

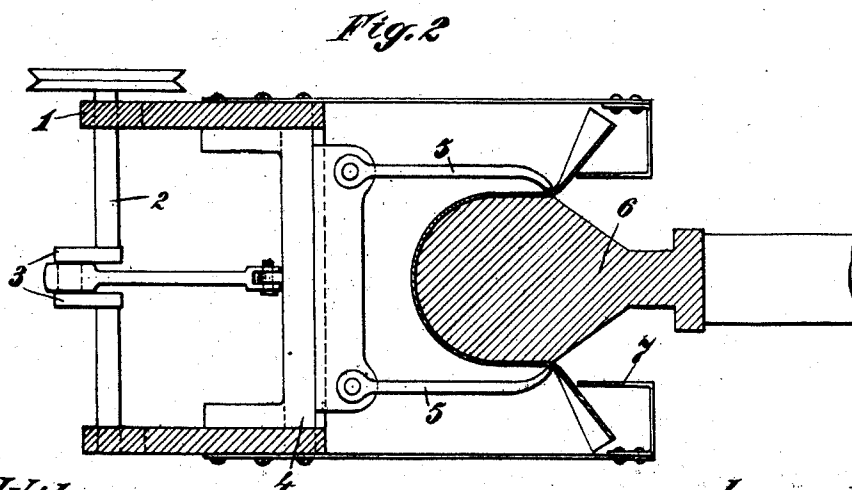
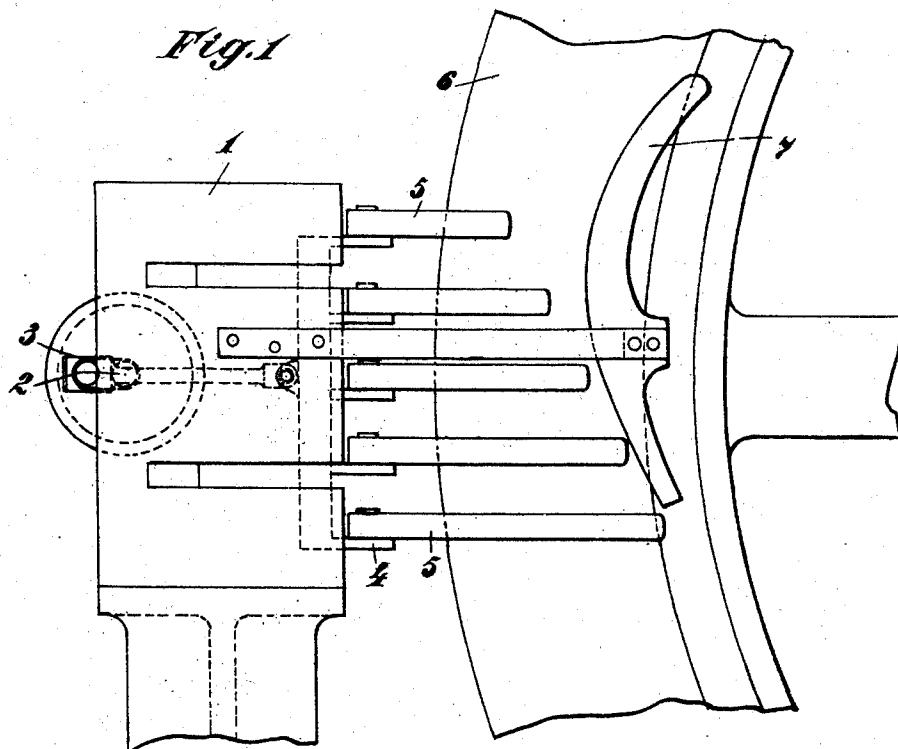
A. MATHERN.

SMOOTHING APPARATUS FOR THE MANUFACTURE OF PNEUMATIC TIRES.

APPLICATION FILED MAY 9, 1910.

973,061.

Patented Oct. 18, 1910.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALPHONSE MATHERN, OF BERLIN, GERMANY.

SMOOTHING APPARATUS FOR THE MANUFACTURE OF PNEUMATIC TIRES.

973,061.

Specification of Letters Patent.

Patented Oct. 18, 1910.

Application filed May 9, 1910. Serial No. 560,356.

To all whom it may concern:

Be it known that I, ALPHONSE MATHERN, a citizen of the French Republic, and resident of Berlin, Germany, have invented certain new and useful Improvements in Smoothing Apparatus for the Manufacture of Pneumatic Tires, of which the following is a specification.

This invention relates to an apparatus designed to smooth the sheets used for the manufacture of pneumatic tires and which are stuck the one upon the other on a metal core. The metal core is mounted upon a revolving shaft and the sheets which consist of endless bands of canvas or other suitable material wound off a drum are fed upon said core and stuck the one upon the other in layers. A great inconvenience connected with this manufacture is that the sheets easily get creased so that it is difficult to put them smooth upon the core.

This invention relates to an apparatus which serves to obviate the abovementioned inconvenience.

In the drawings: Figure 1 shows the improved apparatus in elevation in connection with the core. Fig. 2 is a longitudinal section of Fig. 1.

The improved apparatus is constructed as follows:—In a frame or casing 1 a crank shaft 2 is revolubly mounted which is driven by a pulley from any source of energy. To the crank 3 of shaft 2 a slide 4 is connected by means of a connecting rod so that the revolving motion of said shaft is transferred into a reciprocating motion of said slide 4. The slide 4 is guided in longitudinal grooves of said frame or casing 1. Said slide 4 has projections on the front side of which the smoothing fingers 5 are fixed which are of different lengths and destined to press upon the outer surface of the core

6 so that the canvas sheet is smoothly pressed against said core. To the frame or casing 1 there is further fixed at either side a guide piece 7 which has the shape of a segment and grips under the sheet to be put on the core so that this sheet is held away from the core and pressed against the same only by means of the smoothing fingers 5 which have inwardly curved ends and are gradually moved forward with the slide 4. If these guide pieces 7 were not used the fingers would instead of smoothing out the sheet crumple the same up and the object aimed at could never be attained.

I claim:—

An improved smoothing apparatus for the manufacture of pneumatic tires comprising in combination with the metal core revolubly mounted upon an axle, the frame of the apparatus having longitudinal grooves in its side walls, a crank shaft revolubly mounted in said frame, means for driving said crank shaft, a slide guided in said grooves of the frame and means for communicating a reciprocating motion to said frame from said crank shaft, projections of said slide, fingers of different lengths having inwardly bent ends fixed on the front end of said slide and guide pieces fixed to said frame so that they grip behind said core and hold the sheet to be stuck upon the core and to be smoothed by said fingers away from said core until it is pressed against the same by the advancing fingers, substantially as described and shown and for the purpose set forth.

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

ALPHONSE MATHERN.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.