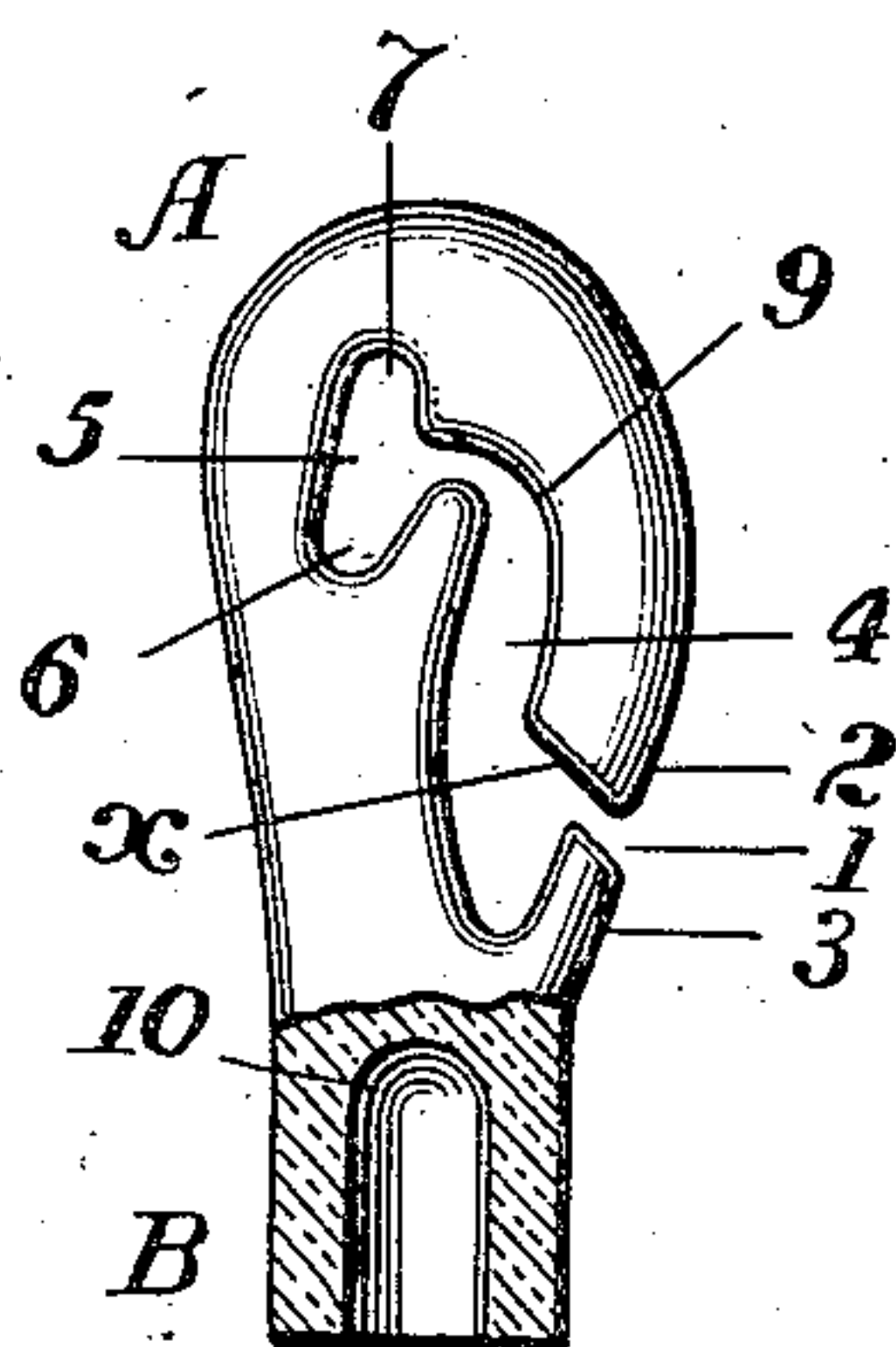


No. 855,325.

PATENTED MAY 28, 1907.

