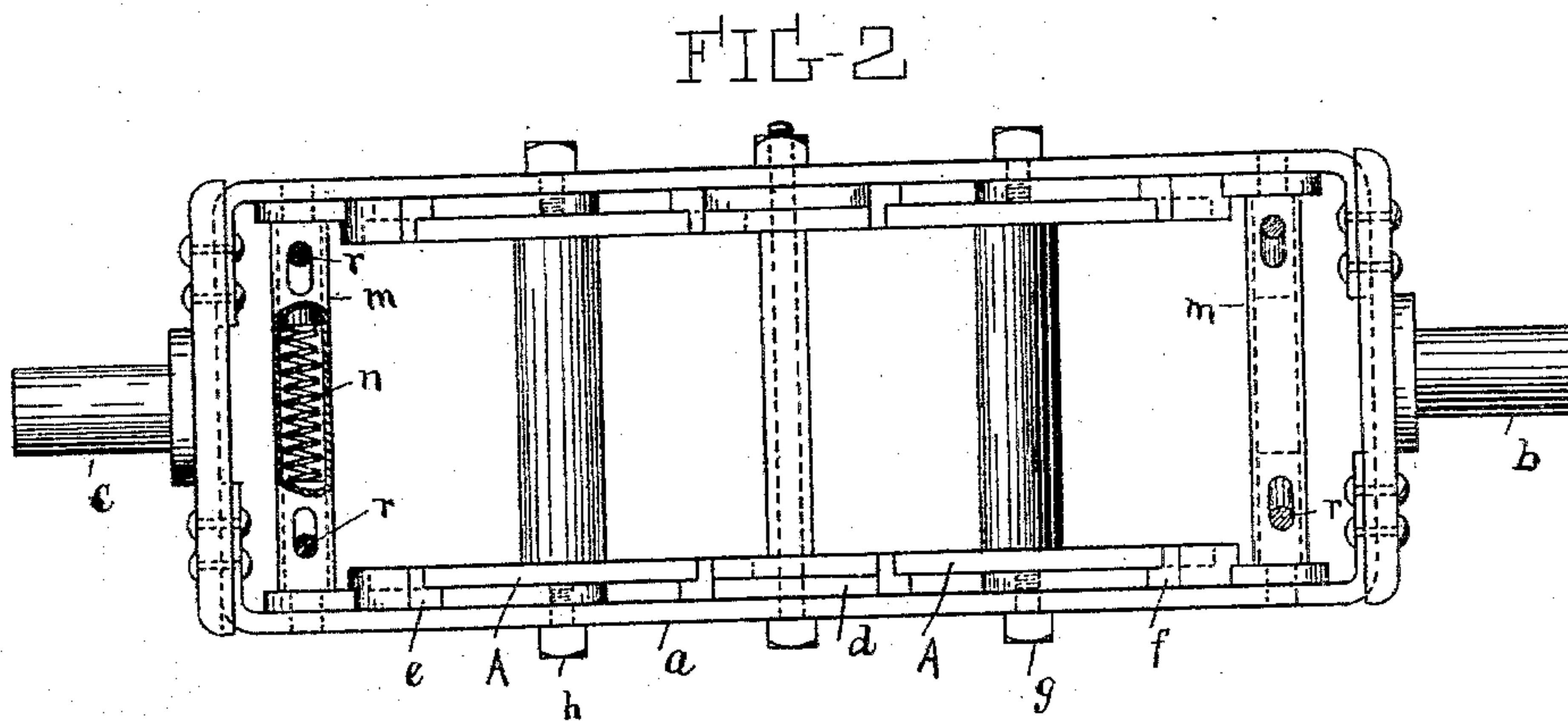
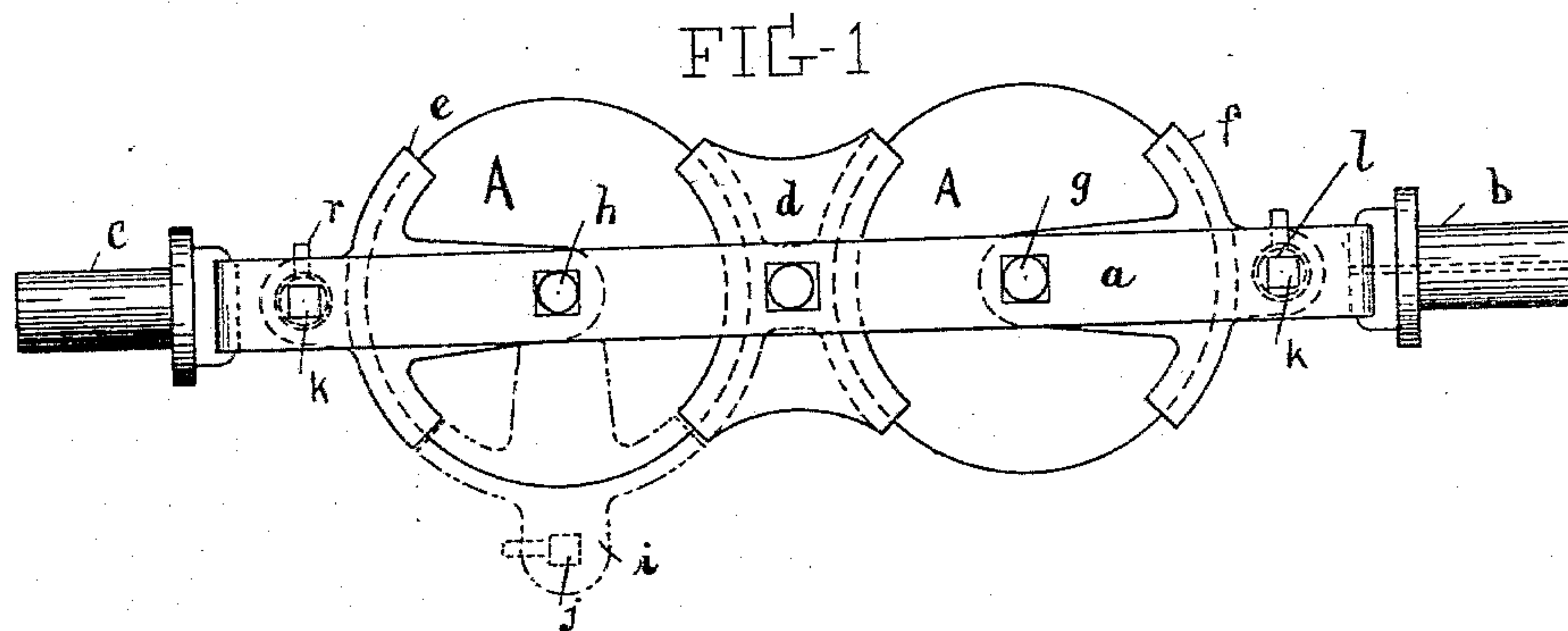


