

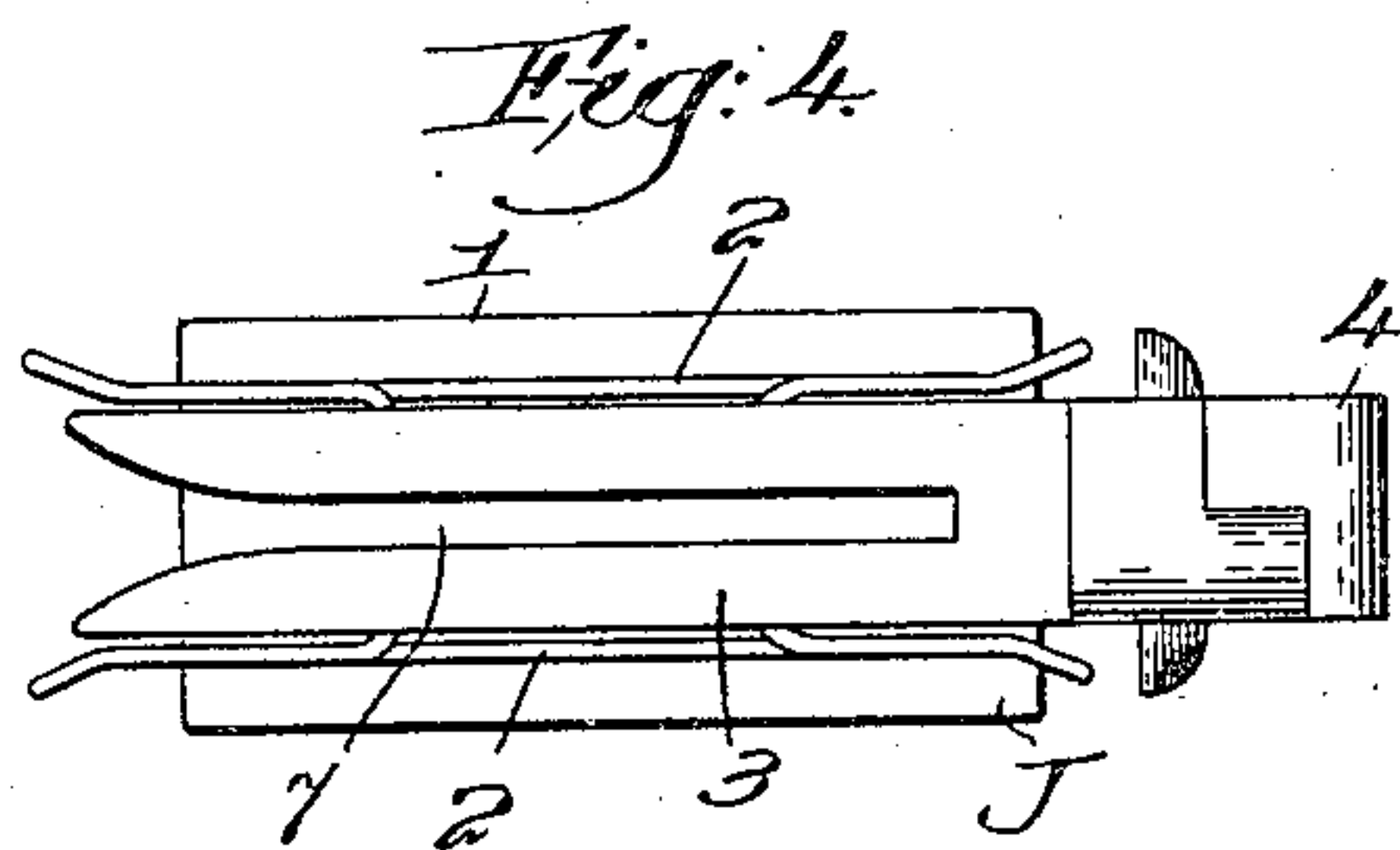
