Sept. 23, 1958 J. L. ARTHUR 2,852,949

PULLEY CONSTRUCTION

Filed July 1, 1957

FIG 1

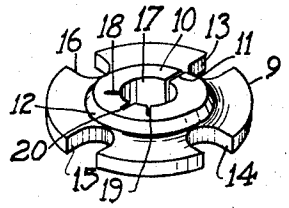


FIG 2

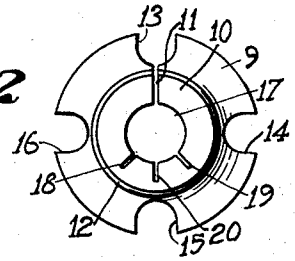


FIG 3

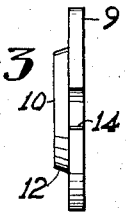


FIG 4

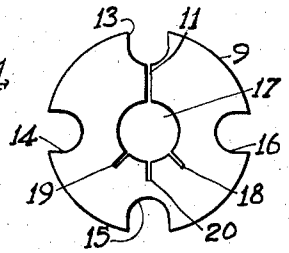
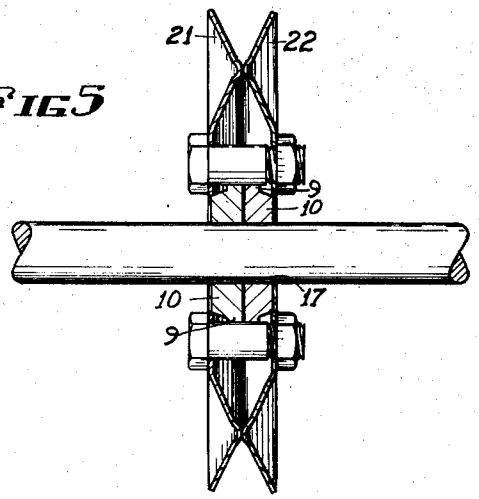


FIG 5



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2,852,949

PULLEY CONSTRUCTION

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Application July 1, 1957, Serial No. 668,979

5 Claims. (Cl. 74—230.3)

The present invention concerns a pulley of the type forming the subject of United States Patent No. 2,764,896.

In the prior specification there is described and claimed an improved pulley comprising complementary side-forming members placed back to back to form a V groove between their outer edges and to form spaced apart central bosses each having a central opening, a slotted locking piece between the central bosses of the side-forming members which piece is chamfered at each end to engage the edges of the central openings of the said side-forming members, and means to force the said side-forming members towards each other to compress the locking piece by virtue of the edges of the central openings of the said side-forming members acting on the chamfered end sections of the locking piece.

An object of the present invention is to facilitate manufacture of the slotted locking piece.

According to the present invention the locking piece is made in two halves subsequently assembled back to back, preferably with the slot in one half in an angular position different from that of the other half.

Such half-pieces may conveniently be made as pressure die-castings in light alloy.

The possibility of arranging the slots in 180° angular opposed relationship enables an improved fit on the shaft to be obtained due to any distortion from the rotationally generated shape of one half locking to a large extent compensating for a similar distortion on the other piece.

The invention will be described further by way of example with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view,

Fig. 2 is a front view,

Fig. 3 is a side view,

Fig. 4 is a perspective view, and

Fig. 5 is a transverse section of a pulley with the locking pieces in position.

A half locking piece which comprises a flange **9** and a projection **10** as shown has a slot **11** and is chamfered at **12** to engage the edges of central openings in side forming members (not shown). The half piece has four U shaped recesses **13**, **14**, **15** and **16**, in its outer periphery. The slot **11** extends outwardly from the central bore **17** in the half locking piece, preferably into the base of the recess **13**. Auxiliary blind slots **18** and **19** extending outwardly from the bore **17** and disposed at 120° angular intervals relative to the slot **11** may be provided, to improve flexibility of the piece. If the slots in the piece are made by slitting with a saw instead of during a die-casting operation it will be preferable to replace the two auxiliary slots **18** and **19** by a single blind slot **20**.

