

J. GARRARD.
GRAIN-BINDER.

No. 182,655.

Patented Sept. 26, 1876.

Fig. 1.

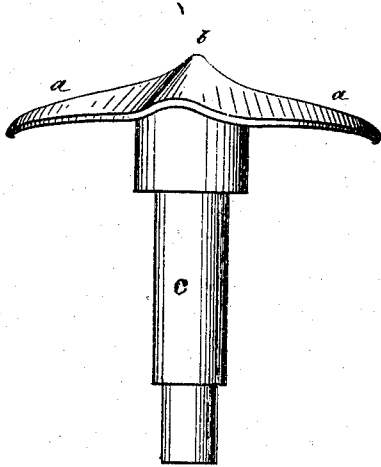


Fig. 2.

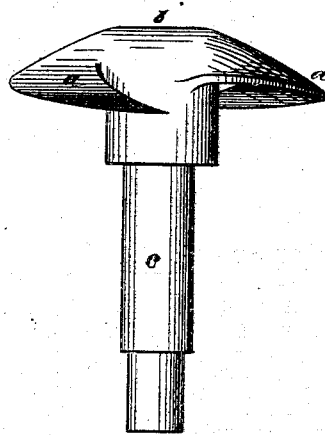
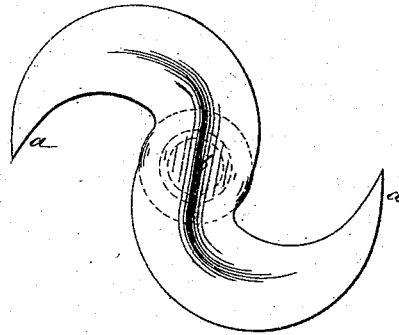


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JEPHTHA GARRARD, OF CINCINNATI, OHIO, ASSIGNOR TO EXCELSIOR GRAIN-BINDER COMPANY, (LIMITED,) OF NEW YORK, N. Y.

IMPROVEMENT IN GRAIN-BINDERS.

Specification forming part of Letters Patent No. 182,655, dated September 26, 1876; application filed June 6, 1876.

To all whom it may concern:

Be it known that I, JEPHTHA GARRARD, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Twisters for Grain-Binders, of which the following is a specification:

In Letters Patent No. 179,294, granted June 27, 1876, I have described a twister for grain-binders, constructed with a point or cone projecting forward of the twister-arms and adapted to locate the twist of the wire in the axis of the twister, preventing the escape of the end or part of the wire which first reaches the twisting-point before the other part of the wire is brought in contact with it. I have discovered that the escape of the first end of the wire from the working face of the twister may be prevented by a projection of another form, dispensing with the point or cone from the end of which the twist is spun or formed in my invention above referred to.

My present invention consists in constructing a twister with a ridge on its working face and over the axis thereof, projecting above the plane in which the wire is caught by the outer portions of the radial or curved arms, the effect of the said ridge being to prevent the wire which first reaches the apex or axis of the spindle from slipping therefrom, and so meeting the other wire on one side instead of in the line of the axis.

In the accompanying drawings, Figure 1 is a perspective view of my improved twister-head. Fig. 2 is a side elevation of the same. Fig. 3 is a top view thereof.

a a are a pair of curved radial arms, forming the head of the twister-spindle *c*, and adapted to successively catch and twist together the ends of the wire band in the manner I have described in several other applications for Letters Patent.

In order to prevent the wire which is first caught from passing beyond the apex of the spindle before the other wire reaches that point, I form, on the upper or working face of the twister, a ridge, *b*, gradually rising from the center of the face of each twister-arm and extending across the apex of the spindle. The said ridge permits the first wire to slide at the full elevation reached, (which is the extreme height of the spindle apex,) until it is met by the opposing wire, and consequently both are twisted together beyond the apex.

The present invention will thus be understood to perform, with a modified and improved construction, the general functions described in Letters Patent No. 169,251, dated October 26, 1875.

Having thus described my invention, the following is what I claim as new and desire to secure by Letters Patent—

A twister for grain-binders, constructed with curved radial arms and with a ridge over the axis of said arms projecting above the plane of the outer portion thereof, substantially as and for the purposes set forth.

J. GARRARD.

Witnesses:

SAML. D. MACK,
DANIEL B. NATHANS.