

W. HILDEN.
MACHINE FOR TWISTING THREADS.
APPLICATION FILED JULY 18, 1911.

1,030,179.

Patented June 18, 1912.

Fig. 1.

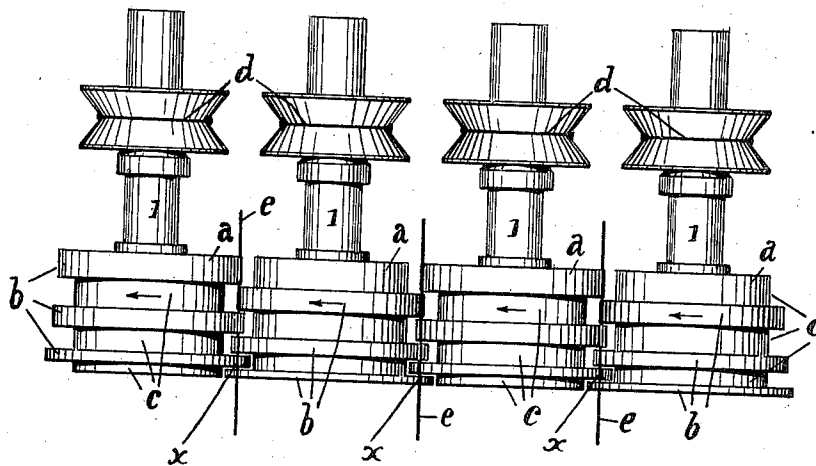


Fig. 2.

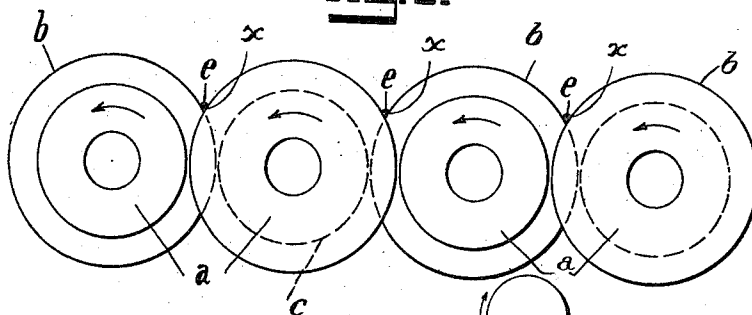
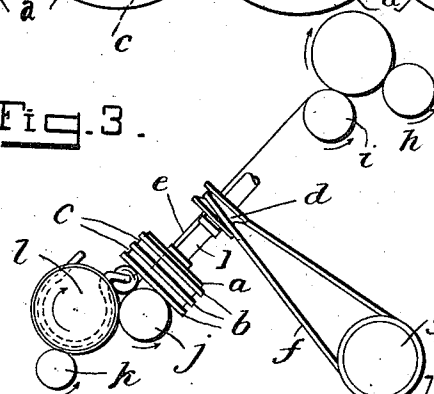


Fig. 3.



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UNITED STATES PATENT OFFICE.

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MACHINE FOR TWISTING THREADS.

1,030,179.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILHELM HILDEN, a subject of the King of Prussia, residing at Aix-la-Chapelle, in the Kingdom of Prussia, Empire of Germany, have invented certain new and useful Improvements in Machines for Twisting Threads; 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.

The invention relates to improvements in a machine for twisting thread.

The prime object of this invention is to provide means for twisting thread without employing tubes usually employed for this purpose.

A further object of my invention is to provide means for twisting thread by subjecting the latter to a plurality of rotating intermeshing elements, each of which revolves in the same direction and at the same speed, the thread being supported by the peripheral surfaces of the rotating elements to impart the twisting action.

The invention also relates to the details of construction and arrangement of parts which will be hereinafter described and particularly pointed out in the claims.

In the drawings:—Figure 1 is a plan view of the twisting elements; Fig. 2 is an end view of the same; Fig. 3 is an elevation of the mechanism illustrating diagrammatically the feeding means.

1 indicates a series of shafts, each of which is provided on its end with a roller or rotating element *a*. Each roll *a* is provided with annular flanges *b*, suitably spaced apart to provide grooves *c*. The rolls are located in the same plane and the flanges *b*, of each roll fits in the grooves *c* of the adjacent roll, as clearly shown in the drawings. By this arrangement a seat *x* is formed by the peripheral surfaces of adjacent rolls in which the thread *e*, is supported during the twisting operation.

The shafts 1 are each provided with a grooved wheel *d* around which pass belts *f*, the latter passing around a drum, *g*, whereby rotary motion is imparted to the rolls *a*.

All the rolls *a*, rotate in the same direction, consequently, the peripheral surfaces which form the bottom of the respective

seats *x*, rotate in opposite directions and thereby imparts to the thread a twisting action.

h indicates feeding mechanism including a guiding roller *i*, around which the thread passes to the rolls *a*.

After the thread passes over the seats *x*, it passes over a roller *j*, of suitable guiding mechanism indicated at *k*, for drawing the thread through the seats. The guiding mechanism includes a spring pressed roller *l*, designed to engage the thread and hold it down in the seats *x*, as shown in Fig. 3.

I make no claim specifically in this application to the feeding or guiding means shown and show same simply for the purpose of illustrating a means for carrying out the twisting operation.

In operation the thread is fed through the seats *x*, and as the rolls *a* are rotated, the peripheral surfaces effectually twist the thread, the rollers *l*, holding the thread down in the seats and insuring of the latter being twisted.

By the construction described I provide an economical and simple structure for twisting thread.

What I claim is:—

1. Thread twisting mechanism comprising a plurality of rotating elements formed with flanges and grooves which intermesh, the flanges forming seats to receive thread, and means for rotating the rolls in the same direction to cause thread supported in the seats to be twisted.

2. Thread twisting mechanism comprising moving elements which intermesh to form tapering thread receiving seats, means to rotate the moving elements in the same direction whereby the surfaces of the elements forming the bottoms of the seats will move in opposite directions to twist thread supported in said seats, and means for guiding the thread through the seats.

3. Thread twisting mechanism comprising a series of rolls, each roll being of the same size and having formed on its periphery a plurality of flanges and grooves, the flanges and grooves of adjacent rolls intermeshing to form tapering thread receiving seats on the flanges, all of the rolls being arranged in the same plane and rotating at the same speed, means for rotating the rolls,

means for feeding thread through the taper-
ing thread receiving seats and means for
frictionally holding the thread in contact
with the surfaces of the flanges forming the
5 seats, whereby to impart a twisting action
to the thread.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

WILHELM HILDEN.

Witnesses:

HENRY ANADFLIEG,
ELISE KALBUSCH.

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