R. E. THOMAS.

SPROCKET AND GEAR WHEEL.

APPLICATION FILED MAY 1, 1916.

1,206,172.

Patented Nov. 28, 1916

FIG. 1.

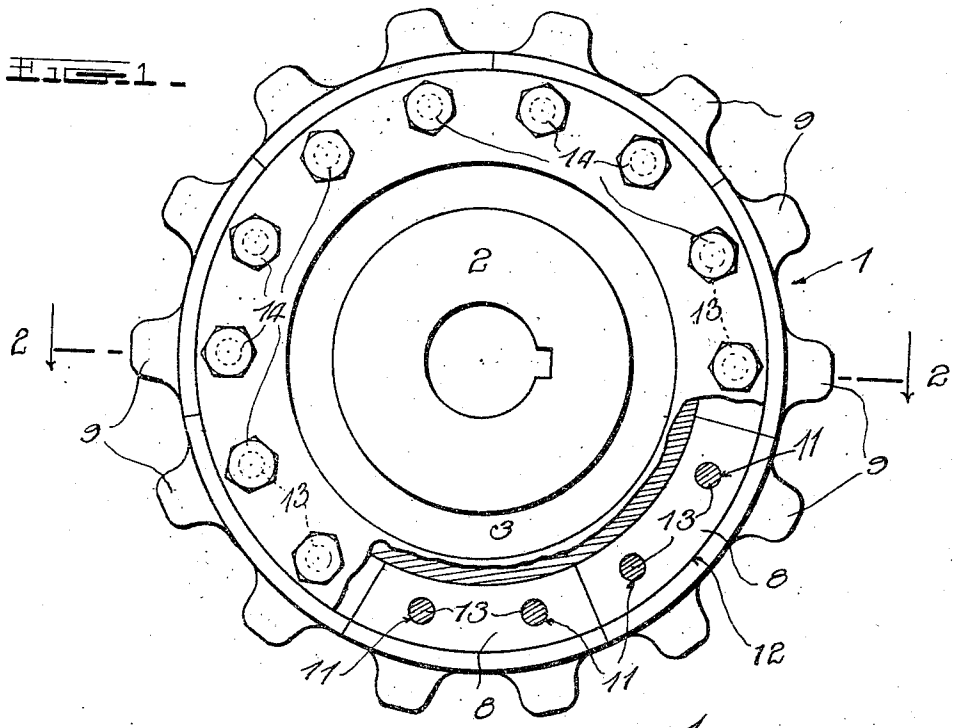


FIG. 2.

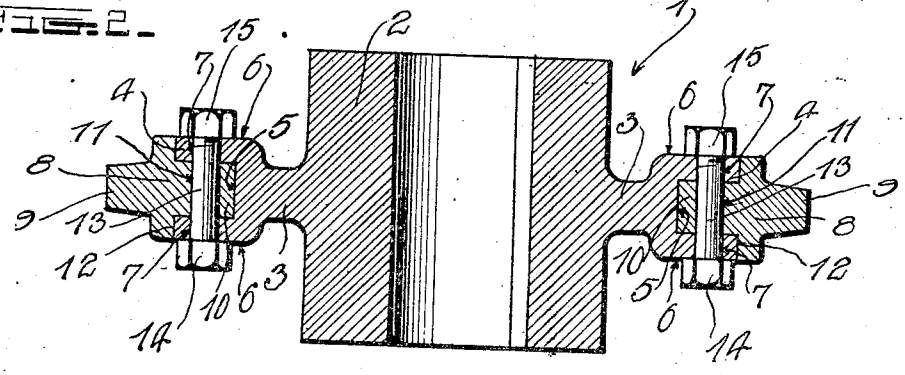
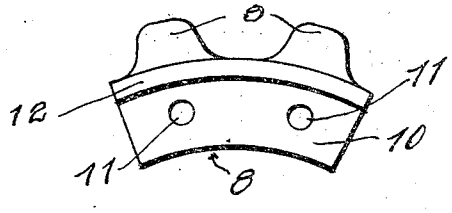


FIG. 3.



Witness

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UNITED STATES PATENT OFFICE.

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SPROCKET AND GEAR WHEEL.

1,206,172. Specification of Letters Patent. Patented Nov. 28, 1916.

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To all whom it may concern:

Be it known that I, ROBERT E. THOMAS, a citizen of the United States, residing at Coplay, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Sprocket and Gear Wheels; and I 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.

