

No. 748,300.

PATENTED DEC. 29, 1903.

J. O. McKEAN.
THREAD GUIDE FOR WINDING MACHINES.

APPLICATION FILED OCT. 10, 1902.

NO MODEL.

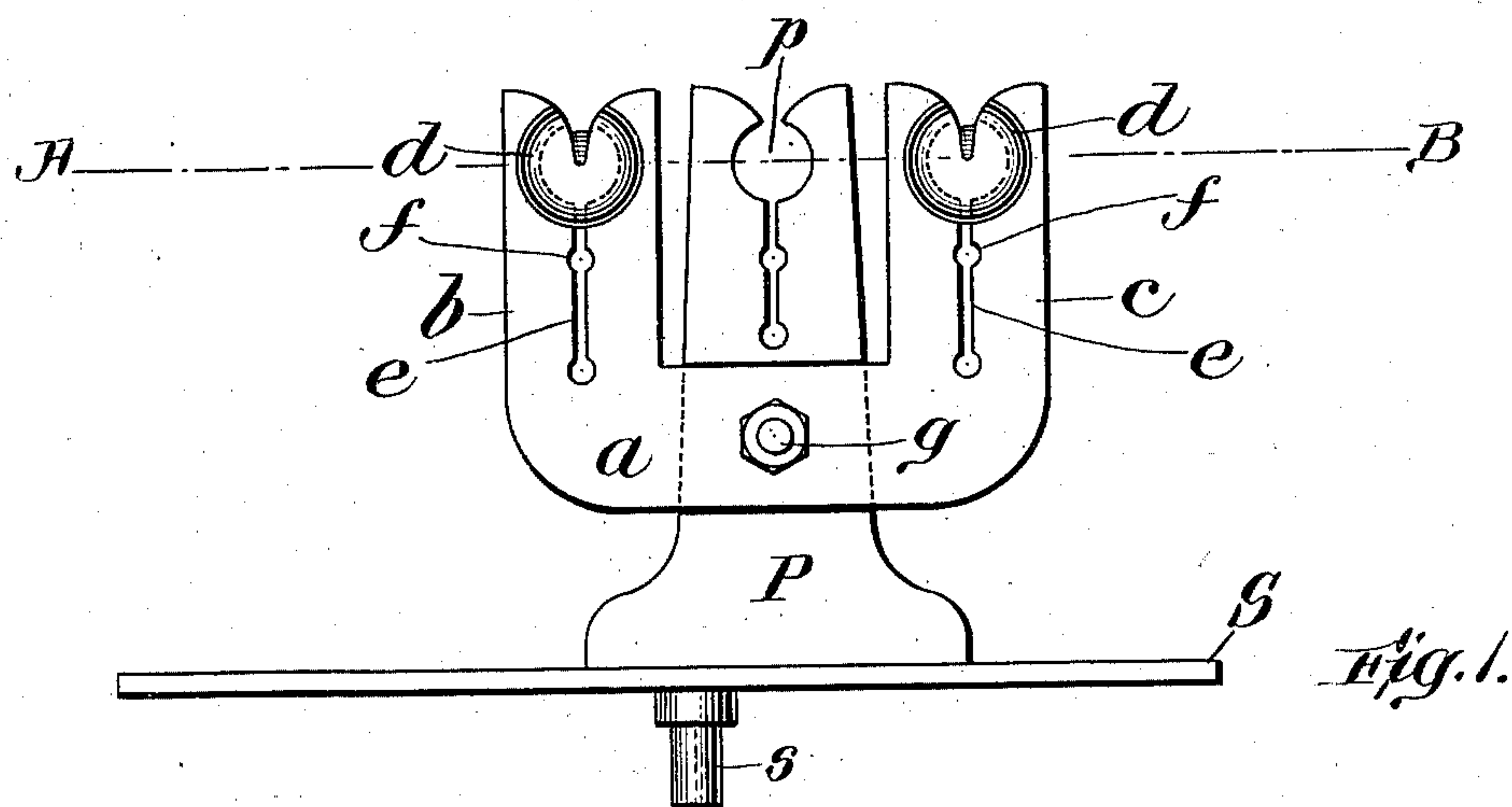


Fig. 1.