(No Model.)

J. SOMMER.
SPOOL CARRYING FRAME.

No. 546,358.

Patented Sept. 17, 1895.



WITNESSES=

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UNITED STATES PATENT OFFICE.

JOHN SOMMER, OF TREMONT, ILLINOIS.

SPOOL-CARRYING FRAME.

SPECIFICATION forming part of Letters Patent No. 546,358, dated September 17, 1895.

Application filed March 31, 1894. Serial No. 505,980. (No model.)

To all whom it may concern:

Be it known that I, JOHN SOMMER, a citizen of the United States, residing at Tremont, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Spool-Carrying Frames; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to 10 which it appertains to make and use the same.

My invention relates to certain new and useful improvements in spool-carrying frames, by means of which a spool-carrying frame is provided which is very simple in construction 15 and well adapted for the purpose designed.

More particularly my invention relates to a spool-carrying frame in which are designed to be supported and turned spools upon which strands are purposed to be wound and then 20 withdrawn under tension.

The object of my invention is to provide such a spool-carrying frame as will accommodate the easy and quick removal of the spools, and also provide in connection therewith suitable bearing surfaces or plates for the rims of 25 the spools which will produce a uniform tension at all times as the strands wound upon the spools are withdrawn.

My invention consists, essentially, of a general frame-structure which may be rectangular in form, and may be provided at its extremities with journals adapted to be carried in suitable boxes to accommodate the turning of the said framework, one of the said journals being provided with one or more perforations; of a fixed bearing-plate which may be located in the central part of the framework, and having one or both of its faces cut out, or having a circular form to conform to 40 the arc or arcs of the circles described by the rims of the particular spools designed to be mounted within the framework, and of two adjustable bearing-plates (if two spools are designed to be supported) pivoted at points 45 upon the framework in line with the centers of the spools, the bearing-surfaces of the said plates being formed to correspond with the arcs of the circles described by the rims of the said spools, so that the spools may be easily removed from the framework by simply dropping the pivoted supporting-plates and allow-

ing them to be swung to provide a sufficient opening between the bearing-faces of the stationary and adjustable plates for the spools to be removed, and also that they may be so 55 swung as to properly hold the spools within the frame and between the bearing-faces of the plates, and to be there secured by a suitable catch or fastening mechanism provided, and of certain other details of construction 60 hereinafter more particularly described.

