

T. F. BROADFIELD.
TOOTHED WHEEL MASK AND ATTACHMENT.
APPLICATION FILED MAR. 15, 1911.

1,004,980.

Patented Oct. 3, 1911.

Fig. 1.

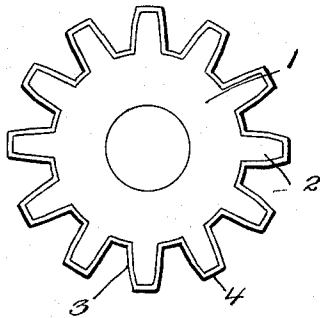


Fig. 2.

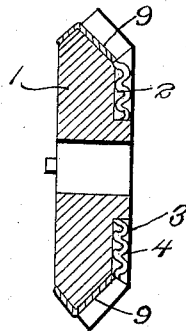
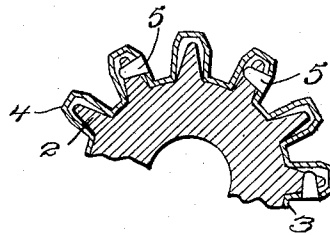


Fig. 4.

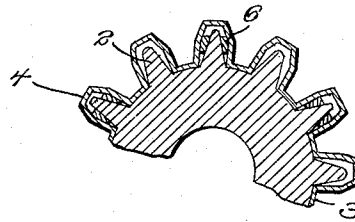


Fig. 3.

Witnesses

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TOOTHED-WHEEL MASK AND ATTACHMENT.

1,004,980.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS FRANCIS BROADFIELD, a subject of the King of Great Britain and Ireland, residing at Grong Grong, in the State of New South Wales, Commonwealth of Australia, have invented certain new and useful Improvements in Toothed-Wheel Masks and Attachments; and I do hereby 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 improvements in masks for gear wheels.

The object of the invention is to provide means for quickly and conveniently repairing worn gear wheels.

The invention also comprehends improvements in the details of construction and arrangement of parts which will be hereinafter described and particularly pointed out in the claims.

In the drawings: Figure 1 is a side elevation of a gear wheel illustrating the application of my machine. Fig. 2 is a detail vertical section of the mask applied to a gear wheel. Fig. 3 is a view of a different form of mask securing means. Fig. 4 is a transverse section showing the mask applied to a beveled gear wheel.

In the drawings: 1 indicates a gear wheel, having the usual teeth 2, 3 indicates a mask provided with a series of hollow projections, forming teeth 4 which correspond to the number of teeth in the gear wheel 1. The mask is formed of thin sheet resilient metal so as to spring over the gear wheel 1 and fit the same snugly.

When the teeth 2 are worn considerably, I may employ, in addition to the resiliency of the mask, separate means for holding the mask in position, as shown in Fig. 2. This arrangement consists in forming registering openings in the teeth 2 and 4, and inserting a pin 5, or I may insert wedges 6, between the worn teeth 2, and the teeth 4, as shown in Fig. 3, whereby to hold the parts in fixed relative position.

My invention is particularly designed for repairing worn gear wheels, without the necessity of incurring the expense and delay incident to substituting new ones. When the teeth of a gear become worn, a mask can be quickly slipped over it when it is ready for use again.

Gear wheels as a rule wear more in particular places than in others, so that when a mask is employed and it should wear unevenly, it can be removed and turned slightly and replaced.

The invention is applicable to all kinds of gear wheels, but I have shown only two forms in the drawings. In Fig. 4 I have illustrated a beveled gear wheel with the mask in place. In this instance the mask is provided with lugs 9, which are intended to be bent over the edge of the beveled gear to hold the mask in position.

From the foregoing description, it will be seen that I have provided a simple, economical and practical device for prolonging the life of a gear wheel.

What I claim as my invention is:—

1. In combination, a toothed base wheel, and a covering for the teeth of said wheel, said casing being of resilient metal to frictionally engage the material between the teeth of the base wheel.

2. In combination, a toothed base wheel, and a covering for the teeth of said wheel, said casing being of resilient metal to frictionally engage the material between the teeth of the base wheel, the teeth of the base wheel being smaller than the teeth of the casing to form spaces and means coöperating with the outer surfaces of the base wheel and the teeth of the casing to lock the casing on the base wheel.

3. As an improved article of manufacture, a resilient casing for a gear wheel comprising an annular series of hollow teeth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

THOMAS FRANCIS BROADFIELD.

Witnesses:

ANDREW WILLIAM DOYLE,
CLIVE HARCOURT BURT.