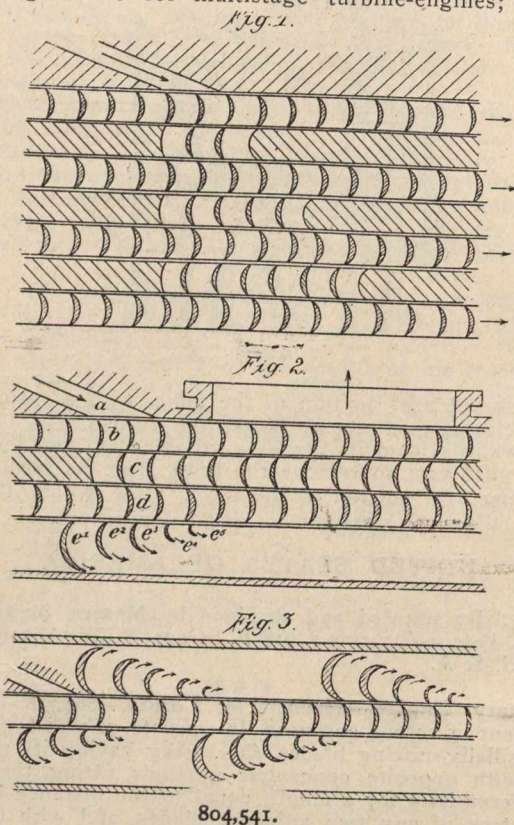


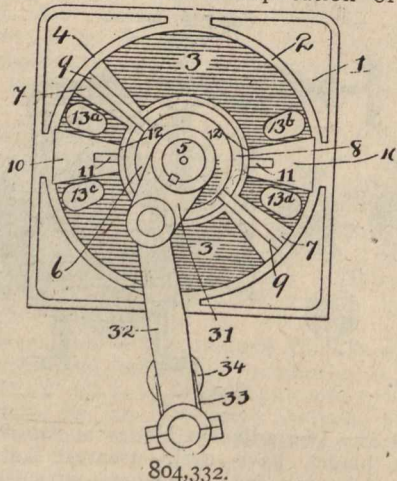
the centre of any two adjacent blades at the time the said blades may be covering this portion of the casing, the casing being provided with heads at each end, the said heads having ports opening opposite the eccentric sections, the said ports being of a circumferential length equal to the circumferential length of the said eccentric sections, and the rim of the casing being provided with ducts connecting the opposite ports in each head.

**Turbine Engine.**—Hugo Lentz.—804,541.—Relating to turbine-engines, including steam-turbines and gas-turbines. The improvements consist in providing new combinations and arrangements whereby economy is secured in manufacture as well as in operation of the turbine-engine. Generally speaking, there is provided, (1), a new form of nozzle giving increased effectiveness; (2), a new form of guiding and redirecting device for multistage turbine-engines; (3), a



new arrangement of parts whereby a turbine-engine employing but one wheel may become a multistage engine; (4), a new arrangement in guideways or directing channels for turbine engines whereby losses due to eddy-currents and friction in the guideways or channels are minimized or eliminated; (5), a new arrangement of confining devices whereby the casing of the turbine-engine is protected from the direct heating action of the jets of pressure medium; (6), new combinations of said parts, whereby the several advantages mentioned may be realized in the same machine.

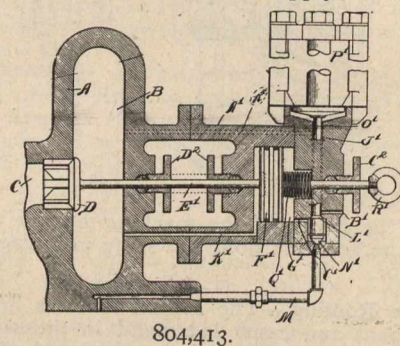
**Gas Engine.**—Charles J. Moody and Victor E. Moody.—804,332.—This engine is intended to combine within itself compactness and perfection of operation without sacrifice of power, and at the same time simplicity of construction and arrangement. The engine is intended to dispense with a multiplicity of cylinders and a duplication of piston-rods,



and at the same time provide means for preventing a dead-centre. Another object is to bring the driven shaft in close proximity to the motor-cylinder and to provide for a rotation of the driven shaft by an oscillating movement of the pistons;

also to dispense with the multiplicity of intake and exhaust ports by the arrangement of a series of valves for permitting the several ports to act alternately for the purpose of intake and exhaustion. It consists of a drum-cylinder, inwardly-extending abutments dividing the cylinder into chambers, a piston provided with blades extending to the chambers, a rocking or oscillating shaft on which the piston is mounted, a main rotating shaft and a connection between the rocking or oscillating shaft for transforming the rocking or oscillating movement into a rotary movement, supply and exhaust passages leading to the cylinder-chambers, valves controlling the supply and exhaust passages having valve-stems inwardly projecting toward the oscillating shaft, rocking arms pivoted between the valves adapted to alternately actuate companion valves, a short stud shaft rotatably mounted within the end of the oscillating shaft, and provided with a cam adapted to move the rocking arms which actuate the valves controlling the supply and exhaust passages.

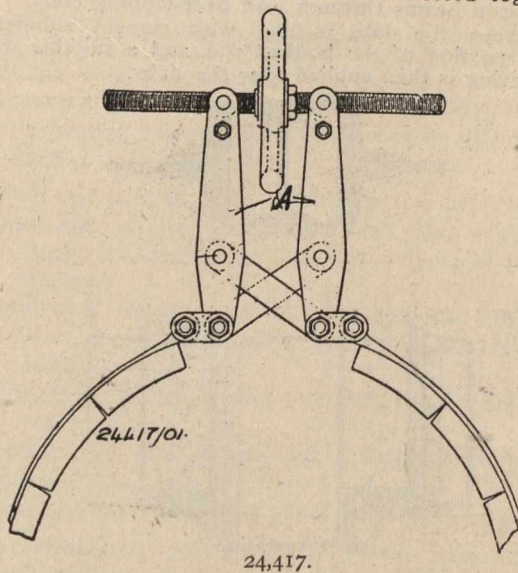
**Steam Turbines.**—Charles G. Y. King.—804,413.—The purpose is to provide a construction of valve-controlling mechanism for turbines wherein the proper operation of the valves is indicated at a point outside the valve-casing. A further object of the invention is to provide a construction of valve mechanism for turbines which is simple and efficient, wherein each valve controlling the supply of steam is effi-



ciently balanced and has connected therewith an indicator extending to a point outside of the valve-casing to indicate when the valve is operating properly. It consists of a plurality of entirely-inclosed individual valves which have an open and a closed position, but no intermediate, for controlling the passage of motive fluid to the turbine, a casing which is common to the valves, and contains a chamber that supplies the ports controlled by the valves, actuators for the valves which are contained in the chest, and are hidden from view, controlling devices for the actuators located external to the valve-casing, which do not indicate the position of the valves and actuators, and means connected to move with each of the valves and its actuator to indicate whether the valve is open or closed.

#### GREAT BRITAIN.

**Brake Mechanism of Winches.**—Lobnitz.—24,417.—The ends of the brake band are connected to the ends of two levers A. Both of these levers are connected together at



the bottom by two cross links, and at the top by a screwed spindle, so that on turning the screwed spindle the brake is quickly applied.

**Stepped Cone Sprocket Wheels or Pulleys for Driving Chains.**—Westinghouse Brake Co., Limited. (Morse Chain Co.)—27,351.—The steps of the sprocket wheel are connected by intermediate frusto-conical surfaces provided with