J. R. MITCHELL.  
GUIDE FOR THREAD, YARN, &c.  
APPLICATION FILED DEC. 3, 1906.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN R. MITCHELL, OF NEW YORK, N. Y., ASSIGNOR TO MITCHELL-BISSELL CO., OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## GUIDE FOR THREAD, YARN, &c.

No. 855,325.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed December 3, 1906. Serial No. 346,129.

*To all whom it may concern:*

Be it known that I, JOHN R. MITCHELL, a citizen of the United States, residing at New York, county and State of New York, have invented certain new and useful Improvements in Guides for Thread, Yarn, &c., of which the following is a specification.

In some machines in which thread guides are employed it has been found practically impossible by the use of guides of ordinary construction to retain the thread in the eye of the guide, inasmuch as in such machines the thread is subjected to vibrations of different characters, which, it has been found, result in gradually working the thread laterally out of the guide eyes or channels, necessitating the stopping of the machines in some cases as the result of breaking or abrading the thread.

To avoid these objections I make use of a guide having channels, notches and fingers arranged in a peculiar manner hereinafter fully set forth and illustrated in the accompanying drawing which shows in part section a thread guide embodying my improvements.

The guide is preferably made of porcelain or other vitreous material, or it may be made of metal, coated if desired with enamel, and it consists substantially of the head A and the stem B, the latter having a socket 10 or otherwise being formed for connection to a suitable support. In the head is formed a channel 4, which at one side communicates with the inlet slot 1, which is at an angle to the line of the channel 4, and the upper end of the channel 4 is curved laterally and communicates with a slot 5, at one side and between the ends of the said slot, thereby forming two notches 6, 7, upon opposite sides of the point where the channel 4 communicates with the slot.

The formation of the channel 4 in the head leaves at one side of the same, and on opposite sides of the slot 1, two fingers 2, 3, and the finger 2 is thickened and the finger 3 is reduced in thickness so that the wide face  $x$  at the end of finger 2 extends inward beyond the side of the finger 3. As a result of this construction, it is practically impossible for the thread, whatever may be the character of

vibrations imparted thereto, to find its way from the channels or slots of the guide. After the thread passes through the inlet slot 1 and through the channel 4 into the slot 5, any lateral vibrations which would tend to throw it back into the channel 4 would have no tendency to cause it to pass out of the inlet slot 1, as the curved face 9 of the channel would tend to deflect it back into the slot 5, and if it should slip down below the finger 3, any movement carrying it toward the finger 2 would cause it to meet the wide face  $x$  thereof and deflect it back into the upper part of the channel 4. In most instances, however, the arrangement of the slot 5, extending in both directions beyond the inlet or mouth of the channel 4, will prevent the thread from passing back into the said channel, any vibration of the thread naturally carrying it either into the notch 7 or into the notch 6 or against the curved face of the channel 4, which naturally causes it to slide back into the slot 5.

What I claim is:

1. A thread guide provided with a head A and a stem B, the head having an inclined inlet slot and a curved channel with which the slot communicates at one side, and a slot communicating at one side with the upper end of said channel and extending in both directions beyond this point of communication with the channel, for the purpose set forth.

2. A thread guide provided with a stem B and a head A, the latter having an inlet slot and a channel with which said slot communicates, fingers on opposite sides of said slot, one of said fingers being thicker than the other and having an inclined terminal face extending inward beyond the side of said other finger, for the purpose described.

3. A thread guide provided with a stem B and a head A, the latter having an inlet slot and a channel with which said slot communicates at one side near its lower end, fingers on opposite sides of the inlet slot, the upper finger being thicker than the lower finger and having an inclined terminal face extending inward beyond the side of the lower finger, for the purpose described.

4. A thread guide consisting of a stem and  
a head; the latter having a channel provided  
with a curved upper end communicating  
with a slot extending in both directions be-  
5 yond the point of communication, and an in-  
let slot communicating with said channel be-  
tween its ends, for the purpose described.

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

JOHN R. MITCHELL.

Witnesses:

JOSEPH MCGRAW,  
M. R. ENGELBERT.