

(No Model.)

F. C. CHASE & D. A. B. BAILEY.

WRIST PIN FOR ENGINES.

No. 393,211.

Patented Nov. 20, 1888.

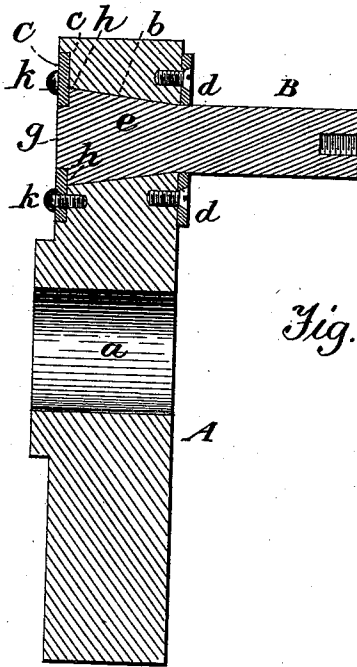


Fig. 1.

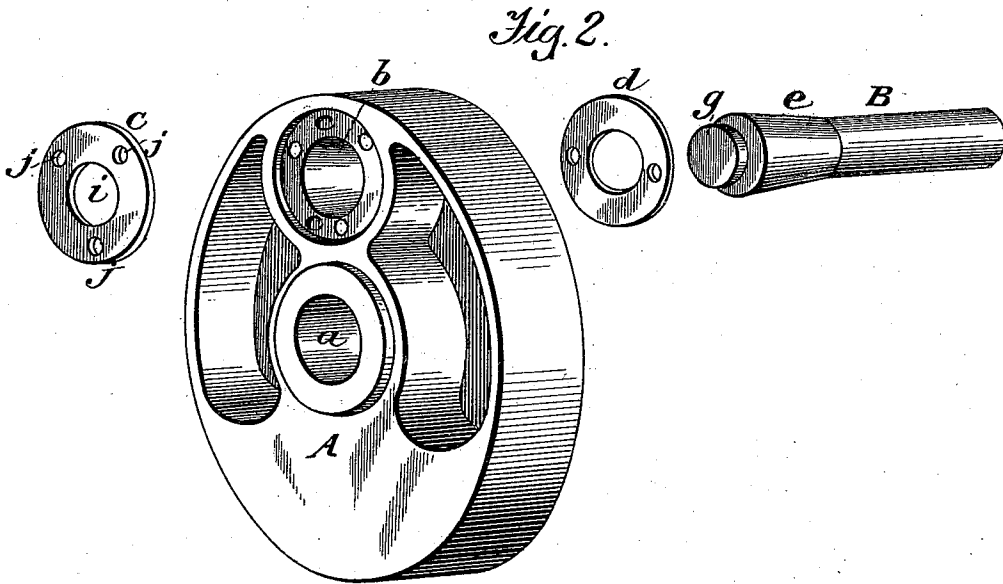


Fig. 2.

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UNITED STATES PATENT OFFICE.

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WRIST-PIN FOR ENGINES.

SPECIFICATION forming part of Letters Patent No. 393,211, dated November 20, 1888.

Application filed February 28, 1888. Serial No. 265,579. (No model.)

To all whom it may concern:

Be it known that we, FRED. C. CHASE and DANIEL A. B. BAILEY, citizens of the United States, residing, respectively, at Lowville, Lewis county, New York, and Potsdam, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Wrist-Pins for Engines; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in wrist-pins for engines; and it has for its object to provide a wrist-pin and means for so connecting it to the disk that the same will stand a great amount of strain and yet allow of the ready removal of the pin, should it become broken or injured, and the easy and quick insertion of a new one in its place.

The invention consists in the peculiar combinations and the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the claims.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a central section through an engine-disk provided with our improvements, and Fig. 2 is a perspective view of the same with the parts separated but shown in their relative positions.

Referring by letter to the details of the drawings, A designates a disk such as is ordinarily used in steam-engines and which carries the wrist-pin. This disk is provided centrally with the aperture *a*, designed to receive the shaft. (Not shown.) Near its outer edge this disk is formed with an aperture, *b*, which is tapered, as shown, and upon the rear face of the disk surrounding the aperture is formed a countersunk recess, *c*. (Shown

as circular, but which may be square, oval, or of such other shape as may be preferred.) Secured to the outer face of the disk, by means of screws or otherwise, is the collar or washer *d*, which serves to prevent the pitman from contacting with the disk.

The wrist-pin B has a head, *e*, which is tapered to correspond with the taper of the aperture in the disk, and the face of this pin is formed with a boss or projection, *g*, forming a shoulder, *h*, which shoulder, when the pin is in position, is designed to be flush with the bottom of the recess or chamber *c* and the end of the pin flush with the face of the disk.

C is a collar of a shape to snugly fit the recess *c*, and with an aperture, *i*, to fit the projection *g* on the pin. It is also provided with holes *j* to receive screws, by means of which it is secured in position in the recess *c*, and when thus in position it is flush with the face of the disk.

The parts being constructed as above described, the operation is as follows: The wrist-pin is inserted in the tapered aperture of the disk until the shoulder *h* is flush with the bottom of the recess *c*. The collar C is then put on the projection *g* of the pin and seated in the recess *c*, where it is firmly secured by the screws *k*, engaging screw-threaded openings in the disk. It will be seen that by this arrangement of parts the pin, when once in place, is rigidly fixed, so that it cannot be accidentally displaced, and yet by the removal of the collar C the pin is free to be taken out for repair or otherwise. While we have shown the pin with a projection extending beyond the bottom of the recess *c*, it is evident that the projection may be omitted and the head of the pin be flush with the bottom of the recess and the collar or plate C be made to fill the recess and cover the end of the pin.

Having thus described our invention, what we claim to be new, and desire to secure by Letters Patent, is—

1. The combination, with the disk having a tapered aperture, and recess *c*, surrounding said aperture at the larger end thereof, of the wrist-pin having a tapered head fitting said

aperture and a collar fitting said recess and secured therein to prevent endwise movement of the pin, substantially as described.

2. The combination, with the disk having tapered aperture and recess *c*, of the wrist-pin having tapered head fitting said aperture, a projection, *g*, and shoulder *h*, and a collar fitting said recess and secured therein and engaging said shoulder, substantially as and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

FRED. C. CHASE.

DANIEL A. B. BAILEY.

Witnesses to Fred. C. Chase's signature:

W. BOWMAN,

GEORGE SHERWOOD.

Witnesses to Daniel A. B. Bailey's signature:

C. E. SANFORD,

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