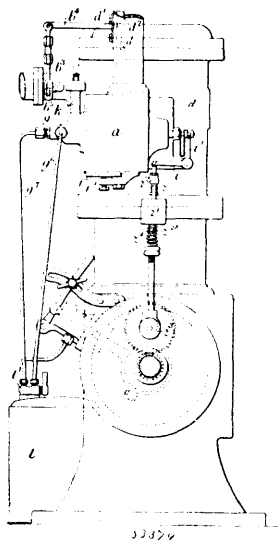


jaw having its supporting frame extended and coiled around pins projecting from opposite sides of the pole to constitute a spring pivot, said movable jaw being open upon its under side and a sack having its mouth located beneath the open under side of said jaw, substantially as described. 5th. The combination with the rod or pole and the stationary jaw, of a movable jaw having its supporting frame extended and coiled around pins projecting from opposite sides of the pole to constitute a spring pivot, said movable jaw being open upon its under side, and a sack having its mouth located beneath the open under side of said jaw, and a spring wire ring above the upper end of the sack to form a stop for the movable jaw, substantially as described. 6th. The combination with the rod or pole and the stationary jaw, of a movable jaw having its supporting frame extended and coiled around pins projecting from opposite sides of the pole to constitute a spring pivot, said movable jaw being open upon its under side, and a sack having its mouth located beneath the open under side of said jaw, and a spring wire being above the upper end of the sack to form a stop for the movable jaw, and cords connecting said spring wire ring with the supporting ring of the sack, substantially as described.

**No. 53,379. Oil and Gas Engine. (Machine à huile et gaz.)**

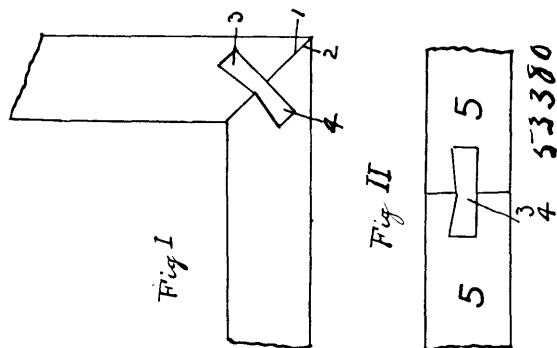


Henry Thomas Dawson, Clapham, Surrey, England, 3rd September, 1896; 6 years. (Filed 10th March, 1896.)

*Claim.* 1st. An engine adapted to be worked by the explosion of heated air and the vapour of petroleum or like vapour having in close proximity to the cylinder of the engine a retort the sides of which are surrounded by a chamber or casing through which the heated exhaust gases from the cylinder are made to pass, such retort having at one end an inlet valve for admitting to it oil and air under pressure and at the other end an outlet valve for allowing heated air and oil vapour to pass from the retort to the cylinder, such valve being under the control of the governor, so that if the required speed is exceeded the valve is not opened, one valve being also formed with a long stem which extends nearly to the other valve, so that when the governor allows the outlet valve to be opened at the proper time the inlet valve is opened also, but if the outlet valve remains closed the inlet valve remains closed also. 2nd. In combination with an engine having a reciprocating piston which is also rotated to open and close at the proper times inlet and outlet ports formed in the sides of the cylinder, a chamber or casing fixed at one side of and close to the cylinder, a retort passed through the casing, the chamber being open to an exhaust port from the cylinder so that the retort may be heated by the exhaust gases as they pass away, and the retort being open at one end through an inlet valve to an inlet port of the cylinder and supplied with oil and air at the outer end, substantially as described. 3rd. A hydrocarbon or oil engine in which the sides of the retort used for vapourising the oil are surrounded by a chamber communicating with the exhaust port or ports of the cylinder and with an outlet passage or chimney, and in which oil and air are admitted to the retort through an inlet valve situated at one end of the retort, whilst the heated vapour passes off to the cylinder through a valve at the opposite end, substantially as described. 4th. A hydrocarbon or oil engine in which the oil retort or vapourizer is heated by the hot exhaust gases passing from the cylinder and in which an automatic valve is provided which opens when the retort tends to become overheated and then allows more or less of the gases to escape without passing around the retort for the purpose of keeping the retort at a proper temperature, substantially as described. 5th. The valve mechanism for

