

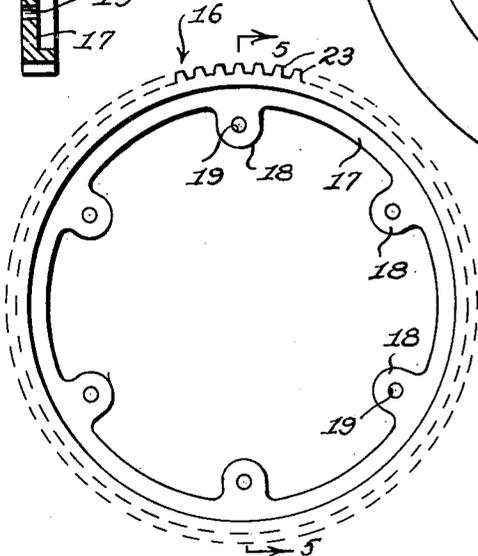
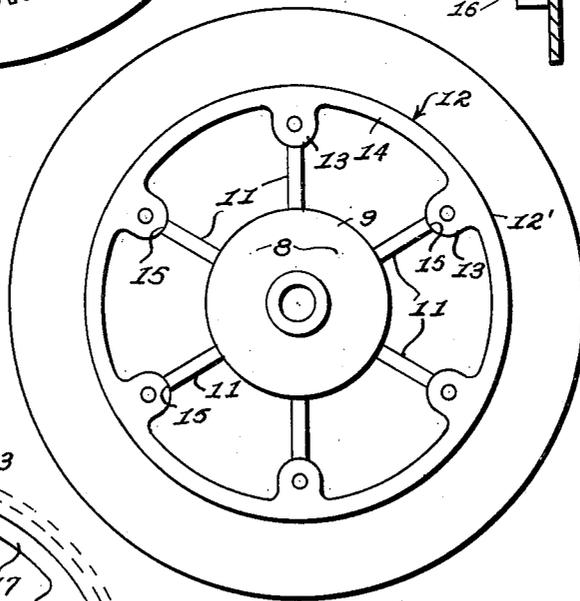
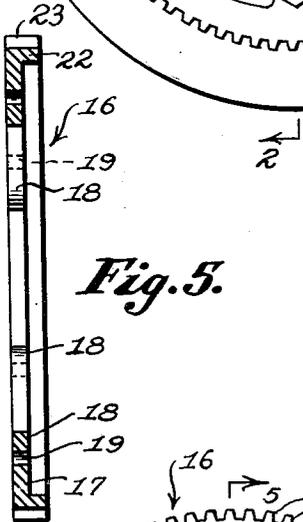
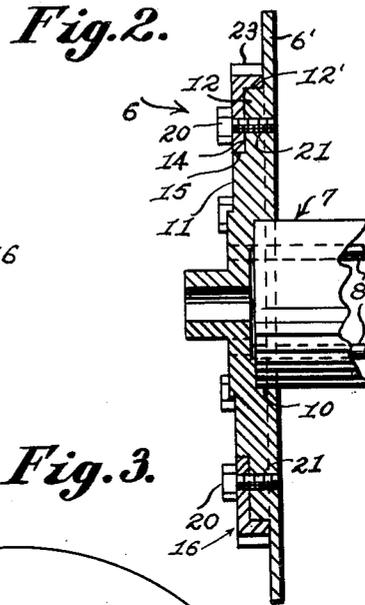
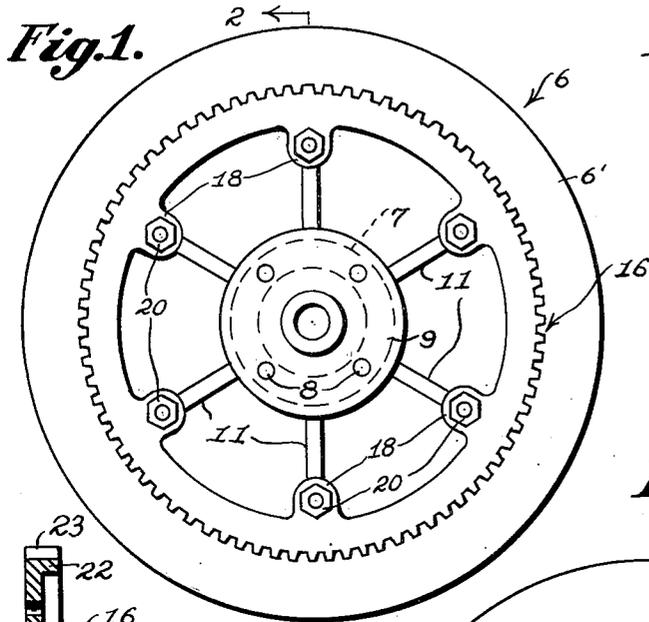
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C. A. PENDLETON

