(No Model.)

F. CLOUTH.

DRIVING BELT.

No. 421,246. Patented Feb. 11, 1890.

Fig. 1.

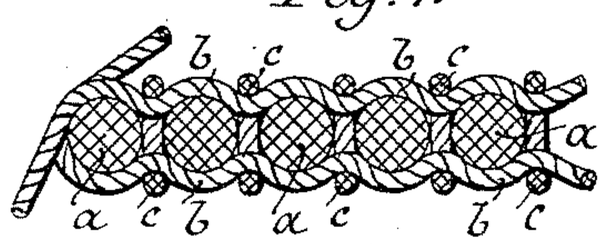


Fig. 2.

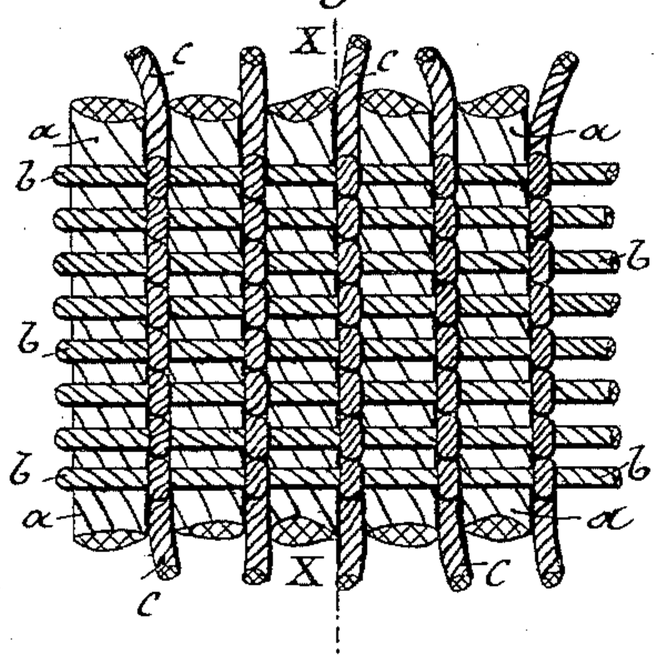


Fig. 3.

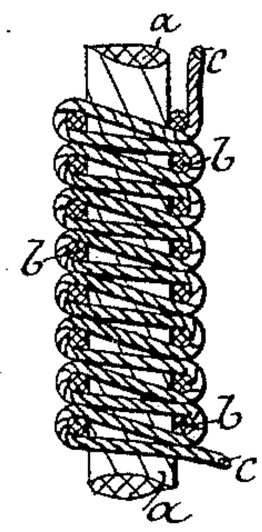


Fig. 4.

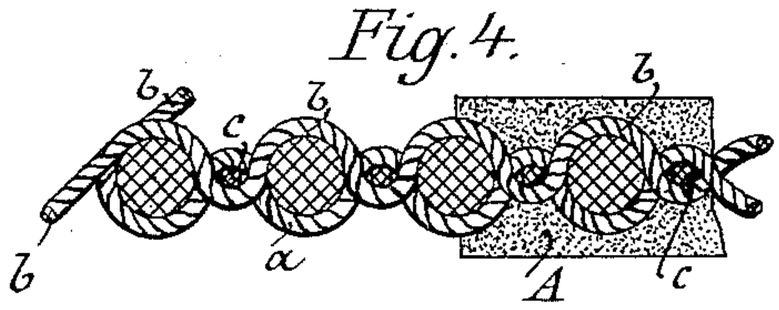
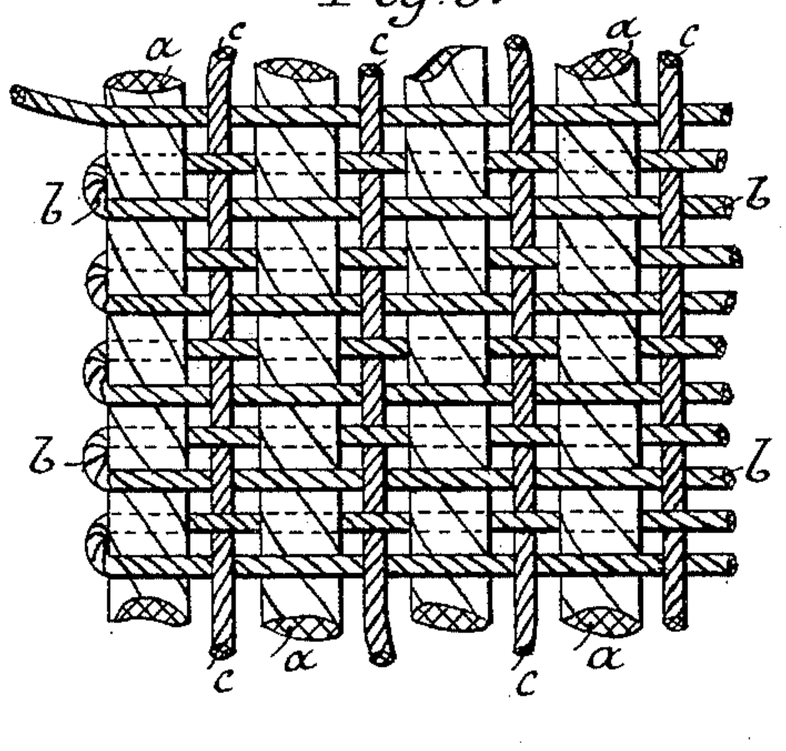


