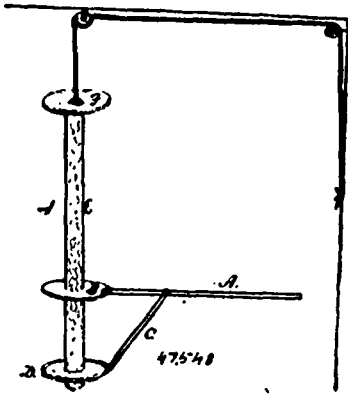
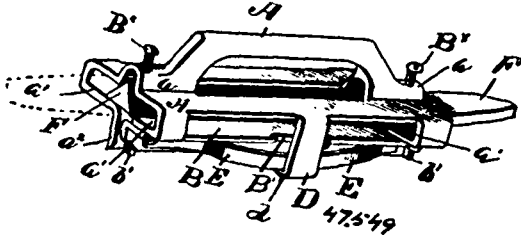


disc B, each arm supported by a brace C, resting on a support D, attached to a shaft E, substantially as and for the purpose specified. 2nd. A rest F, to which the arms A, may be attached or against



which they may rest when not in use and folded substantially as and for the purpose specified. 3rd. A device, circular in structure, and folding, suspended by a rope or strap to elevate and lower, or to be detached and removed if desired, substantially as and for the purpose specified.

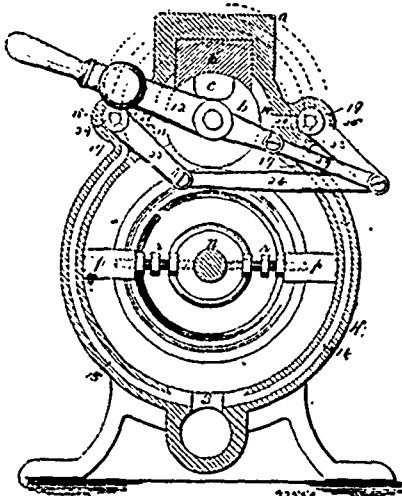
No. 47,549. Saw Jointer and Skate Sharpener Combined. (*Appareil pour affûter les scies et patins*)



Edwin Bertram Pike, Pike Station, New Hampshire, U.S.A., 26th November, 1894; 6 years.

Claim.—1st. The combination with the body portion with file-holding means and a skate or saw-holding jaw, of a spring-pressed and adjustable skate or saw-holding jaw, and a spring held at its centre by a depending portion of the fixed jaw, and arranged parallel with the movable jaw against which its ends bear, as set forth. 2nd. The combination with the body portion with horizontal portions and depending jaw, and depending portion with horizontal lug, of the adjustable jaw and the spring bearing thereon and held by said lug, as set forth. 3rd. The combination with the body portion with horizontal portions, jaw and depending portion with horizontal lug, of the adjustable jaw having lugs at its ends, and the spring held by said depending portion and lugs and bearing against the movable jaw, as set forth.

No. 47,550. Rotary Engine. (*Machine rotative.*)



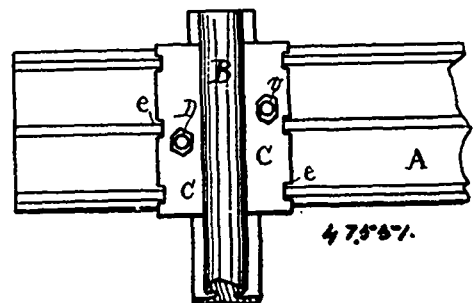
Williard Glenn Adams, Weedsport, New York, U.S.A., 26th November, 1894; 6 years.

Claim.—1st. In a rotary engine the combination with a case, a

piston-head therein and a rotating cut-off valve, of recesses 13, 14, within and on opposite sides of the valve chamber, adapted to take steam to drive the piston-head in opposite directions. 2nd. In a rotary engine, the combination with a case, a piston-head therein and a rotating cut-off valve, and provided with a steam port, and a tubular shaft provided with a port adapted to register with the port in said valve, of recesses 13, 14, within and on opposite sides of the valve chamber, adapted to take steam to drive the piston-head in oppositedirections. 3rd. In a rotary engine, a cut-off valve provided with a steam port and mounted upon a tubular shaft provided with a port registering with that of said valve, a steam pipe within said shaft provided with ports adapted to register with said shaft and valve ports, and means to rotate said steam pipe independently, to change the engagement of said ports, in combination. 4th. In a rotary engine, a cut-off valve provided with a steam port and mounted upon a tubular shaft provided with a port registering with that of said valve, a steam pipe within said shaft provided with ports adapted to register with said shaft port, and means to rotate said steam pipe, independently to change the engagement of said ports, in combination with recesses in the walls of said valve chamber and on opposite sides thereof. 5th. In a rotary engine, the combination with a case, a rotating piston-head and its piston mounted therein, and an exhaust port, of passages in said case and opposite sides thereof, connected to the exhaust port, and means to close one passage and open the other, according to the direction of the rotation of said head. 6th. In a rotary engine, the combination with a case, a rotating piston-head and its pistons mounted therein, a cut-off valve mounted in a chamber upon said case, recesses in the walls of said valve-chamber and upon opposite sides thereof and an exhaust port, of passages in the opposite walls of said case connected at one end to said exhaust port, of passages in the opposite walls of said case connected at one end to said exhaust port and at their other ends to the respective recesses aforesaid and means to close one passage and open the other when the rotation of the piston-head is reversed. 7th. In a rotary engine, the combination with a steam inlet pipe, of a rotatable steam pipe provided at one end with inlet ports, always registering therewith and at the other end with discharge ports, one of which normally registers with the cut-off valve, a cut-off valve and means to rotate said steam pipe to throw one of said discharge ports into register and the other out of register with the said cut-off valve. 8th. In a rotary engine, the combination with a case, a piston-head therein, a cut-off valve in said case, a steam inlet pipe, a rotatable steam pipe provided at one end with inlet ports always registering with said inlet pipe, and at the other end with discharge ports, one of which normally registers with the cut-off valve, and means to rotate said steam pipe, to throw one of said discharge ports into register, and the other out of register with said cut-off valve, of an exhaust port in the case, recesses in and upon opposite sides of the cut-off valve-chamber, passages in the case connected at one end to the exhaust port and at their other end to said recesses, and means to close one passage and rotate the other when said steam pipe is rotated to reverse the engine. 9th. A rotary engine, comprising a case, a head therein concentric therewith, pistons radially mounted in the head and fixedly adjustable in their projection beyond it, a cut-off valve mounted in a chamber connected to the steam chamber between the pistons, a rotary tubular shaft carrying said valve and provided with a port adapted to register with the steam inlet pipe, and a recess in the inner wall of the case beyond and extending from the exhaust port, substantially to the steam inlet, in combination. 10th. In a rotary engine, the combination with the case, the head therein and the pistons in the head, of an exhaust port and a recess in the inner wall of the case beyond the exhaust and extending substantially to the steam inlet.

No. 47,551. Metal Tie and Nut Lock.

(*Traverse métallique et arrête-écrou.*)



Jasper Pemberton Warner, Decatur, Michigan, U.S.A., 27th November, 1894; 6 years.

Claim.—1st. The combination of suitable ties, rails mounted thereon, spring metal binding-plates, bowed upward when viewed in cross-section, prior to being bound, and adapted to straighten after being bound, and binding bolts and nuts, whereby the tendency of the plates to assume their normal shape locks the nuts, substantially as set forth. 2nd. The combination of channelled metal ties,