

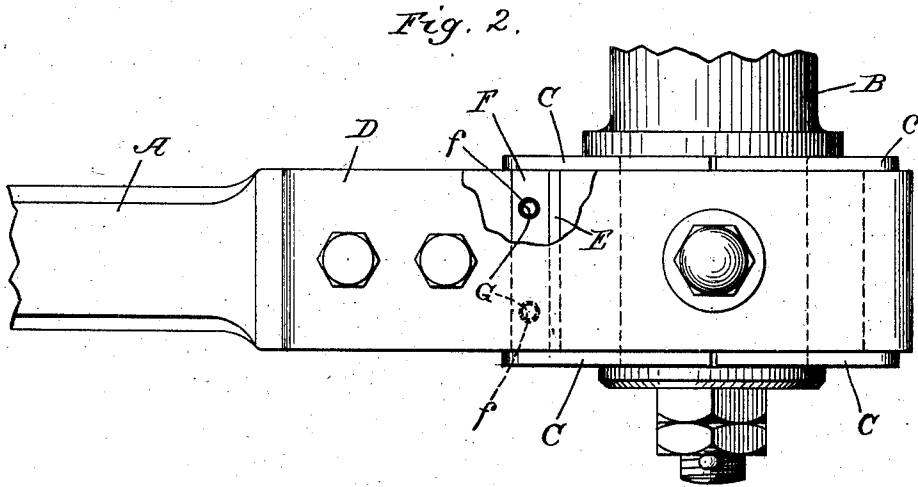
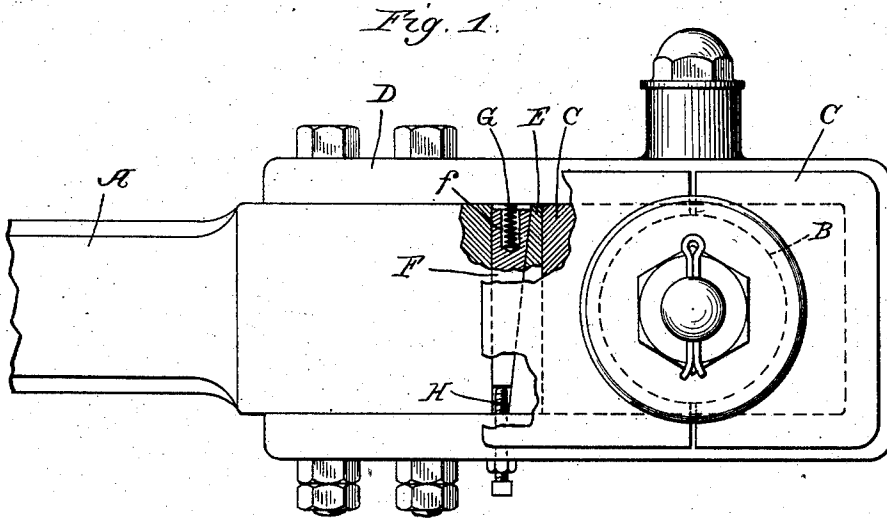
No. 711,241.

Patented Oct. 14, 1902.

E. J. BREWSTER.
AUTOMATIC CONNECTING ROD KEY.

(Application filed July 10, 1901.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

ELMER J. BREWSTER, OF CHICAGO, ILLINOIS.

AUTOMATIC CONNECTING-ROD KEY.

SPECIFICATION forming part of Letters Patent No. 711,241, dated October 14, 1902.

Application filed July 10, 1901. Serial No. 67,699. (No model.)

To all whom it may concern:

Be it known that I, ELMER J. BREWSTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Connecting-Rod Keys, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The purpose of this invention is to provide an improved joint for a connecting-rod, especially the connecting-rod of an engine, by which the key for taking up the lost motion in the pivot-bearing of such connecting-rod shall be caused to act automatically to perform that function and shall also have a bearing against the gib and allow the gib the bearing against the brass for substantially the full width of the strap, which encompasses and retains the brasses.

It consists of details of construction which are set out in the claims.

In the drawings, Figure 1 is a side elevation of a portion of a connecting-rod comprising its joint with the pivot-pin, some parts being broken away to show interior details. Fig. 2 is a plan of the same also broken away in parts.

In the drawings, A is the connecting-rod; B, the pivot-pin or wrist-pin; C C, the brasses of the wrist-pin bearing.

D is the strap which encompasses the brasses.

E is a gib lodged against the inner brass between the two sides of the strap, being of the full width of the latter and having bearing, therefore, to that full width against the brass.

F is the take-up key, which is tapered to correspond to the taper of the gib E and also of the full width of said gib and of the strap, but shorter than the width between the two sides of the strap—that is, than the height of the brasses.

G is a spring lodged between the wider end of the key F and the strap at that side, the key being preferably provided with a slight socket *f* to seat the end of the spring, which reacts thus between the key and the side of the strap, tending to thrust the key inward to

cause it to take up any lost motion in the joint. Preferably, a plurality of springs G G may be employed, or at least two in the width of the head of the key. The tension of these springs is designed to be light, being only sufficient to prevent the key from jolting upward, but not sufficient to drive it down forcibly as to make the joint too tight.

I have referred to the wider end of the key as the upper end; but this is not essential, since the springs will operate to thrust the key in the direction to take up lost motion in whatever direction the joint may stand.

In order to prevent the possibility of the key dropping into the limit, a check-screw H may be provided, set through the strap toward the narrow end to limit the thrust of the latter under the impulse of the springs G, being used thus (a) in assembling the parts to hold the key up and keep the bearing open when applying the brasses about the pivot-pin, and (b) to loosen the joint temporarily when the brasses become heated in moving.

I claim—

1. In a connecting-rod joint, in combination with the strap constructed to embrace the brasses of the wrist-pin bearing, a tapered key and a correspondingly-tapered gib, each of said tapered parts being of the full width of the strap, lodged between the sides of the latter, the key being shorter than the distance between said sides, and the gib being the full length of said distance, and a spring interposed between said strap and the wider end of the key, tending to impel it toward the opposite side of the strap.

2. In a connecting-rod joint, the strap constructed to embrace the brasses of the pivot-pin bearing, the tapered key and a correspondingly-tapered gib, each of said tapered parts being of the full width of the strap, the key being shorter than the distance between the sides of the strap; a spring interposed between the strap and the wider end of the key, tending to impel it toward the other end; and a check-screw set through the opposite side of the strap toward the narrower end of the key, to limit the thrust of the key.

3. In a connecting-rod joint, in combination

with the strap constructed to embrace the
brasses of the wrist-pin bearing, a tapered key
and a correspondingly-tapered gib, each of
said tapered parts being of the full width of
5 the strap, lodged between the sides of the lat-
ter, the key being shorter than the distance
between said sides, and the gib being the full
length of said distance, and a spring acting on

the key tending to impel it longitudinally in
wedging direction.

Chicago, June 17, 1901.

ELMER J. BREWSTER.

In presence of—

CHAS. S. BURTON,
ADNA H. BOWEN, Jr.