(No Model.)

A. M. FORRESTER.

GEARING.

No. 494,741. Patented Apr. 4, 1893.

Fig. 1.

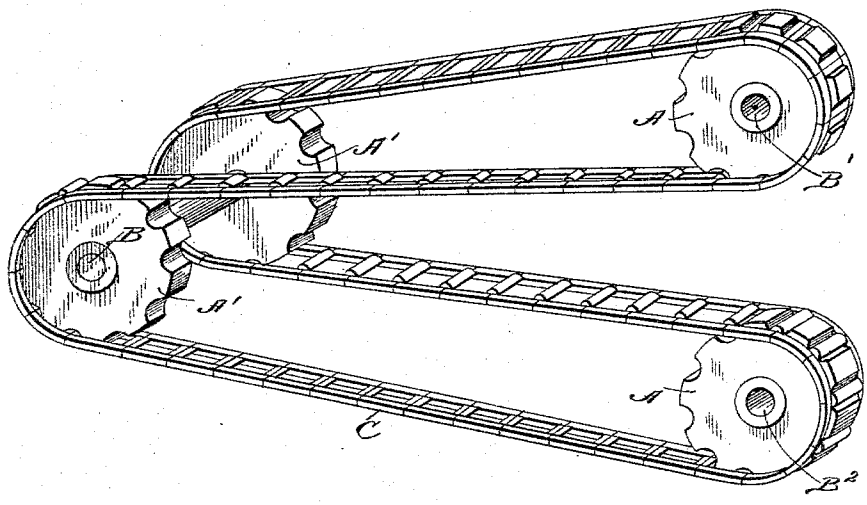
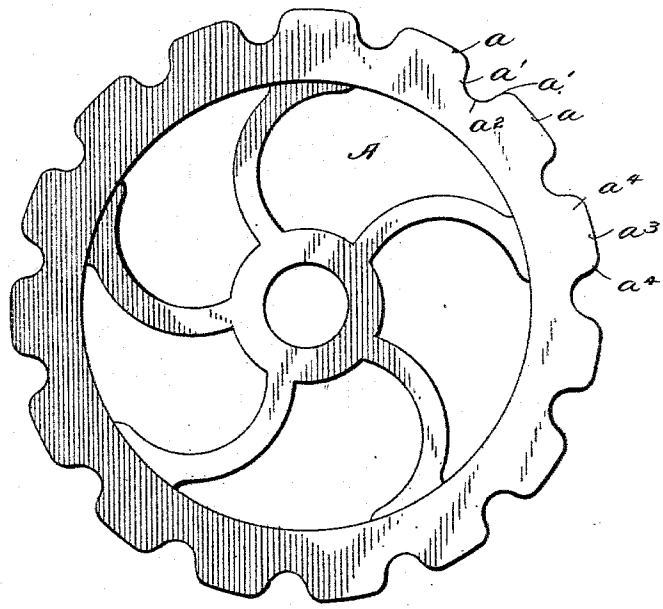


Fig. 2.



Witnesses:
Harry S. Arthur.
John C. Wood.

Inventor:
Abraham M. Forrester.
By H. G. Underwood.
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ABRAHAM M. FORRESTER, OF WASHINGTON, DISTRICT OF COLUMBIA.

GEARING.

SPECIFICATION forming part of Letters Patent No. 494,741, dated April 4, 1893.

Application filed March 6, 1893. Serial No. 465,219. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM M. FORRESTER, a citizen of the United States, formerly residing in Racine, in the county of Racine and State of Wisconsin, but now a resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Gearing; and I do declare that the following is a full, clear, and exact description thereof.

My invention relates to improvements in belt gearing, consisting in a specified construction and arrangement of parts, forming a novel train of gearing, as hereinafter set forth, and subsequently claimed.

In the drawings, Figure 1 is a perspective view of my said train of gearing, and Fig. 2 an elevation of a sprocket-wheel forming part of my said train.

A represents a sprocket-wheel and a a its teeth, which, at the point a' corresponding to the pitch-line in ordinary gear-wheels, are just double the width of the space between two of the teeth, said spaces being rounded at the lowest points, as shown at a^2, while the top surfaces of the teeth are nearly flat, as shown at a^3, with rounded corners a^4 a^4, all as shown in Fig. 2.

In Fig. 1, I illustrate my entire device, wherein I employ four of the just described sprocket-wheels, two of them acting as driving-wheels A A, and two as idlers A′ A′. The said idlers are both mounted on the same stud, B, while the sprocket wheels A are supposed to be mounted on independent shafts B′ B^2, revolving with the said wheels. C is a drive-chain, forming an endless sprocket-belt, and by the arrangement shown, when the shaft B^2 is turned in one direction, carrying its wheel A with it, the motion thus communicated will cause the shaft B′ and its wheel to turn in the opposite direction, this rotation of different shafts in opposite directions being a very useful feature in many forms of machinery, as in the case of opposing grinding cylinders and analogous machines, and my improved train of gearing will be found extremely useful in horse-powers, thrashing-machines, farming mills, harvesters, and a great number of other machines which employ metallic drive-chains.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A train of sprocket gearing, comprising a fixed stud or shaft, two sprocket wheels loosely mounted thereon, two other shafts each carrying a similar sprocket wheel fast thereon, and a drive-chain passing over and around and engaging all of said wheels, substantially as set forth.

2. A train of gearing, consisting of the fixed stud B, with two idlers A′ A′ mounted thereon, independently revolving shafts B′ B^2 carrying sprocket wheels A. A having the wide teeth a a, the space between each two adjacent teeth, at the pitch line, being one half the width of the teeth at this point, and the endless drive-chain C, passing over and around the said idlers, and the said sprocket wheels, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Washington, in the District of Columbia, in the presence of two witnesses.

ABRAHAM M. FORRESTER.

Witnesses:
H. G. UNDERWOOD,
KATIE L. FORRESTER.