J. GRANZ.

ELASTIC DRIVING BELT.

APPLICATION FILED NOV. 24, 1913. RENEWED JAN. 2, 1917.

1,214,911. Patented Feb. 6, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

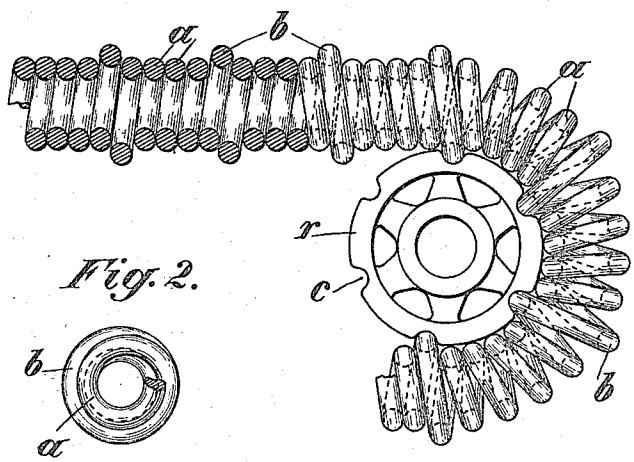


Fig. 2.

Fig. 3.

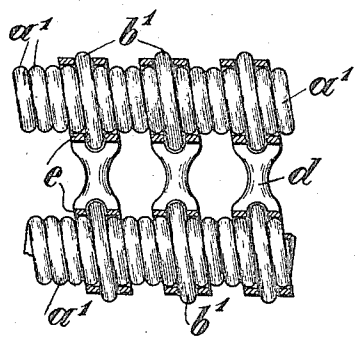
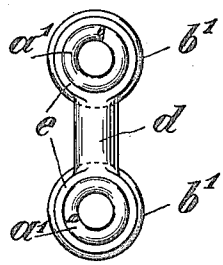


Fig. 4.



Witnesses
Rameehuish.
C. E. Walter.

Inventor
Josef Granz
by Rhadden
Attorney

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

J. GRANZ.

ELASTIC DRIVING BELT.

APPLICATION FILED NOV. 24, 1913. RENEWED JAN. 2, 1917.

1,214,911. Patented Feb. 6, 1917.

2 SHEETS—SHEET 2.

Fig. 5.

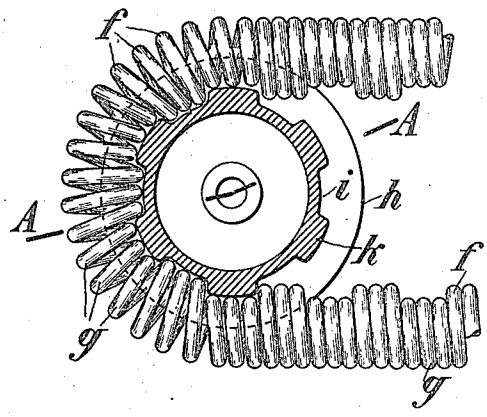


Fig. 7.

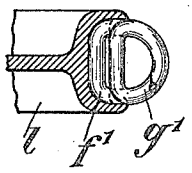


Fig. 6.

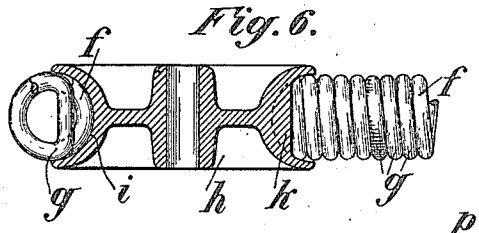
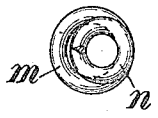


Fig. 8.



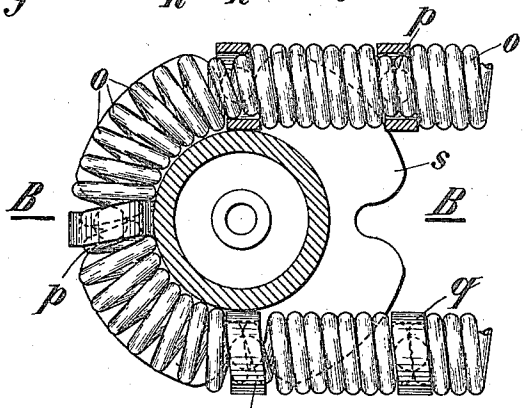


Fig. 9.

Fig. 10.

