

A. JÖRGENS.
RING SPINNING, DOUBLING, AND TWISTING MACHINE.
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1,018,710.

Patented Feb. 27, 1912.

Fig. 1.

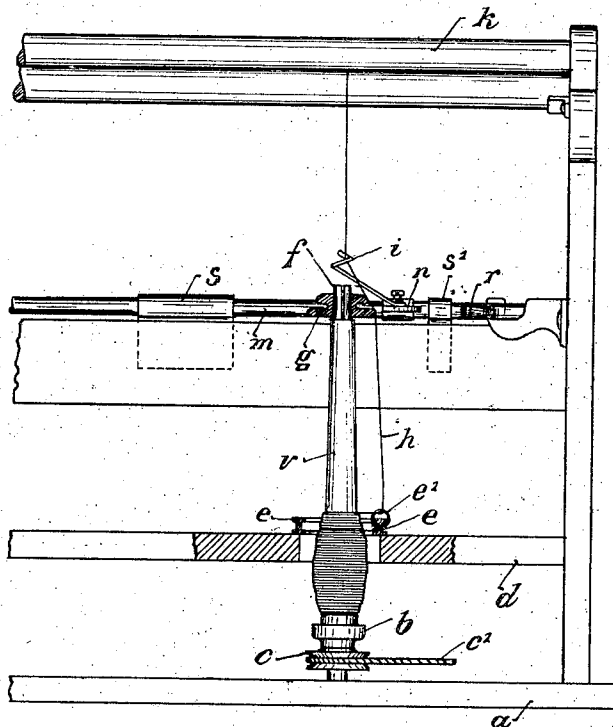


Fig. 3.

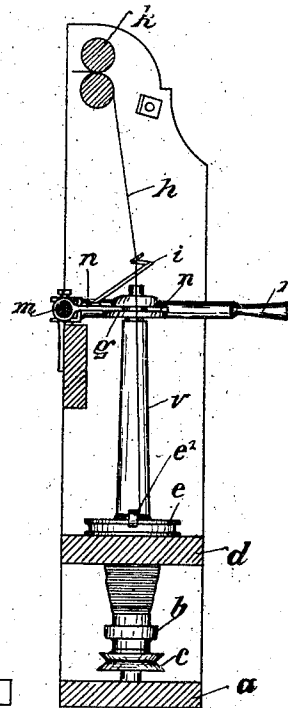
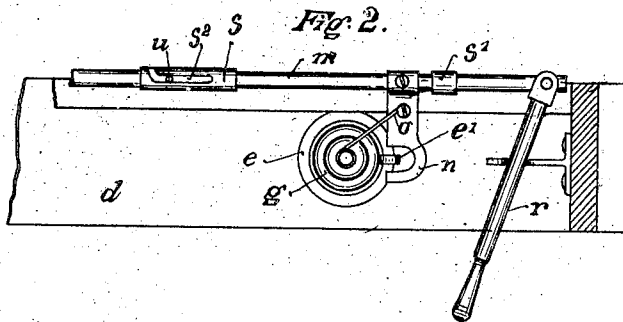


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

AUGUST JÖRGENS, OF KETTWIG, GERMANY.

RING SPINNING, DOUBLING, AND TWISTING MACHINE.

1,018,710.

Specification of Letters Patent.

Patented Feb. 27, 1912.

Application filed December 17, 1909. Serial No. 533,720.

To all whom it may concern:

Be it known that I, AUGUST JÖRGENS, residing at Kettwig-on-the-Ruhr, Rhenish Prussia, Germany, a subject of the Emperor of Germany, have invented a new and useful Improvement in Ring Spinning, Doubling, and Twisting Machines, of which the following is a specification.

My invention has reference to ring spinning, ring doubling and twisting machines and particularly to that class of machines in which the spindle of the cop or pirn carries at its top a disk for the purpose of guiding the thread and the object of my invention is to provide means for removing and placing again a number of such disks, simultaneously, in order to permit of easily changing said cops or pirns.

To permit of the invention being clearly understood I will further describe the same with the aid of the accompanying drawing.

Figure 1 illustrates part of a ring spinning machine. Fig. 2 is a horizontal section of the device shown in Fig. 1. Fig. 3 is a vertical section thereof.

Referring to the said figures *a* is the frame of the winding, spinning, doubling or twisting machine *b* is the spindle, which is rotatably journaled in the frame and fitted with a wharve *c*, and is driven from the usual pulley or drum by a band *c'*. Upon said spindle is placed the sleeve *v*, on which the cop or pirn is formed and which revolves together with the spindle *b*.

d is the plate which is moved up and down, in the usual manner, and which carries the ring shaped rail *e*; on which the traveler *e'* engages as shown. The top portion of the spindle supports a disk *g*, which is detachably secured thereon and for which purpose the said top of the spindle may be slotted, as shown, to afford a friction anchorage, or the said top may be square or conical, and also the disk may be varied in its shape and construction, its purpose being to guide the thread *h* which is drawn through the rollers *k*, and then through the wire loop *i*, to the disk *g*, then through the traveler *e'* and on the sleeve *v*, as shown, to build up the cop. As will be readily understood, the disk permits an easy spinning, holding the yarn con-

tinuously at a uniform distance from the spindle, so that tearing of the yarn is avoided.

Now in order to easily withdraw the cops or pirns, built up in the machine, I have arranged means by which any number of the disks *g* may be simultaneously lifted from their spindles, and replaced again, after the cops have been removed. For this purpose I provide a shaft *m* running along the back of the frame *a*, and journaled thereon in such a manner that it may be shifted to and fro and turned at the same time. *s'* is an ordinary bracket carrying said shaft *m*. *s* is a bracket provided with a slot *s''* which is engaged by a pin *u*, projecting from said shaft *m*, and by this means the shaft *m* is guided for movement longitudinally rotatively. On said shaft are fixed arms *n*, for each disk *g*, which are constructed to engage a disk when brought in contact by shifting the shaft *m*, by means of the lever *r*, and when said lever is actuated, the shaft *m* is turned and all the disks *g* in engagement with the arms *n* are lifted from their spindles permitting the cops to be removed from their spindles and then the disks *g* are placed again on their spindles by lowering the lever *r*, which is then turned laterally in order to remove the arms *n*.

It will be obvious that the construction described may be varied the main requirement being to detach a number of disks simultaneously to permit easy removing of the cops or pirns.

What I claim and desire to secure by Letters Patent is:

In a ring spinning, doubling and twisting machine the combination with a spindle, a disk removably mounted thereon, a rod extending laterally of said spindle and having a disk engaging arm thereon, a mounting for said rod, means for longitudinally moving said rod to engage said arm with said disk, and means serving upon such longitudinal movement to rotate said rod to remove the disk.

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Witnesses:

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