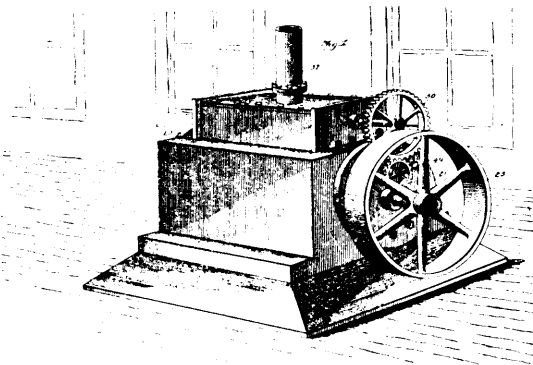


transversely incising the web of a leaf, of means for carrying the leaf past the incising means, the stemming mechanism diagonally disposed to the line of feed of the leaf. 6th. The combination, with means for transversely incising the web of a leaf, of means for carrying the leaf to and past the incising mechanism, and stemming mechanism consisting of a series of superposed clothed rolls diagonally disposed to the line of feed of the leaf. 7th. A machine of the class specified, including means for forming the blade of a leaf a multiplicity of punctures or apertures to produce an incision in said blade. 8th. A machine of the class specified, including means for forming in the blade of the leaf a multiplicity of punctures or apertures to produce an incision in said blade, and for severing the veins lying across the incision. 9th. A machine of the class specified, including means for first forming transversely in the blade of the leaf a multiplicity of punctures or apertures to produce an incision in said blade, second, for severing the veins lying across the incision, and, finally, for detaching the web located between the incision and the butt of the leaf. 10th. The combination, with leaf puncturing means, including a device comprising a body portion and a series of puncturing points secured to said body portion and serving to form in the blade of the leaf a multiplicity of punctures to produce an incision, of means for detaching that part of the web located between the incision and the butt of the leaf. 11th. The combination, with leaf puncturing and carrying means, of an independent device for guiding and feeding a leaf while it is being punctured. 12th. The combination, with leaf puncturing and carrying means, of a device for guiding and feeding a leaf while it is being punctured, said guiding and feeding device having two working surfaces, between which the puncturing means is disposed. 13th. The combination, with leaf carrying means, of a leaf puncturing device, a device for guiding and feeding the leaf while under treatment, and means for driving said several parts in unison. 14th. The combination, with leaf carrying means, of a leaf puncturing device and a leaf feeding device projecting across the line of the leaf, and means for driving said several parts in unison. 15th. The combination, with a vein severing device, of a co-operative device in position to engage, and to force, a vein into contact with the vein severing device. 16th. The combination, with means for puncturing the blade of a leaf to produce an incision, of a vein severing device, means for forcing therein the vein or veins lying across the incision into contact with said severing device, and means for guiding the leaf. 17th. The combination, with means for incising a leaf for cutting the veins, of an independent vein severing device, means for forcing the vein or veins lying across the incision into contact with the vein severing device, and a device for separating the veins and stem.

No. 61,691. Engine. (Machine à vapeur.)

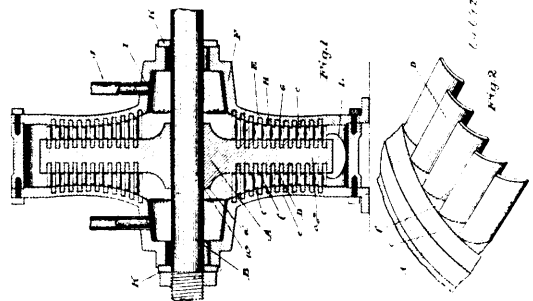


Alfred E. McCollum, West Leisoring, Pennsylvania, U.S.A., 2nd November, 1899; 6 years. (Filed 19th May, 1899.)

