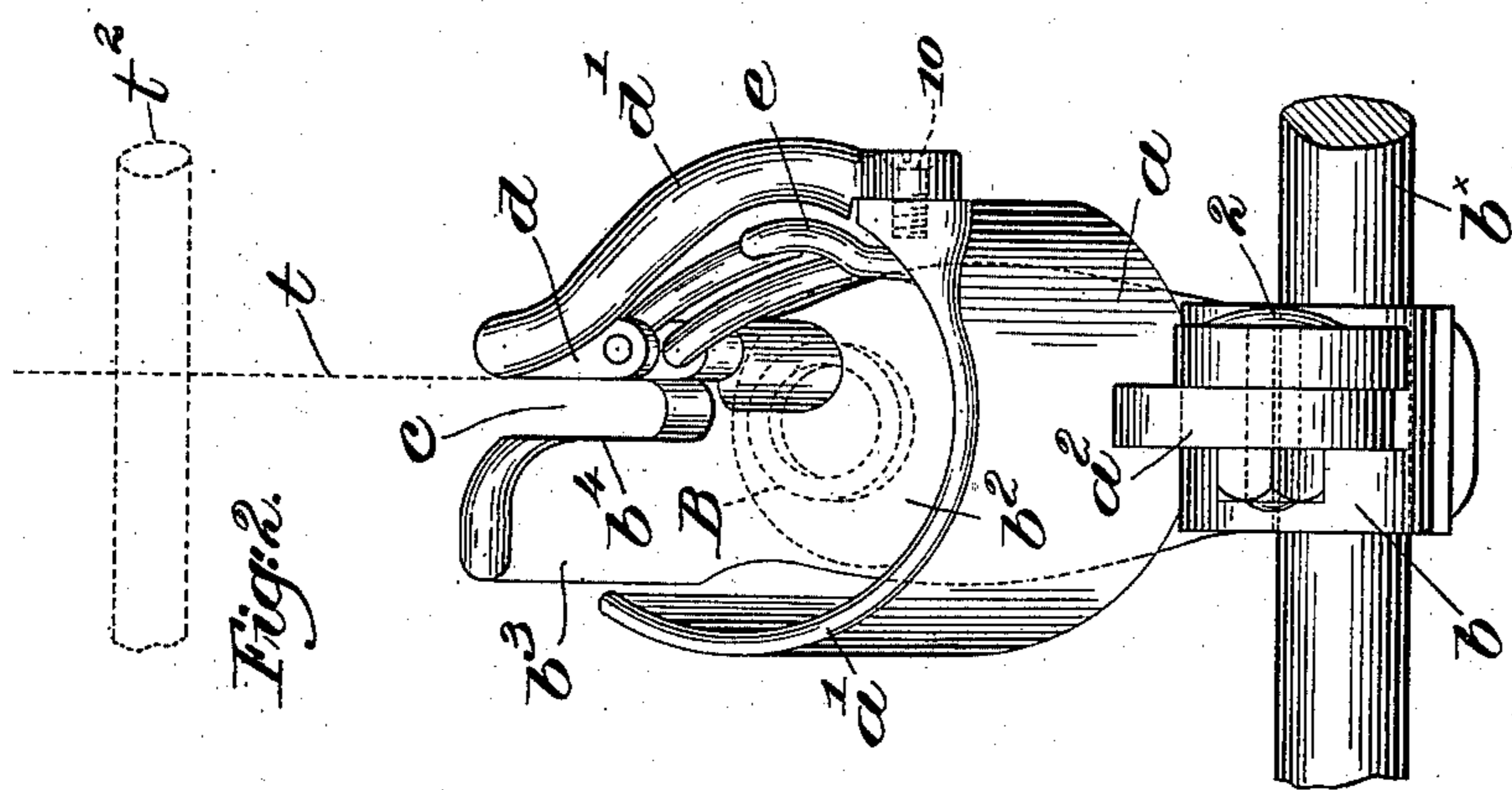
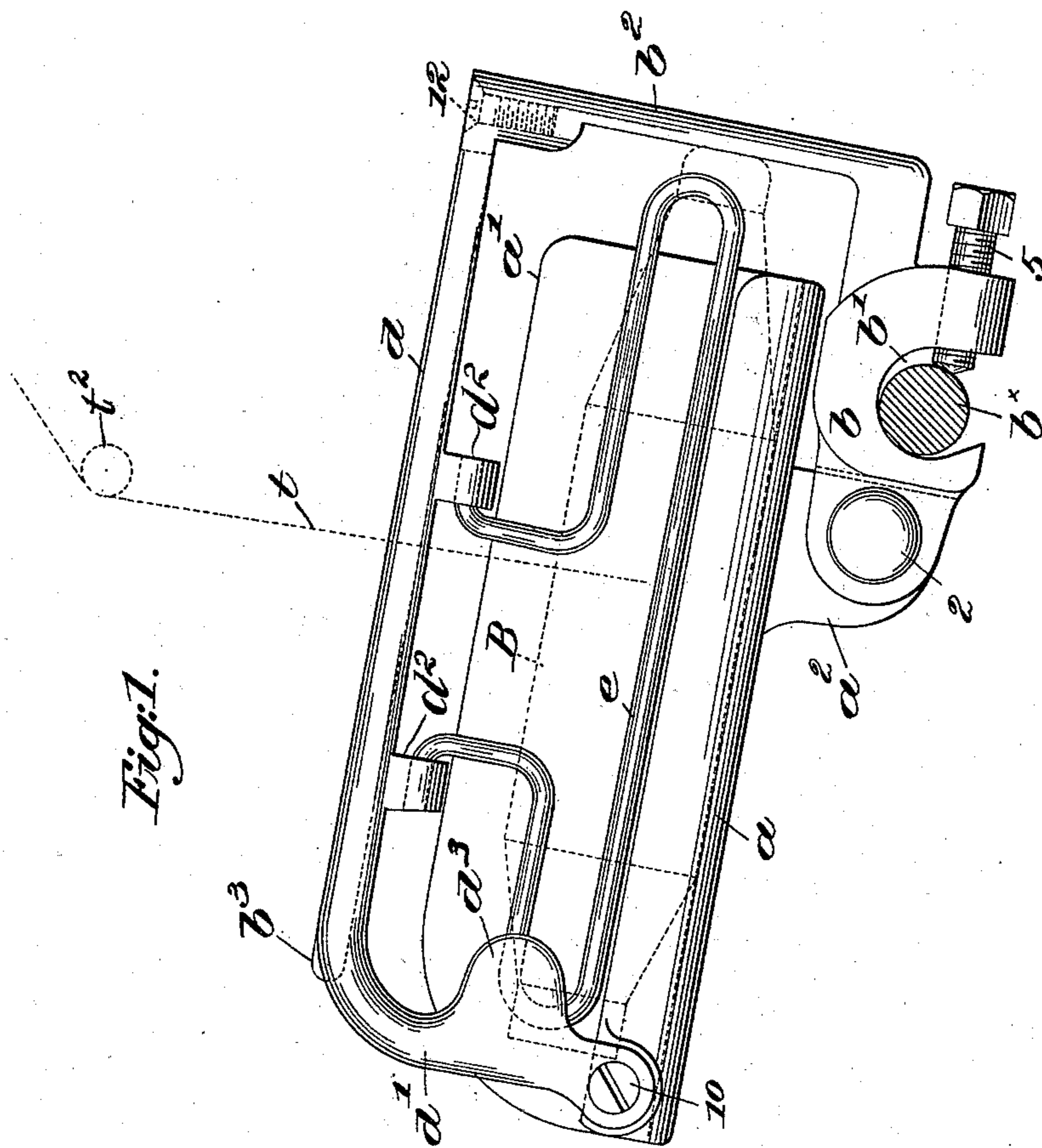


