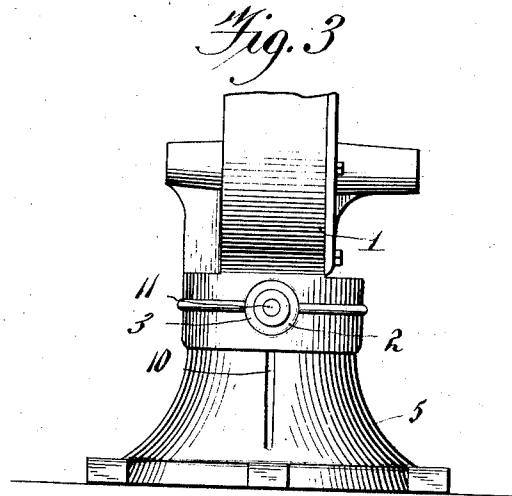
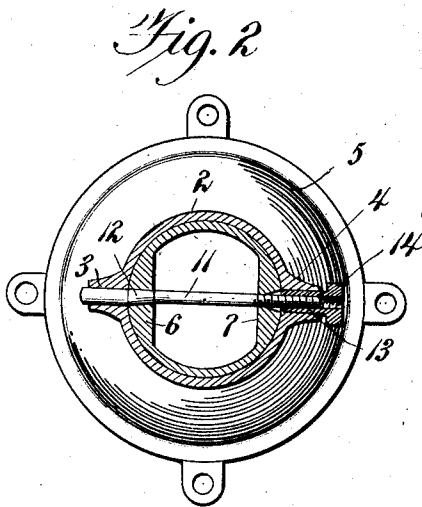
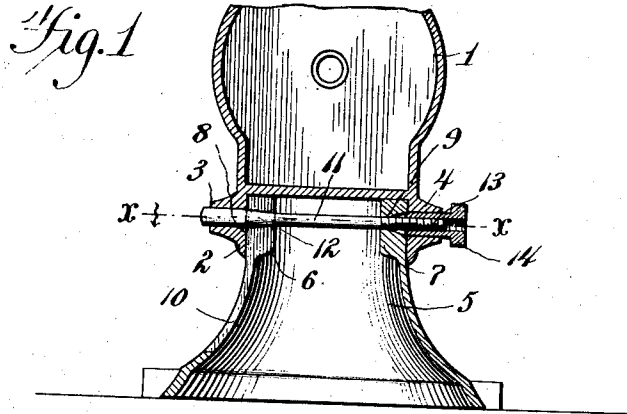


J. H. KINSTING.
DETACHABLE BASE FOR ENGINES.
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1,034,250.

Patented July 30, 1912.



Witnesses

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JOHN H. KINSTING, OF MONROE, MICHIGAN.

DETACHABLE BASE FOR ENGINES.

1,034,250.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN H. KINSTING, a citizen of the United States, residing at Monroe, in the county of Monroe and State of Michigan, have invented new and useful Improvements in Detachable Bases for Engines, of which the following is a specification.

The present invention provides an engine which combines the advantages of being portable as well as stationary, thereby admitting of the main frame and the base being detachable and when secured possessing all the advantages of a unit machine, this feature being essentially advantageous in pumping or spraying and also admitting of the setting of the engine being easily effected so that the pulleys may aline.

The invention relates to the joint and to the securing means had between the frame or crank case of the engine and the base, whereby the frame may be disconnected from the base or secured thereto in a comparatively short time and when in position the frame and base form practically a unitary structure, since there is no possible play or vibration between the parts.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawing, and pointed out in the appended claims.

Referring to the drawing, forming a part of the specification, Figure 1 is a vertical central section of the lower portion of the frame or crank case of an engine and base, showing the joint formed between them. Fig. 2 is a horizontal section on the line $x-x$ of Fig. 1. Fig. 3 is a front view of the parts shown in Fig. 1. Fig. 4 is a detail view of the connecting bolt.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawing, by the same reference characters.