My invention is purposed to be applied for practical use, particularly in connection with fabric-making machines, and the manner in which it is purposed to be practically applied 65 may be understood by reference to the application for patent of Peter Sommer, John Sommer, and Peter W. Sommer, on wire-fabric machines, filed February 3, 1894, Serial No. 499,016, in which said application I am the 70 John Sommer named as one of the joint inventors, in which said application the spool-carrying-frames therein used are referred to by $d d^2$, the particular construction of the said spool-carrying frames shown and described in the 75 above said application for patent being different in its detailed construction from that shown in my present invention, but is designed to be applied for practical use in the same manner. 80

That my invention may be more fully understood, reference is had to the accompanying drawings, in which—

Figure 1 is a side view of the spool-carrying frame. Fig. 2 is a plan view of the same. 85

In the figures, A is the main framework, which may be terminated by journals $b c$ if it is designed that the framework shall be turned.

d is a plate provided with circular bearing-face. 90

$e f$ are adjustable bearing-plates pivoted to the framework a , as at $g h$, and provided with circular bearing-faces and also with extensions therefrom, as i , provided with perforations, as j , which said extensions i are designed to be engaged through the perforations j therein by bars $k k$, carried in openings in cross-pieces $m m$, which have a constant lateral bearing caused by the compression of coil-spring n . 95 100

$r r$ are pins connected with said sliding

bars k , k , projecting outwardly through openings in the cross-pieces m , m and in such position that they may be engaged.

A A are spools which are provided with the usual outside rims and suitably connected at their central portions, these spools being designed to be supported within the spool-carrying frame, with the rims thereof bearing against the faces of the bearing-plates d , e , and f for rim-support, so that when the strands wound upon the spools are drawn the friction of the spool-rims bearing upon the bearing-plates will provide a uniform tension. When the supply on the spools has been exhausted and it is necessary that they shall be replaced by other spools provided with the necessary supply, the pins r , r are drawn toward each other, which will cause the bars k , k to be drawn out of the perforations l , which will permit the pivoted parts e , f or one of them to be dropped downwardly into the position, if desired, as shown in dotted lines in Fig. 1, which will allow the spool to be lifted out of its bearings and a new spool placed in position and secured in such position by drawing adjustable part e into position shown in solid lines, thus providing a simple means of supplying the spools and also providing the proper tension through the bearing of the rims of the spools upon the bearing-plates.

In applying my invention to practical use the main framework may be either revoluble or stationary, according to the purpose and the connection in which it is used; also, I may adapt the spool-frame for carrying one, two, or more spools. If but one spool is used in the frame, there will be employed one stationary plate and one adjustable one, the principle of the invention applying to the means for supporting one or more spools, as may be desired.

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

1. In a spool carrying frame, the combination, of a supporting frame-work, bearing plates carried by said frame and having recesses to engage the opposite sides of a spool rim, one of such bearing plates being movable to permit the removal of such spool.

2. In a spool carrying frame, a series of bearing plates, supported in a frame work, two bearing plates being provided for each spool, one of said plates being fixed, and one having provisions in virtue of which it is movable with respect to the rim of the spool for the purpose specified.

3. In a spool carrying frame, the combination, with a frame work, of two separate bear-

ing plates, one fixed and one having provisions in virtue of which it is movable with respect to the rim of a spool for the purpose specified.

4. In a spool carrying frame, the combination of the frame-work a , provided with journals at its extremities, the centrally disposed plate d , and the plates e and f , having provisions in virtue of which they are movable with respect to the rims of the spools, all substantially as described and shown.

5. In a spool carrying frame, the combination of the general frame work a , provided with journals at its extremities, the centrally disposed stationary plate d , and the plates e and f , pivoted to the frame work a , at points on lines with the centers of the spools designed to be carried between the said plates, all substantially as described and shown.

6. In a spool carrying frame, the bearing plates d , e , and f , the bearing plate d fixed in connection with the frame work a , and the bearing plates e and f having provisions in virtue of which they are movable with respect to the rims of the spools, for the purpose specified, and mechanism for engaging and releasing the said movable plates e and f , all substantially as described and shown.

7. In a spool carrying frame, the plates d , e and f , the bearing plate d , being fixed in connection with the frame work a , and the bearing plates e and f having provisions in virtue of which they are movable with respect to the rims of the spools, for the purpose specified, and mechanism for engaging and releasing the said movable plates e and f , consisting of bars k , k , suitably carried in the frame work to accommodate lateral shifting thereof, all substantially as described and shown.

8. In a spool carrying frame, the bearing plates d , and e , f , the bearing plate d being fixed in connection with the frame work a , and the bearing plates e and f having provisions in virtue of which they are movable with respect to the rims of the spools for the purpose specified, and the mechanism for engaging and releasing the movable plates e and f , consisting of the bars k , k , shiftable laterally, and provided with pins r , r , and the spring n , carried under compression between the ends of the bars k , k , all substantially as described and shown.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN SOMMER.

Witnesses:

C. S. TAYLOR,
W. V. TEFFT.