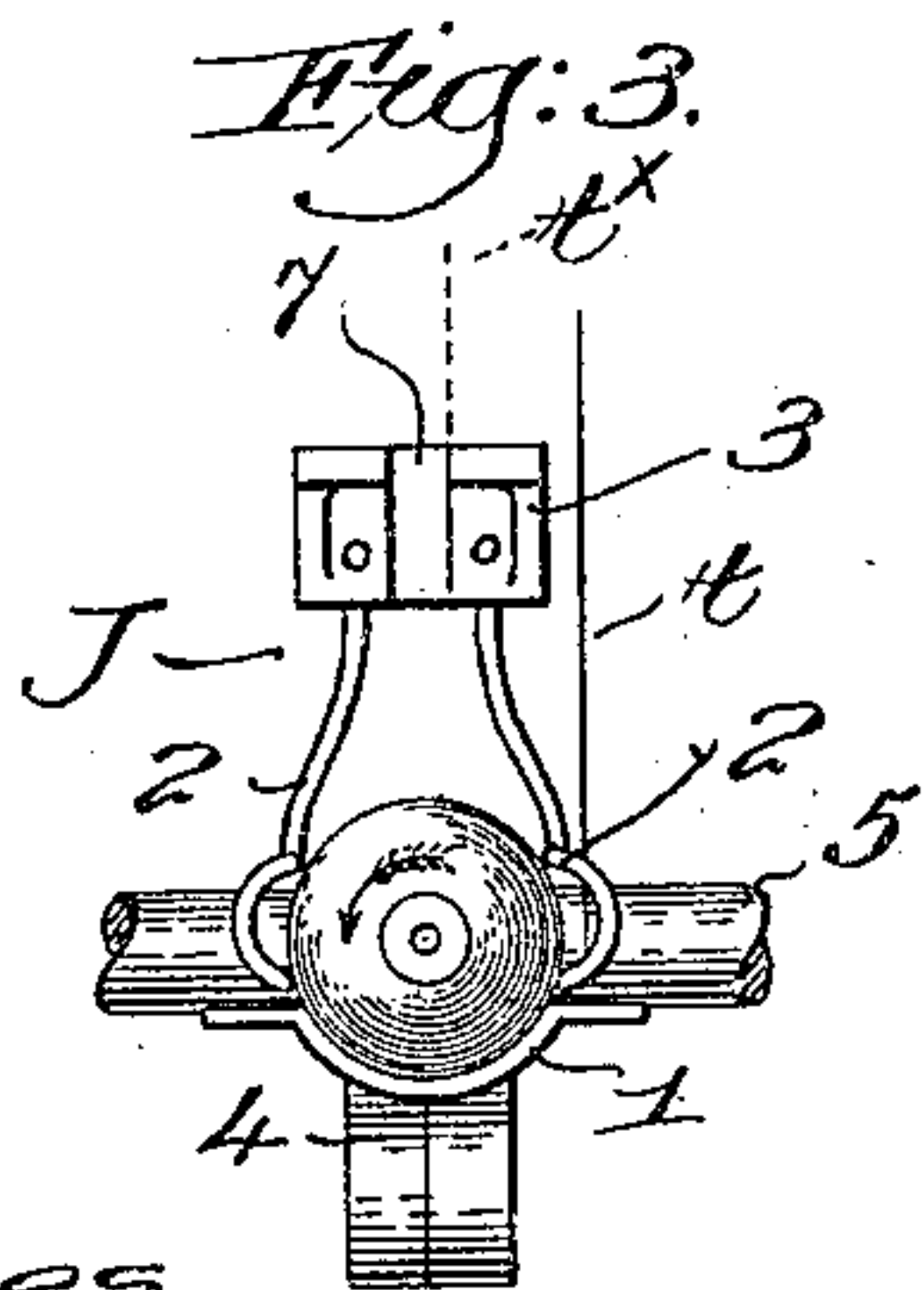
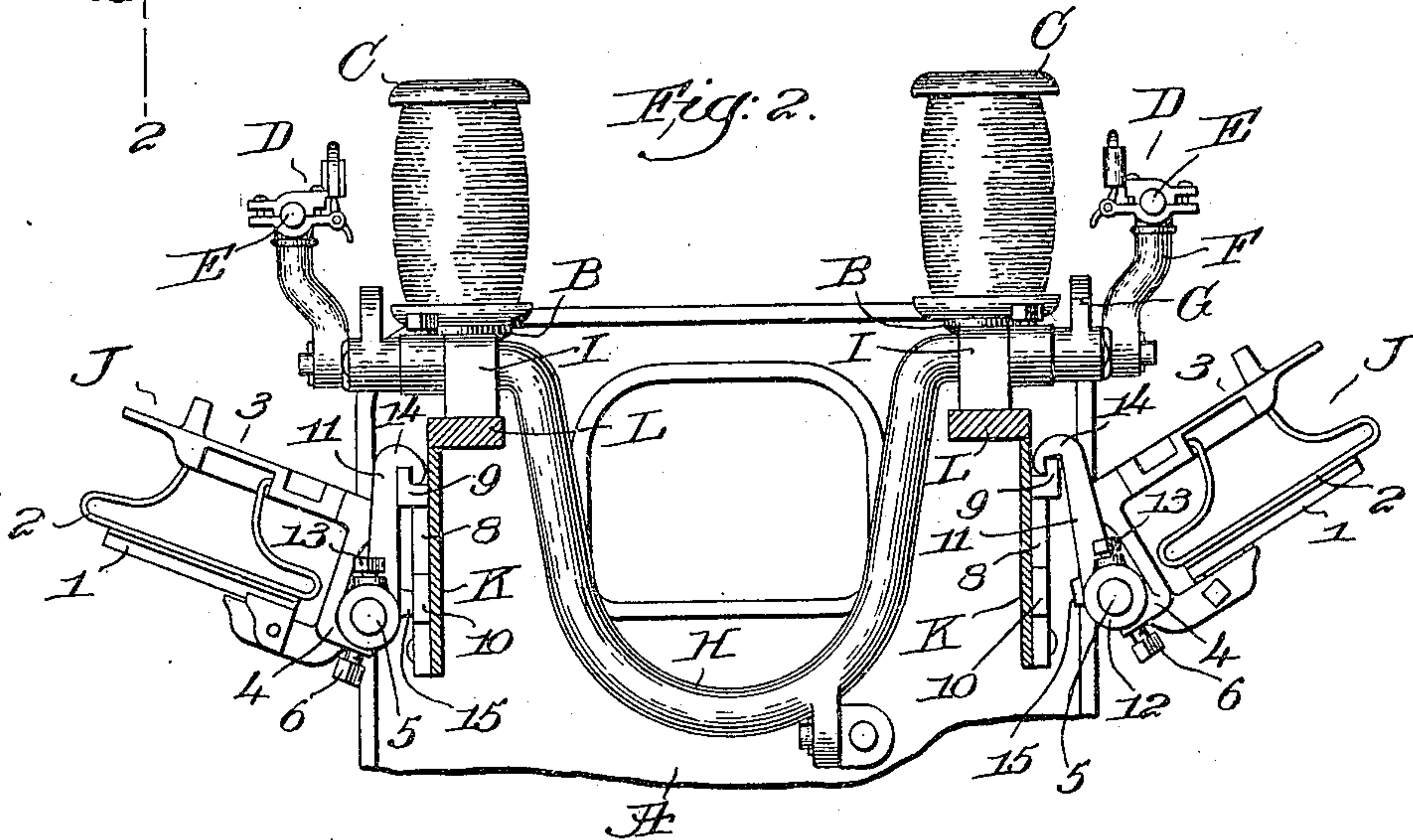
