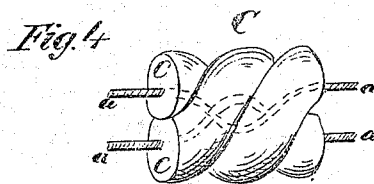
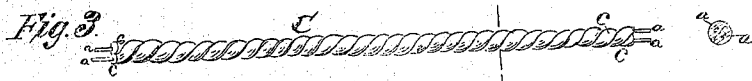
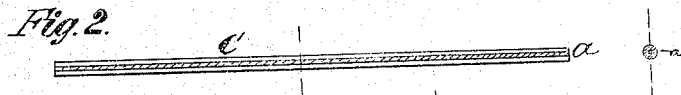
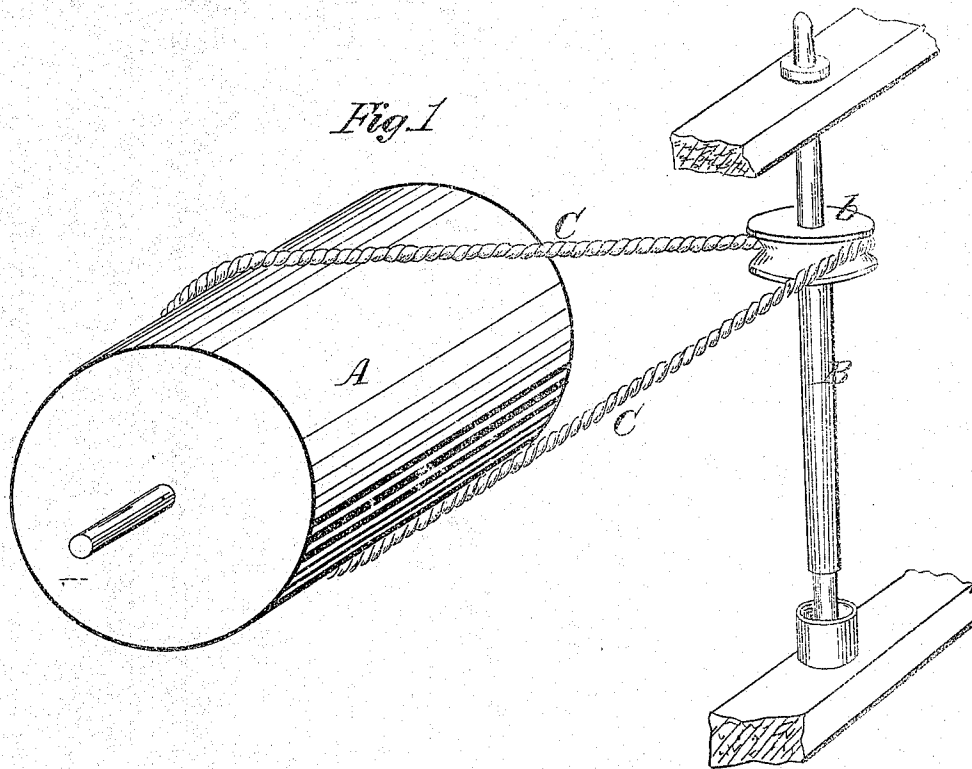


*S. J. Whitton,  
Banding Machine.*

*No. 102,898.*

*Patented May. 10 1870.*



*Witnesses  
R. T. Campbell  
J. M. Campbell,*

*Inventor,  
S. J. Whitton  
by  
Mason, Hewich & Hamner*

# United States Patent Office.

SAMUEL J. WHITTON, OF COLERAINE, MASSACHUSETTS.

Letters Patent No. 102,898, dated May 10, 1870.

## IMPROVEMENT IN MACHINE-BAND.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SAMUEL J. WHITTON, of Coleraine, in the county of Franklin and State of Massachusetts, have invented a new and improved Machine-Band; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a perspective view of my improved band, applied to the driving-cylinder on spindle of a cotton-spinning frame.

Figures 2, 3, and 4, show the construction of the band material.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to produce an endless band or belt for spinning-frames, and other machinery, which will present a soft frictional exterior, and which will not unduly stretch while in use.

The bands heretofore used for communicating rotary motion to spindles from the driving-drums of spinning machinery, have usually been made of two or more twisted strands twisted to a cord of suitable size. In order to afford the required strength to such bands, the strands are twisted tightly together, which renders the bands too stiff, and their surfaces so hard that after using the bands for a short time, they become glazed, and fail to take firm hold of the surfaces about which they are applied.

Common roving, or loosely twisted material used alone in the form of bands, will stretch and diminish in size, and thus fail to drive spindles regularly and at the required speed, which would produce slack-twisted yarn.

I am aware that fabrics have been produced which were composed of threads or yarns made by applying loosely a soft fibrous material about twisted strengthening cores, so as to make strong cloth which would present soft, yielding surfaces. I do not, therefore, claim as my invention cord composed of a strengthening core covered loosely with a fibrous material.

My invention consists in a new and improved arti-

cle of manufacture, to wit, an endless machine-band which has a soft exterior, *c*, composed of roving of fibrous material, and a hard-twisted core or interior, *a*, composed of threads twisted together so as to afford all the strength required to prevent the belt from stretching too much.

In fig. 2, a portion of such a belt is shown in section, which consists of a common roving or loosely-twisted fibrous strand, applied around a firmly-twisted core.

In fig. 3, a portion of a band is shown, which consists of two of the compound strands twisted together so as to inclose two cores or strengthening-threads in the body of the band. By thus twisting together fibrous material, and then uniting the ends of the twisted cord to form a band, it will be seen that the surface presented to the drums, pulleys or cylinders, will be soft and yielding, while the loosely-twisted fibres of which this surface is formed will be strengthened and held together by the internal tightly-twisted core or threads.

Such a band will be very flexible, will stretch very little, will lie closely to the surfaces about which it may be drawn, and will not slip nor lose its frictional qualities by becoming glazed while in use. The material or cord of which the bands are made may be produced by any well-known machinery adapted for covering twisted strands with roving, or loosely-twisted fibrous material.

In uniting the ends of the cords to form the bands, care should be observed that the core-strands are united, otherwise the covering of the band would receive all the tension, which would cause it to stretch.

I claim as a new and improved article of manufacture—

An endless machine-band, composed of a central strengthening core-thread, *a*, covered by a roving or loosely-twisted fibrous material, as shown and described.

Witnesses: SAMUEL J. WHITTON.  
SAMUEL ALFORD, Jr.,  
WILLIAM M. PINGRY.