(No Model.)

S. N. BOURNE.
BOBBIN HOLDER FOR SPOOLING MACHINES.

No. 558,893.

Patented Apr. 21, 1896.



Witnesses.

Fred S. Gunkel.

Thomas J. Drummond.

Inventor.

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by George Gregory
attys.

UNITED STATES PATENT OFFICE.

STEPHEN N. BOURNE, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF TO GEORGE DRAPER & SONS, OF HOPEDALE, MASSACHUSETTS.

BOBBIN-HOLDER FOR SPOOLING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 558,893, dated April 21, 1896.

Application filed March 7, 1895. Serial No. 540,817. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN N. BOURNE, of Manchester, county of Hillsborough, State of New Hampshire, have invented an Improvement in Bobbin-Holders for Spooling-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters and numerals on the drawings representing like parts.

Bobbin-holders are designed to support a bobbin in such manner that the yarn is delivered therefrom with the most nearly uniform and least possible strain.

Heretofore it has been customary to provide bobbin-holders with one or with a pair of guards, one of which guards is used to produce tension on the yarn or thread to be wound, the said yarn or thread passing from the bobbin laterally in a substantially horizontal plane to and about the guard and thence vertically, or nearly so, to the usual spooler-guide. In the use of bobbins of very large diameter, which are now being made, these usual holders fail to act properly and the yarn or thread is frequently broken, due to excessive strains, and hence I have produced a bobbin-holder wherein the strain on the yarn is reduced to the minimum, the yarn or thread leaving the bobbin in a substantially vertical path and passing to the spooler-guide, the said yarn or thread being drawn from the bobbin without any perceptible friction or strain, the bobbin-holder being provided with a wire guard, which acts to steady the bobbin as the thread or yarn is drawn therefrom.