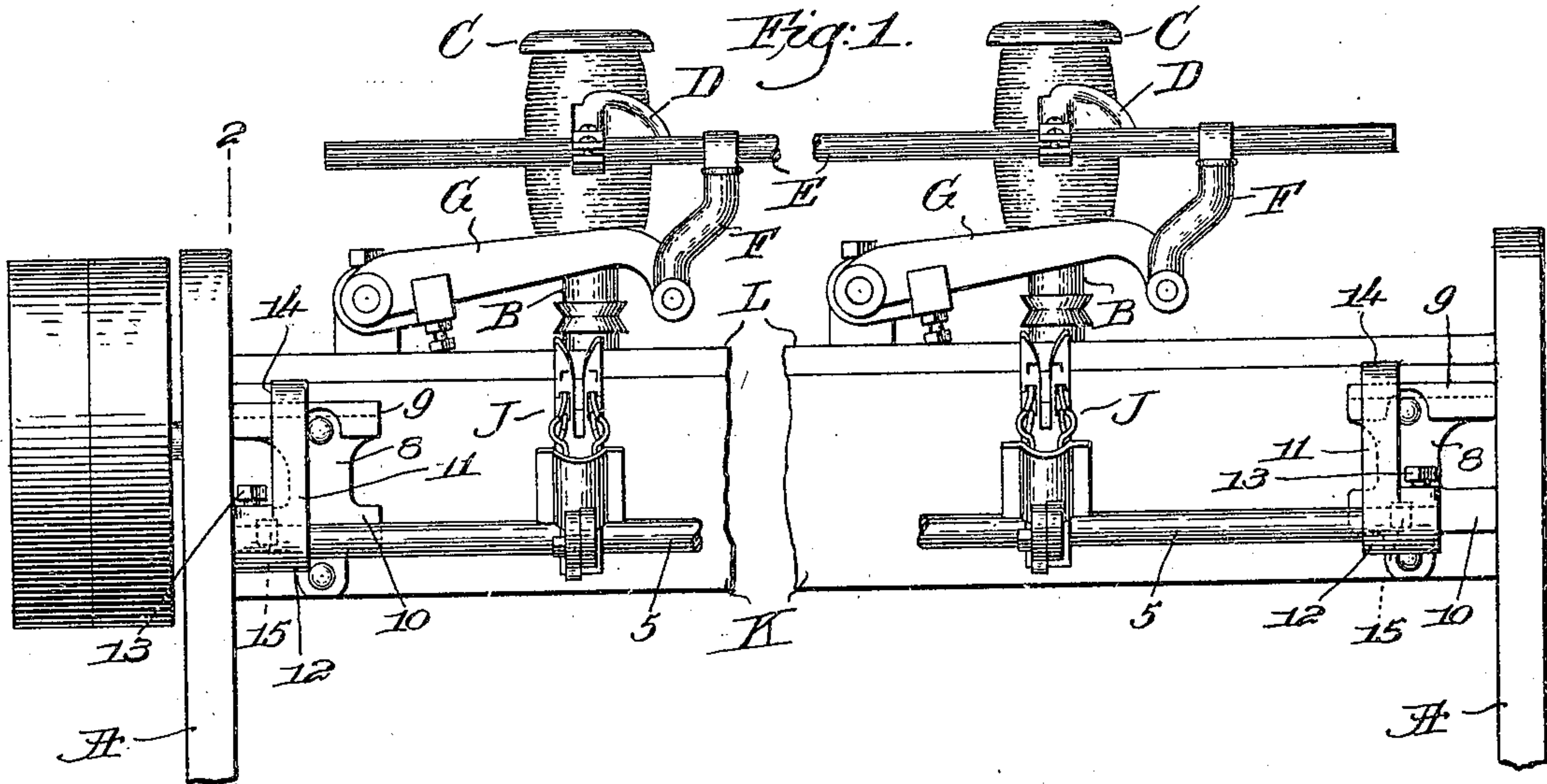
A. E. RHOADES.

