial ports and means for controlling the same, as and for the purpose specified. 3rd. In an automatic cut-off high speed engine, in combination the cylinder, the piston and piston rods suitably connected to the shaft, the heads of the cylinder provided with radial steam ports, the inlet and exhaust chambers dividing the steam ports into two sections at each end, the rotary valve provided with radial ports, the toothed rims formed on the edges of the rotary valves, the pinions meshing therewith, the spindle on which such pistons are secured, and driving means from such spindle operated from the main shaft, as and for the purpose specified. 4th. In an automatic cut-off high speed engine, in combination the cylinder, the piston and piston rods suitably connected to the shaft, the heads of the cylinder provided with radial ports, the inlet and exhaust chambers dividing the steam ports into two sections at each end, and the rotary radial valves located to the interior of the heads, the equidistant radial ports in same and for rotating such valve, as and for the purpose specified. 5th. In an automatic cut-off high speed engine, in combination with the cylinder, the piston and piston rods suitably connected to the shaft, the heads of the cylinder provided with radial steam ports, the inlet and exhaust chambers dividing the steam ports into two sections at each end, the rotary valves located to the interior of the heads, the equidistant rotary ports and means for rotating such valves, and the cut-off slide valves provided with radial ports, slotted arm and link and rod connection extending through the wall of the inlet chamber and means for controlling same, as and for the purpose specified. 6th. In an automatic cut-off high speed engine, in combination the cylinder, the piston and piston rods suitably connected to the shaft, the heads of the cylinder provided with radial steam ports, the inlet and exhaust chambers provided with the angular division wall dividing the steam ports into a minor number of inlet ports and a major number of outlet ports and the rotary valves located to the interior of the heads and means for rotating such valves, as and for the purpose specified. 7th. In an automatic cut-off high speed engine, in combination the cylinder, the piston and piston rods suitably connected to the shaft, the heads of the cylinder provided with radial steam ports, arranged in two sets, the ports of each set being equidistant apart and the ends of the sets being unequally separated circumferentially, the inlet and exhaust chambers provided with the angular division wall dividing the steam ports into a minor number of inlet ports and a major number of outlet ports, and the rotary valves located at the interior of the heads and means for rotating such valves, as and for the purpose specified.

No. 56,465. Unrefillable Bottle.

(*Appareil pour empêcher le remplissage des bouteilles.*)



John Schumacher, Chicago, Illinois, U.S.A., 2nd July, 1897; 6 years. (Filed 1st June, 1897.)

Claim.—1st. In a device for preventing the fraudulent reuse of bottles or similar receptacles, the combination with the receptacle, of time mechanism arranged to operate a definite length of time, means upon which the time mechanism is adapted to operate, and means for preventing the resetting of the time mechanism, substantially as and for the purpose described. 2nd. In a device for preventing the fraudulent reuse of bottles or similar receptacles, the combination with the receptacle, of time mechanism arranged to operate a definite length of time, means upon which the time mechanism is adapted to operate, and means for preventing the operator from interfering with the operation of the time mechanism, substantially as and for the purpose described. 3rd. In a device for preventing the fraudulent reuse of bottles or similar receptacles, the combination with the receptacle, of time mechanism arranged to operate a definite length of time, and means upon which the time mechanism is adapted to operate, the time mechanism being provided with means for arresting its own operation before it has operated the definite length of time aforesaid, substantially as and for the purpose described. 4th. In a device for preventing the fraudulent reuse of bottles or similar receptacles, the combination with the receptacle, of time mechanism arranged to operate a definite length of time, means upon which the time mechanism is adapted to operate, the time mechanism being provided with means for arresting its own operation before it has operated the definite length of time aforesaid, and means for preventing the operator from interfering with the operation of the time mechanism, substantially as and for the purpose described. 5th. In a device for preventing the fraudulent reuse of bottles or similar receptacles, the combination with the receptacle, of time mechanism arranged to operate a definite length of time, means upon which the time mechanism is adapted to operate, the time mechanism being provided with means for arresting its own operation before it has operated the definite length of time aforesaid, and means for preventing the resetting of the time mechanism, substantially as and for the purpose described. 6th. In a device for preventing the fraudulent reuse of bottles or similar receptacles, the combination with the receptacle, of a spring, a device upon which it is adapted to operate, time mechanism adapted to operate a definite length of time for holding the spring under tension, and means for preventing the resetting of the time mechanism, substantially as and for the purpose described. 7th. In a device for preventing the fraudulent reuse of bottles or similar receptacles, the combination with the receptacle, of a spring, a device upon which it is adapted to operate, time mechanism adapted to operate a definite length of time for holding the spring under tension, and means for preventing the operator from interfering with the operation of the time mechanism, substantially as and for the purpose described. 8th. In a device for preventing the fraudulent reuse of bottles or similar receptacles, the combination with the receptacle, of time mechanism arranged to operate a definite length of time, a device upon which the time mechanism is adapted to operate, means under the control of the operator or closing the receptacle, means under the control of the operator for preventing the operation of the time mechanism while the receptacle is closed as aforesaid, and means for preventing the