admitting oil and air to the retort consisting of the valve casing, the valve fitting into a corresponding seat formed in the casing, the groove around the sides of the valve or its seat to which oil under pressure is supplied whilst air under pressure is admitted to the casing above the valve, substantially as described. 6th. The combination of the retort, the perforated spraying tube passing within it, the valve for admitting oil and air to the spraying tube, fitting into a corresponding seat, and the groove around the valve or its seat, into which oil under pressure is supplied, whilst air under pressure is admitted to the outer end of the valve, substantially as described. 7th. The combination of the retort or vapourizer corrugated or furnished with ridges both on its interior and its exterior, the inlet valve and its seat at one end of the retort for admitting oil and air, and the perforated tube extending from the valve seat into the retort for spraying oil upon its heated internal surface, substantially as described. 8th. The combination of the retort fitted with an oil and air admission valve at one end and an outlet valve at the opposite end for the heated air and vapour, combined with an air inlet valve for the admission of a further supply of air to the inlet end of the retort, substantially as described. 9th. The combination of the retort, the inlet valve for oil and air at one end, the outlet valve at the other end, the perforated tube extending into the retort from the inlet valve, the long valve stem extending through the perforated tube from one valve nearly to the other, so that the outlet valve on being opened also opens the inlet valve, substantially as described. 10th. The combination of the retort having its sides and ends closed and its sides corrugated or furnished with ridges both on the exterior and interior, a valve for admitting oil and air at one end, an outlet valve at the opposite end and the long valve stem extending from one valve nearly to the other, substantially as described. 11th. The combination of the ignition tube, the chamber containing it open at its outer end, the nozzle from which a jet of oil vapour is directed into the chamber, the air injector tube through which the jet is passed on its way to the chamber to form a suitable burning mixture for heating the ignition tube, the coil to which oil is supplied and from which vapour passes to the burner nozzle, the coil surrounding the ignition tube or its holder at the open end of the chamber out of the direct line of flame from the burner, substantially as described. 12th. The combination of the ignition tube, the chamber containing it, the nozzle from which a flame is directed against the ignition tube, the coil of tube supplying oil vapour from one end to the nozzle and at the other end connected to a tube containing filtering material and the reservoir containing oil and in which a pressure of air is also maintained from which oil is supplied to the tube containing the filtering material. 13th. The cylinder, its piston, the retort heated by the exhaust gases, the reservoir containing oil and in which a pressure of air is also maintained, the pipes passing from the reservoir to the retort to convey oil and air to it, the cock on these pipes, the igniting tube, the burner for heating it, the pipe for conveying oil from the cock to the burner, the cock being formed as described in such a way that when a partial turn has been given to it, from its closed position it admits oil to the burner, when a further partial turn has been given to it, it allows air to pass to the retort, and when fully opened it allows both air and oil to pass to the retort. 14th. An oil or gas engine, the cylinder of which is provided not only with an ignition tube heated externally but also with a supplementary ignitor heated internally by the charges exploded in the cylinder, substantially as described. 15th. The supplementary ignitor composed of a cavity containing a perforated refractory tube surrounded by lumps of refractory material and open only to the combustion end of the cylinder, substantially as described.

**No. 53,380. Boite en bois. (Wooden box.)**



Joseph Thibault, St. Thomas, Québec, Canada, 4 septembre 1896; 6 ans. (Déposé le 6 mai 1896.)

*Résumé.* 1<sup>re</sup> Dans la construction des boîtes en bois, l'emploi d'une rainure et baguette à section double conique placée dans les encadrements et les liant ensemble. 2<sup>e</sup> Dans la construction des boîtes en bois, l'emploi d'une rainure et baguette à section double conique placée dans les joints des planches formant les côtés des boîtes, et liant ces planches ensemble.