SPOOLER.

APPLICATION FILED NOV. 17, 1909.

Patented Mar. 29, 1910.

953,294.



Witnesses,
Edward H. Allen.
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Inwitness whereof,
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UNITED STATES PATENT OFFICE.

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SPOOLER.

953,294.

Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed November 17, 1909. Serial No. 528,430.

To all whom it may concern:

Be it known that I, ALONZO E. RHOADES, a citizen of the United States, and resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Spoolers, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to spooling machines of the general type illustrated, for instance, in United States Patent No. 744,797 granted to me November 24, 1903, wherein the bobbins are sustained in bobbin-holders arranged in a row along each side of the main frame, the thread or yarn leading upward from each bobbin to a reciprocating thread-guide which lays the thread upon the spool.

In practice and as shown in my patent the bobbin-holders are clamped to a horizontal supporting rod which heretofore has been fixedly secured to the main frame, each bobbin-holder being individually adjustable on the rod, lateral adjustment being necessary with bobbin-holders arranged for top or side lead for the thread.

The bobbin rests in the pan of the holder, retained thereon by swinging side-guards which depend from an overhanging arm, and for side lead the thread is carried from the bobbin under a guard and then upward, imparting the desired tension to the thread, but if the latter is fine and requires practically no tension as it leaves the bobbin-holder the top lead is adopted, the thread being led directly upward through a longitudinal slot in the overhanging arm of the bobbin-holder.