Witnesses
A. Meehuis.
C. C. Walter.

Inventor
Josef Granz
by R. Rhoades
Attorney

UNITED STATES PATENT OFFICE.

JOSEF GRANZ, OF PLAUEN, GERMANY.

ELASTIC DRIVING-BELT.

1,214,911. Specification of Letters Patent. Patented Feb. 6, 1917.

Application filed November 24, 1913, Serial No. 802,688. Renewed January 2, 1917. Serial No. 140,304.

To all whom it may concern:

Be it known that I, JOSEF GRANZ, a citizen of the German Empire, residing at Plauen-im-Vogtland, in Germany, have invented certain new and useful Improvements in Elastic Driving-Belts, of which the following is a specification.

This invention relates to elastic driving belts formed wholly or in part of coiled, springy wire, and its object is to effect an improvement in the construction of such belts, facilitating the engagement thereof with the pulleys or sprockets which they drive.

To this end I form an endless coil, the convolutions of which vary, at intervals, in size, so that the surface of the belt has protuberances which either themselves engage recesses in the pulley or sprocket, or serve for the attachment of members which effect such engagement.

The invention is illustrated in the accompanying drawing, which shows several embodiments thereof.

Figure 1 is a side view of a portion of a belt constructed according to my invention, engaged with a sprocket, the belt being shown partly in elevation and partly in section.

Fig. 2 is an end view of a portion of this belt.

Figs. 3 and 4 show another embodiment of the invention, Fig. 3 being a side elevation, partly in section, and Fig. 4 a transverse section.

Figs. 5 and 6 show another embodiment, Fig. 5 being a side elevation, partly in section, and Fig. 6 a section on the line A—A of Fig. 5.

Figs. 7 and 8 are cross-sections, showing two modifications of the shape of the coil.

Fig. 9 is a side elevation, partly in section, showing another embodiment of the invention, and

Fig. 10 is a section on the line B—B of Fig. 9.

The belt shown in Figs. 1 and 2 consists of a coil of springy wire formed of series of convolutions a alternating at regular intervals with larger convolutions b. The latter engage with recesses c in the circumference of the sprocket or pulley r.

Figs. 3 and 4 show a construction comprising two parallel belts formed of series of convolutions a^1 alternating with larger convolutions b^1, each of these belts being substantially similar to the belt shown in Figs. 1 and 2. The two belts are joined to each other at regular intervals by transverse wheel-engaging members d, each of the latter having at its end eyes e which embrace the belt and slotted to engage the larger convolutions b^1.

The belt shown in Figs. 5 and 6 is formed of series of covolutions f alternating with series of smaller convolutions g, the convolutions f projecting inward to form protuberances on the inner surface of the belt, whereas the outer surface of the belt is substantially flat. The difference in the sizes of the convolutions is in this case produced by making the inner portions of the convolutions g straight, as shown in Fig. 6. The protuberances fit into recesses i in the pulley h, and the flat parts of the convolutions g lie on flat bridge pieces k separating these recesses.

In the modification shown in Fig. 7, the coil is formed of convolutions g^1 alternating with larger convolutions f^1, the inner portions of both sets of convolutions being straight. The pulley l has recesses with flat bases, into which the convolutions f^1 fit.

Fig. 8 shows a modification in which series of convolutions m alternate with smaller convolutions n, the two groups of convolutions being eccentric to each other, so that the larger convolutions protrude only at one side of the belt.

In the construction shown in Figs. 9 and 10, there are two parallel belt members, each consisting of series of convolutions o alternating with shorter series of smaller convolutions p, the two groups of convolutions being co-axial. The series p are embraced by eyes formed at the ends of transverse members q which connect the two belt-members, so that each eye lies between two series o. The members q fit into recesses in the circumference of the pulley s, which is shaped so that both the elastic belt members can lie snugly upon same.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. An elastic driving belt consisting of an endless coil of springy wire having convolutions of two different sizes, the convolutions of the larger size forming protuberances at regular intervals along the belt.

2. An elastic driving belt comprising in combination two parallel endless coils of

springy wire, each formed of convolutions of two different sizes, convolutions of the larger size alternating at regular intervals with convolutions of the smaller size, and transverse connecting members having at their ends eyes which embrace the convolutions of smaller size.

In witness whereof I have signed this specification in the presence of two witnesses.

JOSEF GRANZ.

Witnesses:
AUG. HERMANN MEYER,
ROBERT H. VIER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."