2,548,390

BEAM HEAD

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**Fig. 4.**

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# UNITED STATES PATENT OFFICE

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## BEAM HEAD

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2 Claims. (Cl. 242—124)

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This invention relates to improvements in yarn beams having a usually wooden core and a ring gear equipped head, usually of cast iron, the primary object of the invention being to provide an improved beam of this character wherein the ring gear is readily replaceable on the head so as to eliminate the necessity otherwise present, to remove and replace the entire head, with consequent likelihood of damage to the yarn requiring rewinding thereof, whenever undue wear or breakage of the ring gear occurs.

Other important objects and advantageous features of the invention will be apparent from the following description and accompanying drawings, wherein for purposes of illustration only, a specific embodiment of the invention is set forth in detail.

In the drawings:

Figure 1 is an outboard elevation with the removable ring gear in place on the head.

Figure 2 is a fragmentary transverse vertical section taken on the line 2—2 of Figure 1.

Figure 3 is an outboard elevation showing the head with the ring gear removed.

Figure 4 is an inboard elevation of the ring gear, and,

Figure 5 is a transverse vertical section taken on the line 5—5 of Figure 4.

Referring in detail to the drawings, the numeral 6 generally designates the improved beam head, adapted to be connected to one end of the core 7, by suitable means such as circumferentially spaced bolt rods 8 traversing the hub 9 and extending to the opposite head (not shown), through the core 7, so as to seat the adjacent end of the core in the socket 10 provided in the inboard side of the head 6, as indicated in Figure 2.

The improved head 6 comprises a preferably cast iron disk 6' having circumferentially spaced radial reinforcing ribs or spokes 11 on the outboard side thereof radiating from the hub 9 to an annular enlargement 12 on the same side of the disk, the periphery 12' of the annulus 12 being inwardly spaced from the edge of the disk and acting as a ring gear supporting shoulder. Where the ribs 11 join the annulus 12 they have laterally enlarged portions 13 flush with the outboard face 14 of the annulus 12, with the ribs 11 projecting farther outwardly in an outboard direction to define ring gear supporting shoulders 15.

The removable ring gear 16 may be made of any suitable material preferably of a more wear resistant character than that of the disk 6', although the ring gear may be of the same material. The ring gear 16 comprises a flat annulus 17 from whose radially inward edge project flat lugs 18 of the same shape and size as the laterally enlarged portions 13, apertured at 19 to pass stud bolts 20 which thread into bores 21 in the por-

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tions 13. The radially outward edge of the annulus 17 has a right angular inboard flange 22 on whose periphery are formed the gear teeth 23.

The parts described are so proportioned that the radially inward ends of the lugs 18 engage the rib shoulders 15 at the same time that the inboard flange 22 of the ring gear conformably engages the annular shoulder 12', with the inboard side of the ring gear annulus 17 flush against the outboard face of the disk annulus 12, with the stud bolts 20 tightened.

It is obvious that whenever it is desired to replace ring gear 16 on the head 6, it is necessary only to loosen the bolts 20, remove the damaged ring gear and replace the same with another ring gear instead of having to remove the head 6 from the core 7.

What is claimed is:

1. A geared head for a yarn beam comprising a disk having a hub for axial attachment to an end of the core of the beam, spokes radiating from said hub, and a concentric annulus on the outer ends of said spokes, said annulus being step cut on its outboard side to provide concentric annular shoulders, a ring gear having an externally toothed annular rim surrounding and engaging the outer one of said shoulders and radially inwardly projecting lugs engaging the inner one of said shoulders, said inner shoulder being formed on said spokes, and bolts traversing said projecting portions and threaded into said spokes.

2. A geared head for a yarn beam comprising a hub securable to an end of the beam, spokes radiating from said hub, an annular concentric rim on the outer ends of said spokes, outer end portions of said spokes being widened with the outboard sides of the widened portions cut away to define spoke shoulders at the radially inward ends of said widened portions, the outboard side of said rim being annularly cut away to define an annular shoulder radially spaced from said spoke shoulders, a removable ring gear comprising a rim having radially outwardly projecting teeth, said rim surrounding and engaging said annular shoulder, radially inwardly directed lugs on said rim seating on said widened portions and engaging said spoke shoulders, and bolts traversing said projections and threaded into said widened portions.

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