Bobbin-holders arranged for both leads are now in use, and heretofore when changing the lead it has been necessary to adjust or shift laterally upon the supporting rod one bobbin-holder after another, in order to bring them into proper position with relation to their thread-guides, an operation requiring considerable time and labor on a large spooler.

My present invention has for its object the production of novel and effective means for effecting quickly and easily the simultaneous lateral adjustment of all the bobbin-holders of a series.

In accordance with my invention the

series of bobbin-holders are mounted on a horizontal supporting rod by suitable clamping devices, as is now common, and the rod itself is sustained in such manner that the attendant can easily move it bodily, with its bobbin-holders, laterally in either direction the distance required for adjustment.

The novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a partial side elevation, centrally broken out, of a sufficient portion of a spooler, with one embodiment of my present invention applied thereto; Fig. 2 is a cross-sectional view taken on the line 2—2, Fig. 1, looking toward the right, the supporting rod and its attached bobbin-holders at the right being swung forward in readiness for lateral adjustment; Fig. 3 is an enlarged front elevation of one of the bobbin-holders showing the two leads for the thread; Fig. 4 is a top plan view of the bobbin-holder, showing the slotted top or overhanging arm for top lead of the thread.

Referring to Figs. 1 and 2 the main frame A, rotatable spool-carriers B for the spools C to receive the thread or yarn from the bobbins, the thread-guides D mounted on the transverse-rods E, the depending links F pivotally connecting said rods with the rocker-arms G, and the connected yokes H fulcrumed in bearings I, (see Fig. 2) to effect the traverse of the thread upon the spools, may be and are all of well known construction and are substantially as in my patent referred to.

The bobbin-holders herein illustrated (indicated as a whole at J) have each a pan 1, Figs. 3 and 4, upon which the bobbin rests, swinging side-guards 2 pivotally mounted on and depending from an overhanging arm 3, and a jaw 4, Fig. 2, to embrace the supporting rod 5, each holder being securely clamped thereupon by a set-screw 6, and the arm 3 has a central longitudinal slot or guideway 7, clearly shown in Figs. 3 and 4.

For side lead the thread is carried under one of the guards 2 and then upward to the thread-guide, as shown by full lines at *t*, Fig. 3, but for top lead the thread is carried upward from the bobbin directly through the slot or guideway 7, as shown by dotted lines at *t'*, Fig. 3, and when changing from one lead to the other the bobbin-holder must

be adjusted laterally to properly position it with relation to its thread-guide.

In the present embodiment of my invention the upright girths K, one at each side of the main frame below the spindle-rails L, have securely bolted to them at or near their ends brackets 8, each bracket having a longitudinally-flanged or rail-like and elongated head 9, clearly shown in Figs. 1 and 2, the heads of the brackets being in alinement. The foot of the bracket is longitudinally extended to form a flat abutment 10, corresponding in length to the head, for a purpose to be described.

A hanger 11 having at its lower end a hub 12 to receive the supporting rod 5 is clamped thereto by a set-screw 13, one of such hangers being secured to the rod at each of its ends, in the present embodiment of my invention, as shown in Fig. 1, the upper ends of said hangers being hooked at 14, Fig. 2, to hook over the flange or rail of a bracket head 9, while a lug 15 extending from the back of each hanger adjacent its hub is adapted normally to rest against the abutment 10, see Fig. 2 at the left.

From an inspection of Fig. 2 it will be seen that the rod 5 and its series of bobbin-holders J is suspended from the bracket heads 9 by the hangers, the engagement of the lugs 15 with the abutments 10 maintaining the rod and bobbin-holders in operative position, and viewing Fig. 1 it will be seen that there is a clearance between the right hand end of the rod and the adjacent end of the main frame A.