Fig. 5.



WITNESSES

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DRIVING-BELT.

SPECIFICATION forming part of Letters Patent No. 421,246, dated February 11, 1890.

Application filed October 12, 1889. Serial No. 326,828. (No model.)

To all whom it may concern:

Be it known that I, FRANZ CLOUTH, a citizen of Germany, residing at Nippes, near Cologne, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Driving-Belts; 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 driving-belts; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed, whereby the usual stretching of the belt when in use is prevented and the belt is made very strong and durable.

In the drawings, Figure 1 is a cross-section through the web of the belt. Fig. 2 is a plan view of a portion of the said belt. Fig. 3 is a longitudinal section of said portion of belt, taken on line *x x* in Fig. 2. Figs. 4 and 5 show, respectively, a cross-section and a part plan of a modification in the construction of the web of the belt.

The web of the belt is formed of a series of cords *a*, formed of any textile material adapted for the purpose. These cords are arranged parallel with each other a little distance apart, and are perfectly straight and practically inextensible. The longitudinal cords *a* are kept in position by the cord *b*, which is also of textile material, but smaller in diameter than cords *a*. The cord *b* is wound transversely and spirally around the series of longitudinal cords, and its upper and lower portions are waved or bent to conform to the upper and lower surfaces of cords *a*, against which they bear. The cord *b* is not interwoven with the cords *a*, as is customary in textile fabrics. Binding-laces *c* are interwoven with the upper and lower portions of cord *b* between the cords *a*.

When the longitudinal straight cords *a* are placed near together, as in Figs. 1 and 2, the upper and lower portions of cord *b* are not very much waved or bent, and the binding-laces *c*, which are interwoven between them, follow zigzag lines or courses, as shown in Fig. 3.

In the modification shown in Figs. 4 and 5 the longitudinal cords *a* are spaced farther apart and the upper and lower portions of the transverse cord *b* are very much waved. The binding-laces now follow straight lines between cords *a*, but are nevertheless interwoven with the upper and lower portions of the transverse cord *b* in a similar manner to the zigzag lace shown in Fig. 3. It is obvious that the cords *a* may be spaced at various distances apart between the two extreme forms shown, respectively, in Figs. 4 and 1, and that the cords *b* and binding-laces *c* will be more or less bent or waved accordingly.

The textile web may be used to transmit power, or it may be covered with india-rubber A or other similar material, as shown to the right hand in Fig. 4.

When an india-rubber-covered belt is desired, it is better that the cords *a* should be spaced somewhat far apart, as the exterior surface of the belt is then more corrugated and affords a better hold for the india-rubber.

When the belt is to be used without being coated with india-rubber, it is better that the cords *a* should be nearer together, as the belt is then more solid and affords a better contact-surface for bearing upon the pulleys around which it passes.

What I claim is—

1. In a driving-belt, the combination, with a series of straight longitudinal cords, of a single continuous cord wound transversely and spirally around the said series of cords, and binding-laces interwoven with the upper and lower portions of said single continuous cord between the straight longitudinal cords, substantially as set forth.

2. In a driving-belt, the combination, with a series of straight longitudinal cords, of a single continuous waved or bent cord wound transversely and spirally around the said series of cords, and binding-laces interwoven with the upper and lower portions of said single continuous waved cord in zigzag lines between the said longitudinal cords, substantially as set forth.

3. In a driving-belt, the combination, with

a series of straight longitudinal cords, of a single continuous cord wound transversely and spirally around the said series of cords, binding-laces interwoven with the upper and lower portions of said single continuous cord, and an outer coating of india-rubber inclosing all the cords, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANZ CLOUTH.

Witnesses:
GUSTAVE ALBERT OELRICHS,
WM. D. WARNER.