This invention relates to new and useful improvements in sprockets and gear wheels, and the primary object of the invention is to provide a wheel of this character with detachable teeth, whereby when the old teeth become worn they may be easily removed from the web of the wheel and replaced by new teeth without the necessity of removing the wheel from the shaft.

A further object of the invention is to provide a device of this character which is simple and durable in construction, inexpensive to manufacture, and one which will be very efficient in operation.

With these and numerous other objects in view, my invention consists of the novel features of construction, combination and arrangement of parts which will be hereinafter referred to and more particularly pointed out in the specification and claim.

In the accompanying drawings: Figure 1 is a side elevation showing the wheel partly in section; Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1; Fig. 3 is a side elevation of one of the sections.

In describing my invention, I shall refer to the drawings in which similar characters designate corresponding parts throughout the several views and in which the numeral 1 designates my improved sprocket or gear wheel, which comprises a hub 2, and a web 3 which has positioned in its periphery 4 a circumferentially extending groove 5. The groove 5 extends around the web of the wheel and said web is slightly enlarged adjacent its periphery as clearly shown in Fig. 2 of the drawings. The groove 5 is of corresponding width to the normal width of the web, and said groove 5 owing to the fact that it is centrally positioned in the enlarged portion of the web, is disposed in direct alinement with the body of the same. The circumferentially extending groove 5 has in the side portions 6 of the same, a plurality of spaced alined transversely extending apertures 7, for a purpose to be hereinafter more fully described.

The toothed portion of my improved wheel comprises a plurality of segmental sections 8 which are of corresponding width to the width of the periphery of the web 3, and each section is provided on its outer surface with a pair of spaced teeth 9 adjacent the ends of the same. The sections 8 are provided with reduced inner ends 10 which have transversely extending apertures 11 therethrough disposed directly beneath the teeth 9. These reduced ends 10 of the segmental sections 8 are adapted to be positioned in the circumferentially extending groove 5 of the web and when all of the sections are assembled therein, a complete circle will be formed. When the reduced ends 10 are in position, owing to the fact that they are of substantially the same size as the groove 5, the shoulders 12 formed at the sides of the sections will rest upon the periphery of said web as clearly shown in Fig. 2 of the drawings. The apertures 11 through the reduced ends of the sections will also be disposed in alinement with the alined apertures 7 through the side portions 6 of the groove, so that bolts 13 which are provided with heads 14 at one end are adapted to be positioned therethrough to securely hold the sections in position. These bolts 13 have their opposite ends screw threaded and are adapted to receive thereon nuts 15 to removably lock the bolts through the alining apertures. By this means it will be obvious that the segmental toothed sections are adapted to be removably positioned in the periphery of the web 3 of the wheel, and also that upon removal of the pair of bolts through the apertures in one of the sections, the section may be easily removed from the web without in any manner disturbing the remaining sections. Thus, when the teeth become worn, the section which they are on may be easily and simply removed from the wheel, and a new section with new teeth may be replaced therefor, thereby avoiding the necessity of removing the wheel from the shaft, or if the teeth are not removable of scraping the wheel.

The wheel, and sections may be formed from any desired metal, according to the uses to which the same is applied, and it may be formed in various sizes accordingly. This device will be found to be a great time and labor saver in replacing the worn teeth

on a sprocket or gear wheel. The means employed for holding the teeth in position afford a very simple and efficient securing means of this character and one which may be operated with the least possible effort, and the quickest time possible.

I claim:

In a device of the class described, the combination of a hub and a web, said web having an enlarged portion adjacent its periphery with a circumferentially extending groove in said periphery, said groove being of equal width to the normal width of the web, the side portions of the groove being provided with a plurality of spaced alining transversely extending apertures, segmental sections of corresponding width to the periphery of said groove, each having a pair of teeth projecting from their outer surface, reduced inner ends on said sections of corresponding width to the width of said groove adapted to be positioned therein, the shoulders formed thereby on the sections engaging the outer surface of the side portions of said groove, said reduced ends of the sections having transversely extending apertures therethrough disposed one beneath each tooth and adapted for alinement with the apertures through the side portions of said groove when in position, headed bolts projecting through said alining apertures, and removable fastening means on the outer ends of said bolts whereby separate sections are removable from the web without disturbing the remaining sections.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT E. THOMAS.

Witnesses:

WM. H. SCHNELLER,

CLINTON T. SNYDER.