When it is desired to shift or adjust the bobbin-holders laterally the attendant grasps the rod 5, draws it forward far enough to disengage the lugs 15 from the abutments 10, as shown at the right, Fig. 2, and then moves the rod and its connected parts to the right or left, as may be necessary, the hooked ends 14 of the hangers 11 sliding along the rail-like heads 9. The desired lateral shifting having been accomplished the rod 5 is released and immediately it swings back to normal operative position, the weight of the various parts creating sufficient friction between the lugs 15 and the bracket abutments to prevent any accidental lateral displacement under normal conditions. In Fig. 1 the bobbin-holders are set for side lead of the threads and when a change is to be made to top lead the shifting of the rod 5 will be to the right, as will be apparent, in order to position properly the guideways 7 with relation to the thread-guides D. Thus by a very simple and readily effected operation on the part of the attendant the entire series of bobbin-holders on a side of the frame is laterally adjusted or shifted simultaneously, completely obviating the old and cumbersome, time and labor-consuming method of in-

dividually adjusting each bobbin-holder on the supporting rod. After the bobbin-holders have been properly set and clamped upon the supporting rod in the first instance, by means of the set-screws 6, there is no further adjustment required relatively to the rod, the simultaneous adjustment of all of the bobbin-holders of a set as herein provided for being a great economizer of time and labor.

By means of the set-screws 13 the angularity of the bobbin-holders as a set can be varied, simply by the necessary turning of the rod 5 in the hubs 12.

The rail-like heads of the brackets are of sufficient length to permit any required adjustment, and while said heads are at all times in operative sliding engagement with the hooked hangers or suspenders they permit slight rocking movement of said hangers when the rail is pulled forward preparatory to lateral shifting. Such forward movement of the rail is practically necessary, as otherwise the friction between the hanger lugs and the bracket abutments would make necessary the expenditure of considerable power to effect the lateral shifting.

Various changes or modifications may be made by those skilled in the art without departing from the spirit and scope of my invention as set forth in the claims annexed hereto.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a spooler, a series of rotatable spool-carriers, thread-guides, and bobbin-holders, combined with a supporting rod upon which the bobbin-holders are clamped, and means for sustaining and permitting longitudinal movement of the rod to thereby effect lateral adjustment of the bobbin-holders in unison.

2. In a spooler, a series of rotatable spool-carriers, thread-guides, and bobbin-holders, combined with a supporting rod upon which the bobbin-holders are clamped, fixed brackets, and hangers rigidly attached to the said rod and in sliding and rocking engagement with the brackets, to permit lateral and simultaneous adjustment of said bobbin-holders.

3. In a spooler, fixed brackets having elongated, flanged heads, a series of bobbin-holders, a supporting rod on which they are mounted, and suspending hangers rigidly attached to said rod and having hooked upper ends in sliding engagement with the flanged heads of the brackets.

4. In a spooler, a series of rotatable spool-carriers, thread-guides, and a series of bobbin-holders, combined with laterally shiftable supporting means for the bobbin-holders, whereby they can be adjusted in unison laterally with relation to the thread-guides.

5. In a spooler, in combination, a series of thread-guides, a series of bobbin-holders adapted for side or top lead for the thread, and laterally shiftable means for supporting said bobbin-holders and with which they are rigidly connected, whereby said bobbin-holders can be adjusted laterally in unison to position the bobbin-holders for side or top lead.

6. In a spooler, a series of bobbin-holders, a supporting rod on which they are clamped, and laterally shiftable, rocking suspending means for said rod, to effect simultaneous adjustment of the bobbin-holders.

7. In a spooler, fixed brackets having longitudinally extended, flanged heads and flat, elongated abutments at their feet, a series of bobbin-holders, a supporting rod on which they are clamped, a hanger at each end of and rigidly attached to the rod, each hanger having its upper end hooked to slidably engage and rock on the flanged head of a bracket, and a lug on the lower end of each hanger, to frictionally engage the abutment and normally prevent longitudinal movement of said supporting rod.

8. In a spooler, fixed brackets having longitudinally extended, flanged heads and flat,

elongated abutments at their feet, a series of bobbin-holders, a supporting rod on which they are clamped, a suspending hanger having a hooked upper end to slidably engage and rock on the flanged head of a bracket, a hub on the lower end of each hanger, to receive the rod, means to clamp the rod therein, and a lug on each hanger adapted normally to engage the bracket abutment and frictionally restrain the rod and its adjuncts from longitudinal movement.

9. In a spooler, a series of bobbin-holders, a supporting rod upon which they are clamped, sustaining means for the rod, including laterally movable members, whereby the latter said rod and the bobbin-holders as a unit can be shifted laterally, and means to hold the rod in angularly adjusted position with relation to the sustaining means therefor.

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

ALONZO E. RHOADES.

Witnesses:

G. L. BELL,
E. D. OSGOOD.