Claim.—1st. In an engine, the combination with a cylinder of a piston rod or shaft centrally journaled therein and having right and left pitched, spiral grooves in its surface, and a movable head or piston mounted upon said rod and provided with tenons or feathers, to engage in the grooves, substantially as described. 2nd. In an engine, the combination with a cylinder of a piston rod or shaft centrally journaled therein and having right and left pitched, spiral grooves in its surface, two blocks or cones, mounted upon said shaft and having tenons to engage in said grooves respectively, and means for alternately locking said blocks against turning while being moved in a longitudinal direction over said shaft, substantially as described. 3rd. In an engine, the combination with a cylinder of a piston rod or shaft journaled therein, having right and left pitched, spiral grooves in its surface, a head or piston, consisting of movable plates, loosely mounted upon said rod and held against turning, two blocks mounted upon said shaft between said plates and having feathers to engage said grooves respectively, and means for alternately locking said blocks against turning between said plates, substantially as described. 4th. In an engine, the combination with a cylinder of a piston rod or shaft centrally journaled therein and having right and left pitched, spiral grooves in its surface, two blocks mounted upon said head or piston and having feathers to engage in said grooves

respectively, a second rod or shaft journaled in said cylinder and provided with a spiral groove in its periphery, two blocks mounted upon the last mentioned shaft, each having a feather to engage in said groove and means for alternately locking one of each pair of blocks against turning upon its shaft while being longitudinally moved through the cylinder, substantially as described. 5th. In an engine, the combination with a cylinder of a piston rod or shaft, consisting of movable plates, locked against turning therein, a valve governor shaft journaled therein, a slide valve having openings with interior feathers, a valve rod passing through said opening and having a spiral groove in which said feathers engage, means for rotating the valve governor shaft, and gearing to communicate its rotation to the valve rod, substantially as described. 6th. In an engine, the combination with the cylinder of a piston rod or shaft journaled therein but held against longitudinal movement, a piston head, longitudinally movable in said cylinder but held against turning, and means whereby the piston rod or shaft is rotated by the longitudinal movement of the piston head, substantially as described. 7th. In an engine, the combination with the cylinder and the steam chest of a valve governor shaft, journaled in the cylinder and held against longitudinal movement, a piston head, longitudinally movable in said cylinder but held against turning, a valve rod journaled in the steam chest, a slide valve mounted on the valve rod within the steam chest means whereby the longitudinal movement of the piston head is caused to rotate the valve governor shaft, gearing connecting the valve governor shaft with the valve rod, and means for causing the rotation of the valve rod to reciprocate the sliding valve, substantially as described. 8th. In an engine, the combination with a piston head, consisting of three plates longitudinally movable but locked against turning in the cylinder, of rods or bolts passing through said plates and connecting the two outer plates at a fixed distance apart, the central plate being movable upon said rod, a piston rod or shaft centrally journaled in the cylinder and having oppositely pitched spiral grooves, and two blocks located in recesses between the plates mounted upon said rod or shaft and having feathers to engage said grooves respectively, substantially as described. 9th. In an engine, the combination of the cylinder with a steam chest, steam channels being provided extending from the steam chest to the opposite end of the cylinder, a slide valve located in the steam chest and having a recess in its under side, the steam chest being provided with an exhaust port communicating with said recess, and means for reciprocating the slide valve whereby communication is established alternately through its bottom recess between the respective steam channels and the exhaust port, substantially as described. 10th. In an engine, the combination with twin cylinder of piston rods centrally journaled therein, and gear wheels on the end of said piston rods meshing with each other, substantially as described. 11th. In an engine, the combination with twin cylinder of piston rods centrally journaled therein and held against reciprocation, a gear wheel on each of said piston rods meshing with each other, a steam chest communicating with each piston, a throttle chest communicating with each steam chest, and throttle valves in said throttle chests simultaneously actuated to alternately admit steam to each of the cylinders, substantially as described. 12th. In an engine, the combination with a steam cylinder and a pumping cylinder arranged in line therewith, of a piston rod or shaft extending through both cylinders, journaled therein and held against reciprocation, a piston head in the steam cylinder longitudinally movable but held against turning, a piston head rotated in the pumping cylinder longitudinally movable therein and held against turning, means for causing the longitudinal movement of the piston head in the steam cylinder to rotate the shafts, and means for causing the rotation of the shaft to reciprocate the piston head in the pumping cylinder, substantially as described.

No. 61,692. Steam Engine. (Machine à vapeur.)



Samuel Lount, Barrie, Ontario, Canada, 2nd November, 1899; 6 years. (Filed 10th April, 1899.)

Claim.—1st. A steam turbine motor consisting of a disc like driving wheel having concentric sets of blades or vanes projecting from its side face, the blades of each set to stand parallel to the axis of revolution and to be inclined as to their width secant to their circle of revolution, a casing enclosing the driving wheel having concentric sets of blades or vanes intermeshing with the sets of blades or vanes on the driving wheels, the blades of each set being arranged parallel