The numeral 1 designates the main frame or crank case of the engine which may be of any make or design. An annular flange 2 is formed at the lower end of the frame or crank case 1 and is machined upon its inner wall so as to present a true circle. Bosses 3 and 4 are formed upon the flange 2 at diametrically opposite points and these bosses are formed with transversely alined openings. The base 5 has its upper end of

circular form and of such a diameter as to fit snugly within the annular flange 2, the part designed to enter the flange being machined so as to fit close within the annular flange. The upper portion of the base is thickened at diametrically opposite points, as indicated at 6 and 7, and openings are formed in the thickened portions 6 and 7 in position to register with the openings formed in the bosses 3 and 4. The opening 8 formed in the thickened part 6 is tapered, the larger end facing outward. The opening 9 formed in the part 7 has its inner portion straight and its outer portion tapered. The base is formed with a cut 10 which extends through the thickened portion 6 and terminates a short distance from the lower end of the base. The cut 10 admits of the parts of the base bordering thereon to be separated so as to expand the upper portion of the base fitting within the annular flange 2, thereby preventing any possibility of vibration or play between the base and the engine frame when the parts are assembled. The cut 10 extends through the middle portion of the tapered opening 8 and through the upper end of the base.

A connecting pin 11 has its end portions fitted in the openings formed in the base and engine frame and serves to connect said parts. One end of the connecting pin is enlarged and the inner portion of the enlargement is tapered, as indicated at 12, to correspond with the taper of the opening 8. The opposite end portion of the connecting pin is threaded, as indicated at 13, and receives a nut 14, the latter having a tubular shank which passes through the opening formed in the boss 4, the outer end of said tubular shank being tapered to enter the tapered end of the opening formed in the thickened portion 7 of the base. The tapered portion 12 of the connecting pin is adapted to fit within the tapered opening 8 when the pin is in position and when the nut 14 is tightened upon the threaded end of the connecting pin the tapered portion 12 of the connecting pin is drawn into the tapered opening 8 with such a force as to cause a spreading of the upper part of the base, thereby causing it to bear against the inner wall of the flange 2 with such a pressure as to prevent any possible movement, vibration or play between the base and frame of the engine, thereby resulting in the formation of a structure substantially

the same as a unit machine, while at the same time admitting of the engine being quickly disconnected from the base for any purpose whatsoever. When the nut 14 is removed from the threaded end of the connecting pin 11 and the latter is drawn outward the frame of the engine may be lifted from the base or placed in position thereon and when the connecting pin is in position and tightened by turning the nut 14 tight upon the connecting pin the joint between the frame of the engine and the base is not only made secure but is made absolutely tight against any possible movement or vibration which is essential in the construction of an engine.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention what is claimed as new, is:—

1. In an engine, the combination of a base and a frame detachably fitted thereto, one of the parts having an annular flange to receive a circular part of the other, both of said parts having registering openings at

diametrically opposite points, the inner part being split in line with one of the openings, and a connecting pin passing through the registering openings of the parts and having a tapered portion to fit within an opening of the inner part to effect a spreading thereof to insure a tight joint between the two parts when the engine frame and base are in position.

2. In combination an engine base having its upper portion made circular and provided in one side with a cut, said base having its upper portion provided with openings at diametrically opposite points, said cut intersecting one of said openings, an engine frame having an annular flange to receive the circular portion of the base and provided at opposite points with openings to register with the openings in the upper circular portion of the base, and a connecting pin passing through the registering openings formed in the matching portions of the engine frame and base and having a tapered portion fitting within the opening of the base in line with the before mentioned cut, the opposite end of said connecting pin being threaded, and a nut mounted upon the threaded end of the connecting pin for exerting a pull thereon to effect a spreading of the upper portion of the base.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. KINSTING.

Witnesses:

M. R. BRIGHTBILL,
FRED H. KINSTING.