

F. H. WHEAT.

YARN GUIDE FOR RING SPINNING FRAMES.

No. 301,544.

Patented July 8, 1884.

Fig:1.

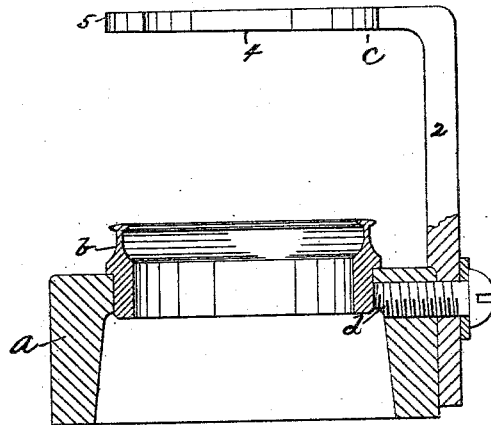


Fig:2.

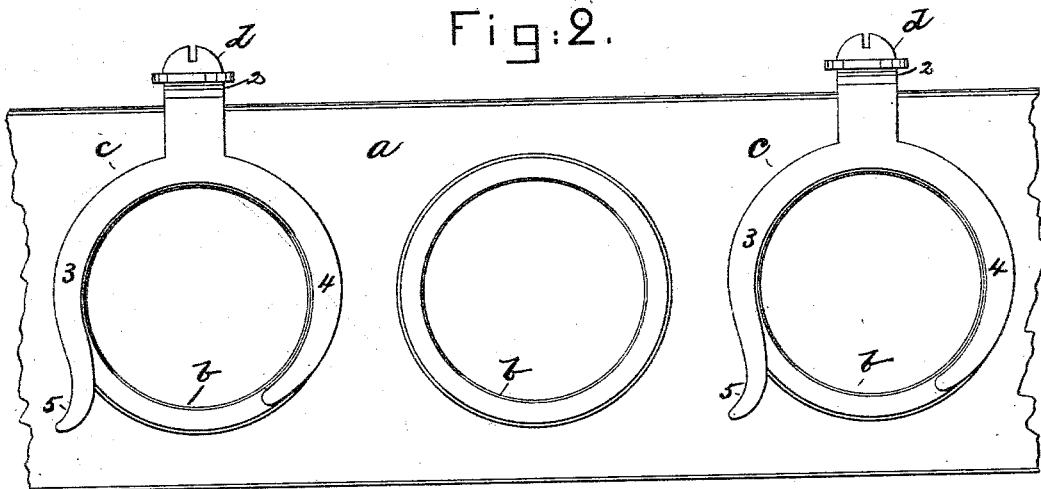
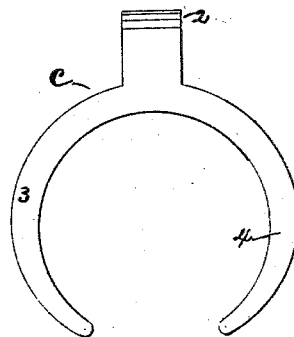


Fig:3.



Witnesses.  
*L. J. Connor.*  
*Jos. P. Livermore*

Inventor.  
*Franklin H. Wheat.*  
*by Crosby & Gregory, Atty.*

# UNITED STATES PATENT OFFICE.

FRANKLIN H. WHEAT, OF LOWELL, ASSIGNOR TO WM. F. DRAPER, OF  
HOPEDALE, MASSACHUSETTS.

## YARN-GUIDE FOR RING-SPINNING FRAMES.

SPECIFICATION forming part of Letters Patent No. 301,544, dated July 3, 1884.

Application filed November 10, 1879.

*To all whom it may concern:*

Be it known that I, FRANKLIN H. WHEAT, of Lowell, county of Middlesex, and State of Massachusetts, have invented an Improvement in Yarn-Guides for Ring-Spinning Frames, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to yarn-guides for use in connection with ring-spinning frames, and has for its object to prevent the yarns being spun by adjacent spindles from striking together and being broken or injured as they are being wound upon the bobbins. It has been proposed to remedy this difficulty by placing upon the ring-rail a series of division-plates extended upward from the rail between the rings; but such plates interfere with doffing and with cleaning the surface of the ring-rail, and in such plan one of such plates is required between adjacent rings, which adds materially to the weight of the ring-rail.

This invention consists, essentially, in the combination, with a ring-rail and a series of rings, of yarn-guides connected with the said ring-rail only at or near alternate rings of the series of rings, whereby a series of yarn-guides in number substantially one-half the number of the rings of the said series are adapted to direct the yarns at each one of the said rings, as will be described, and prevent the yarns passing to the bobbins on adjacent spindles from striking against each other. I prefer in practice to give one of the arms of the yarn-guide an outward turn toward the spindle and bobbin next to its outer side, as thereby I am enabled to control the yarn by a guide for each alternate bobbin.

Figure 1 represents in cross-section a ring-rail provided with a ring and with my improved yarn-guide; Fig. 2, a top view of a ring-rail with my yarn-guide, and Fig. 3 a top view of a modified form of yarn-guide.

In the drawings, *a* represents a ring-rail, and *b* a ring, of any usual construction, the ring-rail being operated in any usual way.

The yarn-guide *c*, composed of a shank, 2, and arms 3 4, is herein shown as attached by a screw, *d*, with the rear side of the ring-rail; but it is obvious that the guide may be at-

tached in any other suitable manner so as to rise and fall with the ring-rail. With this form of guide surrounding the bobbin above the ring-rail, as described, I am enabled to prevent contact of adjacent yarn during spinning by the use of one of such guides with each alternate spindle or bobbin. The outwardly-curved part 5 serves to prevent the yarn which travels within said guide from throwing out either when spinning or piecing ends.

I have so arranged in this my invention that the screw *d*, which attaches the guide, enters the hole in the rail which commonly receives the screw that holds the ring in place.

In a ring-spinning frame provided with my improved yarn-guide it is possible to run the spindles at a higher speed than when such guide is not employed, and the traverse of the ring-rail may be made greater, for without the guide the bowing out of the yarn limits the length of the traverse, and consequently with my guide a greater quantity of yarn may be applied to each spindle, giving greater length of yarn, resulting in less piecing and less doffing, which saves much valuable time.

I claim—

1. A yarn-guide composed of two arms, one of which, near its outer end, is outwardly curved, as at 5, and a shank by which to attach it to the ring-rail, substantially as set forth.

2. The combination, with a ring-rail and a series of rings, of a series of yarn-guides connected with the said ring-rail only at or near alternate rings of the said series of rings, whereby a series of yarn-guides in number substantially one-half as many as the rings of the said series are adapted to direct the yarns at each of the rings of the said series of rings, as described, and prevent the yarns passing to bobbins of adjacent spindles from striking together, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANKLIN H. WHEAT.

Witnesses:

G. W. GREGORY,  
N. E. WHITNEY.