May 12, 1931. D. C. MAIER 1,804,699

SHAFT KEYING DEVICE

Filed Jan. 20, 1922

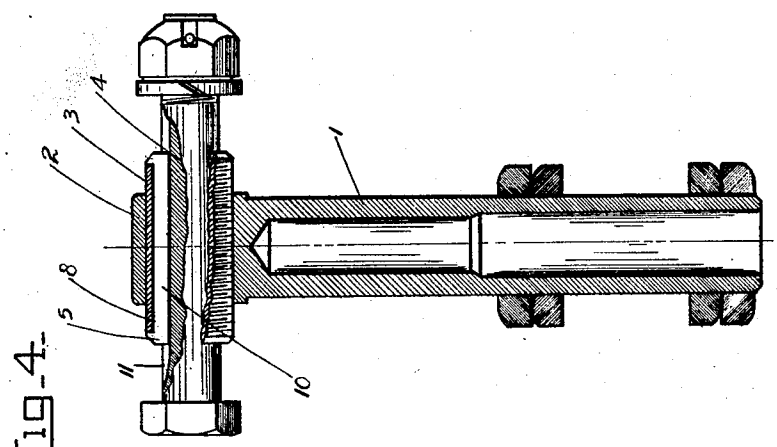


Fig. 4.

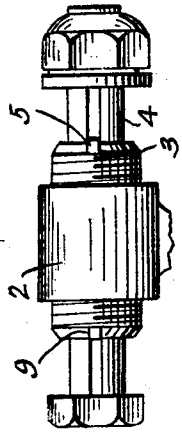


Fig. 5.

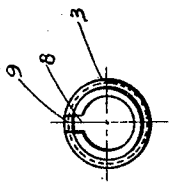


Fig. 1.

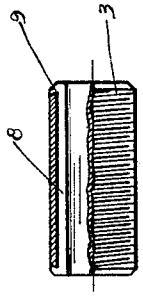


Fig. 2.

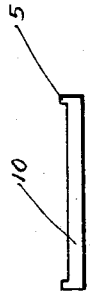


Fig. 3.

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UNITED STATES PATENT OFFICE

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SHAFT KEYING DEVICE

Application filed January 20, 1922. Serial No. 530,721.

This invention relates to improvements in shaft keying devices for fastening sleeves or the like to shafts.

The object of this invention is to provide a key which will not be readily sheared. To this end it is proposed to provide a key, the body of which will lie within a longitudinal recess in the shaft to which it is applied, the upper portion of the body protruding from said recess to engage a corresponding recess in the sleeve to be fastened to said shaft. It is further proposed to arrange the ends of the key so that they will extend beyond the sleeve and be adapted to be bent or peened over the end of the sleeve for the purpose of preventing displacement of the key by an accidental longitudinal movement thereof.

With the foregoing and other objects in view, the invention consists in the novel construction, combination of parts and in the details of construction hereinafter described and claimed and illustrated in the drawings, in which:

Figure 1 is a longitudinal section of the improved device.

Figure 2 is an end view of the sleeve per se showing the recess to receive the key and the slot to receive the bent end of the key.

Figure 3 is a side view of the sleeve per se.

Figure 4 is a side view of the key and

Figure 5 is a top plan view of the device as shown in Figure 1.

Referring more particularly to the drawings, numeral 1 represents an upright post provided with an interiorly screw-threaded barrel 2 to receive an externally screw-threaded sleeve 3.

The shaft 4 and the sleeve 3 are provided with opposing longitudinal recesses 11 and 8 to receive the key 10. At each end of the sleeve 3 there is formed a recess 9 to receive the bent-over portion 5 of the key 10.

The key 10, by reason of its engagement with the opposing slots 11 and 8 in the shaft 4 and sleeve 3 respectively, effectively prevents relative rotary movement of said shaft and sleeve. The entire length of the key engages the two above mentioned slots 11 and 8, thus reducing the possibility of the key becoming sheared. This feature is a distinct advantage over the type of key in which the major portion thereof rests within the one member to be keyed, while only a lug or projection of the key engages the other member to be keyed, in which case the efficiency of the key is impaired as a fracture of the lug or projection renders the key inoperative and results in an undesired relative rotation between the two members to be keyed together.

A further advantage of the proposed device resides in the feature of the bending or peening of the key over the ends of the sleeve, there being an inwardly extending angular slot as shown in Fig. 3 in each end of the sleeve to receive said peened portion in order that a nut or the like (not shown) may be screwed on the sleeve and lie flush at either end thereof. By this construction there is effectively eliminated the possibility of longitudinal movement or removal of the key in the sleeve when in operation.

Having thus described my invention, I claim:

The combination with a shaft having a longitudinal recess in the surface thereof, of a sleeve mounted thereon, said sleeve having a corresponding longitudinal recess opposed to said shaft recess, a key extending throughout the length of said sleeve and engaging in both of said recesses and projecting ears integral with said key and on the ends thereof for securing said key to said sleeve, said sleeve being provided with angularly extending surfaces engaged by said projecting ears on said key ends, said angularly extending surfaces being cut at an acute angle relative to the longitudinal recess in said sleeve.

In testimony whereof I have affixed my signature.

DWIGHT C. MAIER.