In use two half pieces as shown are assembled with their rear faces (Fig. 4) in contact, that is, back to back but with the slot **11** of the first half piece adjacent the recess **15** of the second half piece, that is, angularly displaced by 180° from the slot **11** of the second half piece.

In Figure 5 the two pulley members are designated **21** and **22**.

It will be clear from Figure 5 that if the members **21** and **22** are running out of true they can be lined up on the shaft by loosening the bolts and tapping the pulley. This is possible as the chamfered edges **12** are located in the openings in the pulley members **21** and **22** and can be lined up as required. After lining up the bolts are tightened and the units then remain in position.

What I claim is:

1. For an improved pulley of the type comprising complementary side-forming members placed back to back to form a V-groove between their outer edges and to form spaced apart central bosses each having a central opening the edges of which engage a slotted locking piece to compress it when the bosses are pulled inwards by a series of pulley tensioning members; an improved locking piece comprising two half locking pieces arranged to be assembled back to back and each of said half locking pieces comprises a back flange having notches to at least partly surround said pulley tensioning members, and an outer chamfered projection to engage the edges of said central boss of a respective one of said side-forming members of the pulley, said flange and projection having a central bore to engage a shaft, and having a slot outwards from said bore, said slot in each of said two half locking pieces allows each of said two half locking pieces to be compressed.

2. For an improved pulley of the type comprising complementary side-forming members placed back to back to form a V groove between their outer edges and to form spaced apart central bosses each having a central opening the edges of which engage a slotted locking piece to compress it when the bosses are pulled inwards by a series of pulley tensioning members; an improved locking piece comprising two half locking pieces arranged to be assembled back to back and each of said half locking pieces comprises a back flange having notches to at least partly surround said pulley tensioning members, and an outer chamfered projection to engage the edges of said central boss of each said side-forming members of the pulley, said flange and projection having a central bore to engage a shaft, and having a first slot outwards from said bore to allow each of said half locking pieces to be compressed and a blind slot extending outwards from the central bore opposite said first slot.

3. For an improved pulley of the type comprising complementary side-forming members placed back to back to form a V groove between their outer edges and to form spaced apart central bosses each having a central opening the edges of which engage a slotted locking piece to compress it when the bosses are pulled inwards by a series of pulley tensioning members; an improved locking piece comprising two half locking pieces arranged to be assembled back to back and each of said half locking pieces comprises a back flange having notches to at least partly surround said pulley tensioning members, and an outer chamfered projection to engage the edges of said central boss of each of said side-forming members of the pulley, said flange and projection having a central bore to engage a shaft, and having a first slot outwards from said bore to allow each half locking piece to be compressed and a series of blind slots extending outward from the central bore to increase flexibility.

4. For an improved pulley of the type comprising complementary side-forming members placed back to back to form a V groove between their outer edges and to form spaced apart central bosses each having a central opening the edges of which engage a slotted locking piece to compress it when the bosses are pulled inwards by a series of pulley tensioning members; an improved locking

piece comprising two half locking pieces arranged to be assembled back to back and each of said half locking pieces comprises a back flange having open notches of U shape to at least partly surround said pulley tensioning members, and an outer chamfered projection to engage the edges of said central boss of a respective one of said side-forming members of the pulley, said flange and projection having a central bore to engage a shaft, and having a slot outwards from said bore to allow each of said two half locking pieces to be compressed.

5. For an improved pulley of the type comprising complementary side-forming members placed back to back to form a V groove between their outer edges and to form spaced apart central bosses each having a central opening the edges of which engage a slotted locking piece to compress it when the bosses are pulled inwards by a serise of pulley tensioning members; an improved locking piece comprising two half locking pieces arranged to be

assembled back to back and each of said half locking pieces comprises a back flange having open notches of U shape to at least partly surround said pulley tensioning members, and an outer chamfered projections to engage the edges of said central boss of a respective one of said side-forming members of the pulley, said flange and projection having a central bore to engage a shaft, and having a first slot outwards from said bore to allow each of said two half locking pieces to be compressed and a blind slot opposite said first slot.

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