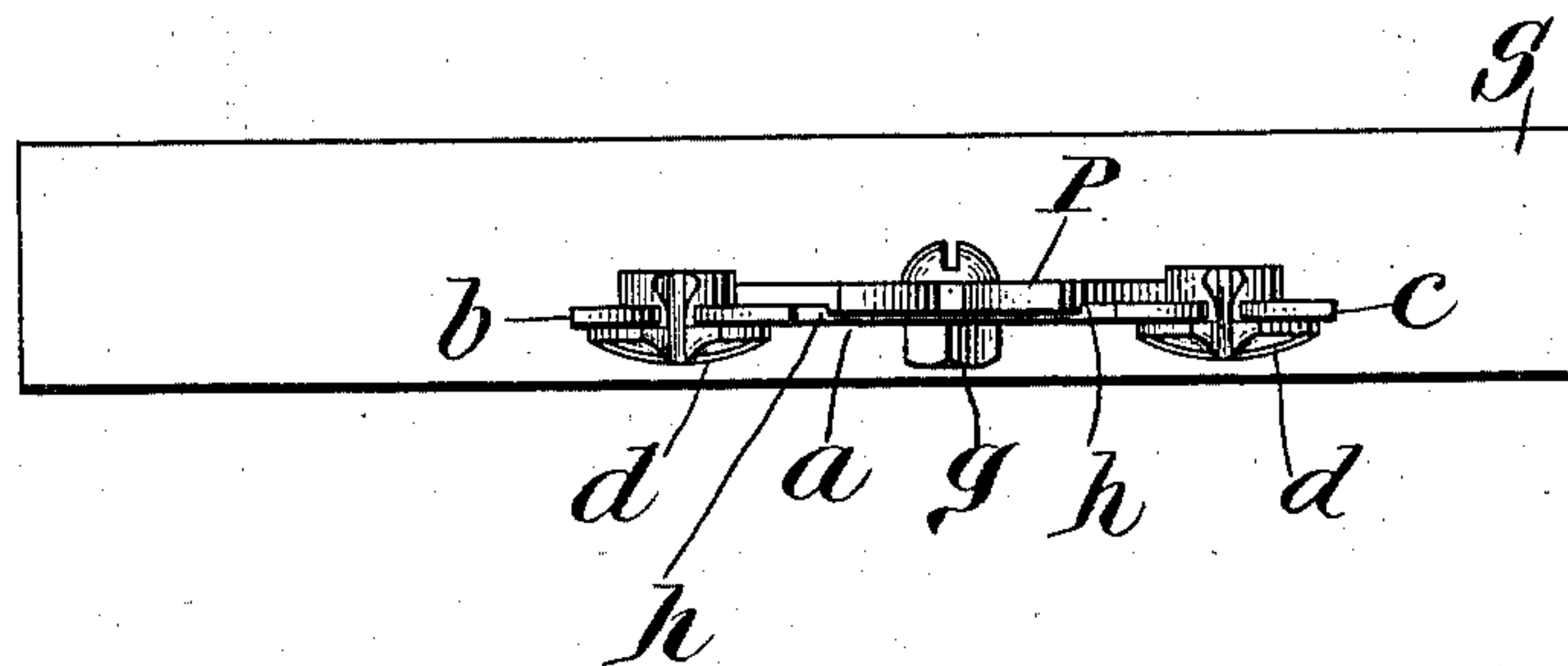


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN O. McKEAN, OF WESTFIELD, MASSACHUSETTS, ASSIGNOR TO FOSTER MACHINE COMPANY, OF WESTFIELD, MASSACHUSETTS, A CORPORATION OF MAINE.

THREAD-GUIDE FOR WINDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 748,300, dated December 29, 1903.

Application filed October 10, 1902. Serial No. 126,664. (No model.)

To all whom it may concern:

Be it known that I, JOHN O. McKEAN, a citizen of the United States, and a resident of Westfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Thread-Guides for Winding-Machines, of which the following is a specification.

My invention relates to winding-machines, especially the class of winding-machines which produce cylindrical or conical cops and whereof the winding mechanism is characterized by the combination of a rotating spindle for carrying the cop shells or quills and a reciprocating slide which carries the thread-guide in such manner as to form the characteristic wind now generally used to form cylindrical and trunco-conical cops. In cases where the cops prepared for the market are short in relation to their diameter economy of manufacture is served by winding two cops simultaneously upon the same spindle, using therefor a slide to which are secured thread-guide posts spaced apart a distance suited to the length of the cops to be wound. When, however, the requisitions of manufacture call for a change in the length of these cops, a complete change also of the slides with thread-guides affixed is rendered necessary; and my invention consists of an improvement designed to facilitate these changes in production which occur almost daily.

