(No Model.)

A. DAHLGREN.

YARN BEAM OR SPOOL.

No. 397,539. Patented Feb. 12, 1889.

Fig. 1.

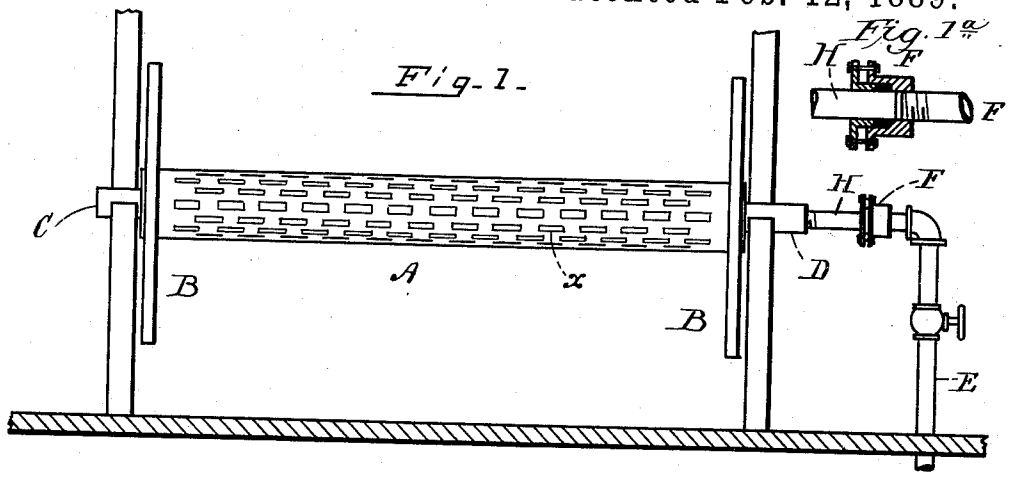


Fig. 1a.

Fig. 2.

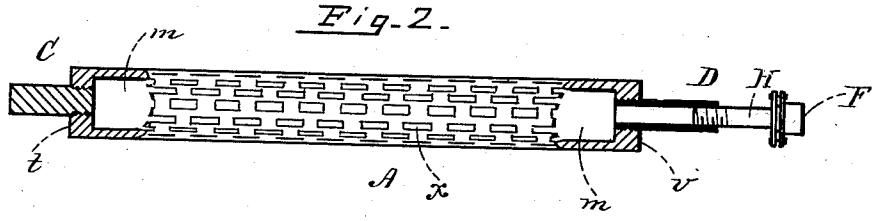


Fig. 3.

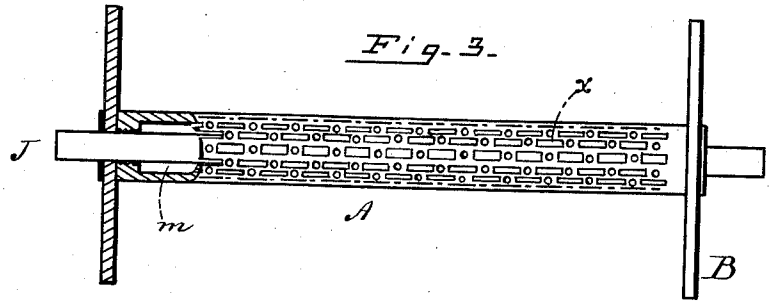
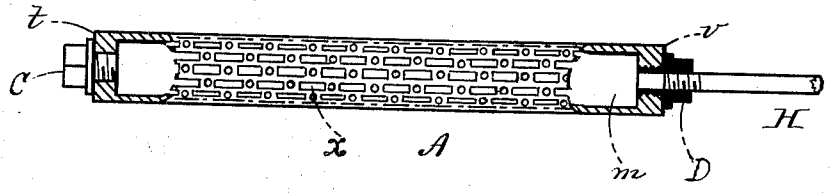


Fig. 4.



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YARN BEAM OR SPOOL.

SPECIFICATION forming part of Letters Patent No. 397,539, dated February 12, 1889.

Application filed May 12, 1888. Serial No. 273,673. (No model.)

To all whom it may concern:

Be it known that I, ADOLF DAHLGREN, of Nashville, in the county of Davidson, State of Tennessee, have invented a certain new and useful Improvement in Yarn Beams or Spools, of which the following is a description sufficiently clear and exact to enable any person skilled in the art to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my improved yarn beam or spool represented as provided with heads and connected with a steam-pipe. Fig. 1ª is a detail view of the joint F. Fig. 2 is a side elevation, partly in section, representing the beam or spool as without heads and connected with a steam-pipe; Fig. 3, a side elevation, partially in section, representing the beam or spool provided with heads and mounted on a mandrel; and Fig. 4, a side elevation, partially in section, representing the beam or spool shown in Fig. 3 with the mandrel withdrawn and heads removed and connected with a steam-pipe.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of beams or spools which are employed in the manufacture of textile fabrics for containing the yarn, thread, &c., as the case may be; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a more effective and otherwise desirable article of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body or barrel of the beam or spool; B, the heads; C, a solid plug, and D a hollow plug.

The body A is hollow and foraminous, being provided, preferably, with a series of projections, *x*, which open into its interior or chamber *m*. It is provided with closed ends, each of which is provided with a screw-threaded central opening.

The plug C is solid and provided at one end with an external screw-thread adapted to fit the screw-threaded hole of the end *t* of the body. This plug and plug D, hereinafter mentioned, are preferably round at their outer ends, as shown in Figs. 1 and 2, to adapt them to serve as journals on which the beam may rotate; or the plugs may be angular at their outer ends, as shown in Fig. 4, when the beam is not intended to rotate upon the plugs as journals.

The plug D is hollow and provided at its inner end with an external screw-thread, as in Figs. 1 and 2, to fit the screw-threaded hole of the end *v* of the body A, and at its outer end with an internal screw-thread, into which a steam-pipe may be fitted.

In Figs. 1 and 2 a short steam-pipe, H, is screwed into the outer end of the journaled plug D, said pipe in Fig. 1 being shown coupled to the steam-pipe E by an ordinary revoluble steam-tight joint, F. In Fig. 4 the pipe H is shown screwed into the squared plug D.

I sometimes construct the beam or spool with heads, as shown in Figs. 1 and 3, and sometimes without, as shown in Figs. 2 and 4. In either case by disconnecting the pipe H from the hollow plug D the beam may be conveniently carried by the projecting plugs C D.

The body A is shown as provided with both round and elongated perforations *e;* but the perforations may be of any suitable size or shape to perform their functions properly.

The object in making the body of the beam or spool hollow and providing it with the perforations is to enable the yarn, thread, &c., contained thereon to be steamed, which, it will be obvious, may be readily accomplished by letting steam into said body through the pipes E H and plug D, either when the beam is running or stationary, as preferred. This construction also enables air to be forced into the beam to dry the yarn, thread, &c., after being steamed, or when moistened in any other manner. It also affords means whereby coloring-matter, dyes, &c., may be injected and brought into contact with the yarn on the beam without removing it therefrom.

The screw-threads upon the plugs C and D permit them to be removed when desired and

a mandrel, J, to be passed through the heads and body of the yarn-beam.

Having thus explained my invention, what I claim is—

1. A hollow perforated yarn-beam having closed ends provided with central screw-threaded openings, a solid plug screwed into one end, and a hollow plug screwed into the other end, substantially as described.

2. A hollow perforated yarn-beam having closed ends provided with central screw-threaded openings, a solid plug screwed into one end, and a hollow plug screwed into the other end, said plugs being round at their outer ends to serve as journals, substantially as described.

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