Figure 1 in side elevation represents a bobbin-holder embodying my invention, a bobbin being shown therein in dotted lines; and Fig. 2 is an outer end elevation thereof.

The bobbin-holder herein shown consists of a concave plate or support *a* open at its ends and extended upwardly along one side to form a curved retaining-wall *a'* at one side of the holder. The bobbin rests at its side on the support *a* and is rotated thereon while in nearly horizontal position, the wall *a'*, connected with the support *a*, aiding in preventing the escape of the bobbin as the latter rotates from the support. By means of an ear *a²* projecting from the under side of the sup-

port it is secured, as by a bolt 2, to a stand *b*, transversely recessed or grooved at *b'* to receive a suitable supporting rod or bar *b^x*, a set-screw 5, extended through one of the walls of the groove, bearing against said bar and securing the holder rigidly thereto.

The stand *b* is upturned across the inner end of the support *a*, as at *b²*, and is preferably laterally enlarged or widened, as shown in Fig. 2, to form a stop for the adjacent end of the bobbin, which rests easily in the support *a*. The back *b²* of the stand is extended forward at *b³*, thus forming a finger above the wall *a'* of the support, its inner edge *b⁴* forming one side of a thread guide or slot *c* in a vertical plane passing through the longitudinal axis of the bobbin-holder, as clearly shown in Fig. 2.

The support *a* has secured to it by a screw one end of a bar *d*, which I shall denominate a "guide-bar," the other end of the bar being secured by a screw 12 to the back plate *b²*, said guide-bar presenting a straight, but somewhat rounded, surface directly above the bobbin and substantially parallel to its axis, the bar constituting the active side of the slot *c*, the thread at times touching it.

A guard *e*, preferably formed of stiff wire bent into suitable shape and concaved between its upper and lower edges, is shown as mounted in ears *d²* on the bar *d* to move laterally and close the open side of the bobbin-holder and prevent the bobbin from flying out, outward movement of the guard being limited by a stop or enlargement *d³* on the outer end *d'* of the bar and in the path of the outer end of the guard, the lower edge of the latter being located a short distance above the open side of the support *a*.

The thread or yarn *t* as it is drawn off from the bobbin *B* passes directly and substantially vertically to the spooler-guide *t²* through the slot or thread-guide *c*, in which it is free to move as unwound, with the least possible friction. As the thread moves from one to the other end of the bobbin, the latter is apt to be jerked or thrown about in the holder sufficiently to break or strain the thread, and this is prevented by the guard *e*, which rests against the side of the bobbin and steadies it without offering any opposition to its free

rotation other than that due to the weight of the guard as it is held by gravity against the bobbin side.

5 The bobbin is inclosed within a substantially cylindrical space of sufficient size to allow the necessary free rotation of the bobbin as it is unwound.

My invention is not restricted to the specific construction and arrangement herein
10 shown, as the same may be modified or changed in various details without departing from the spirit and scope of my invention.

I claim—

15 1. A bobbin-holder composed of an inclined curved plate *a*, having at one side an upwardly and inwardly curved wall *a'*, a stand *b*, to which the said plate is connected, said stand having an upturned end *b*², a bar *d* connected at one end to said upturned end
20 and its other end to said curved plate, and a swinging guard *e* supported from said bar, one side of the said bar lying parallel to and substantially vertically above the axis of the bobbin, substantially as described.

25 2. A bobbin-holder composed of an inclined curved plate *a*, having at one side an upwardly and inwardly curved wall *a'*, a stand *b*, to which the said plate is connected, said stand having an upturned end *b*² and a forward extension *b*³, a bar *d* connected at one
30

end to said upturned end and its other end to said curved plate, and a swinging guard *e* supported from said bar, one side of the said bar lying parallel to and substantially vertically above the axis of the bobbin, substantially as described. 35

3. A bobbin-holder comprising an inclined curved plate on which the bobbin may lie and rotate, said plate having an upwardly-directed extension to constitute one side of the holder, 40 a connected guide-bar for the thread located above and substantially parallel with the axis of the bobbin and provided with a stop, a depending guard pivotally connected to said frame and adapted to rest by gravity against 45 one side of the bobbin, the outward movement of said guard being limited by said stop and a finger lying substantially above the bobbin with its edge opposed to the said guide-bar, thus leaving a slot above the axis of the bob- 50 bin for the travel of the thread vertically from the bobbin, substantially as described.

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

STEPHEN N. BOURNE.

Witnesses:

W. W. LIMMONS,
J. R. FRADD.