By the use of my improvement I dispense entirely with the necessity for carrying in stock a large number of double thread-guide slides and also materially shorten the time required for making the machine changes corresponding to changes in style and sizes of cops.

In the drawings hereto annexed, which illustrate my invention in the form which I prefer, Figure 1 is a front elevation of a winding-machine slide with my improvement embodied therein, and Fig. 2 is a plan view of the same.

S is the slide adapted to reciprocate in a straight guide, and secured thereto or integral therewith there is provided the stud s, which serves as the follower for the traverse

cam, by means of which the reciprocations of the slide are effected. On the upper side of the slide S, secured thereto or integral therewith, there is mounted the post P, which at its upper end is provided, as usual, with a spring-socket *p*, adapted to receive and retain a thread eye or button, such as is now employed with winding machinery.

As so far described, the slide, its post, and thread-eye socket are adapted to single-cop winding and are of usual construction. For double-cop winding I provide the cross-arm *a*, which is detachably secured to the post P by means of the binding-screw *g* and which terminates at the ends in upwardly-turning branches *b* and *c*. Each of these upwardly-turning branches is provided at its upper end with a thread-eye socket like the socket *p*, wherein thread eyes or buttons *d* may be secured. These buttons *d* are inserted by spreading apart the forked end of the branch, inserting the thread-eye, and then allowing the fork to spring back into its normal place. This is accomplished usually by inserting a spreading-screw in the hole *f*, and thus crowding open the slot *e*. For each slide I provide a number of arms, such as the arm *a*, (shown in the drawings,) these being graded in suitable sizes, so that duplex thread-guides may be selected, having the sets of thread-eyes *d* substantially any desired distance apart. If, for instance, cops are to be wound an inch and a half in length, I provide for this purpose a duplex thread-guide, wherein the sets of thread-eyes are an inch and three-quarters apart, the extra quarter inch leaving enough space for the slightly-protruding ends of the cop-quills. When the required number of inch-and-a-half cops has been wound, if it is then desired to wind a number of two-inch cops, two on a spindle, I remove the arm *a* suited to the inch-and-a-half length and apply an arm suited to the two-inch cops. The removal of one arm and the application of another is the work of a moment. I provide, as shown in Fig. 2, a dovetail connection between the post P and the arm *a* at *h*, so that the correct alinement of the thread-eye *d* is immediately and automatically secured by the mere insertion and tightening of the bind-

ing-screw *g*. By the use of my improvement I am enabled to use a single slide either for single-cop winding or for double-cop winding without involving more difficulty than that
5 of the removal and attachment of the cross-arms *a*.

In Fig. 1 the dotted line A B represents the axis of the spindle of a winding-machine in which the thread-guide is used, and, as will
10 be seen, both buttons *d* are in the same plane with the axis of the spindle, which is a feature of importance in practice for the best results.

It will be obvious that the arm *a* constitutes a supplemental member and that it may be
15 provided with more than two guides or buttons *d*, as the circumstances of the use of my invention may require.

My present invention is particularly applicable to that type of winding-machine
20 shown in my Patent No. 678,507, granted July 16, 1901, and by its use in such a machine the latter may be converted without other material change from a single to a "gang" machine.

25 What I claim is—

1. In combination, a slide; a post secured

thereto; a cross-arm detachably secured to the post; and a pair of thread-eyes on the cross-arm.

2. In a thread-guide for winding-machines, 30 the combination of a slide, a post secured thereto, a branched arm detachably secured to the post and provided with a thread-eye in each of its branches.

3. In a thread-guide for winding-machines, 35 the combination of a slide, a post secured thereto, a thread-eye socket in the post, a cross-arm, detachably secured to the post, provided with upwardly-reaching branches on either side of the post, and a thread-eye in 40 each branch.

4. In combination, a slide; a post secured thereto, a thread-eye on the post; an arm detachably fastened to the post, and a thread-eye on the arm. 45

Signed by me at Westfield, Massachusetts, this 7th day of October, 1902.

JOHN O. McKEAN.

Witnesses:

E. T. FOWLER,
ALICE C. BREEN.