

No. 721,828.

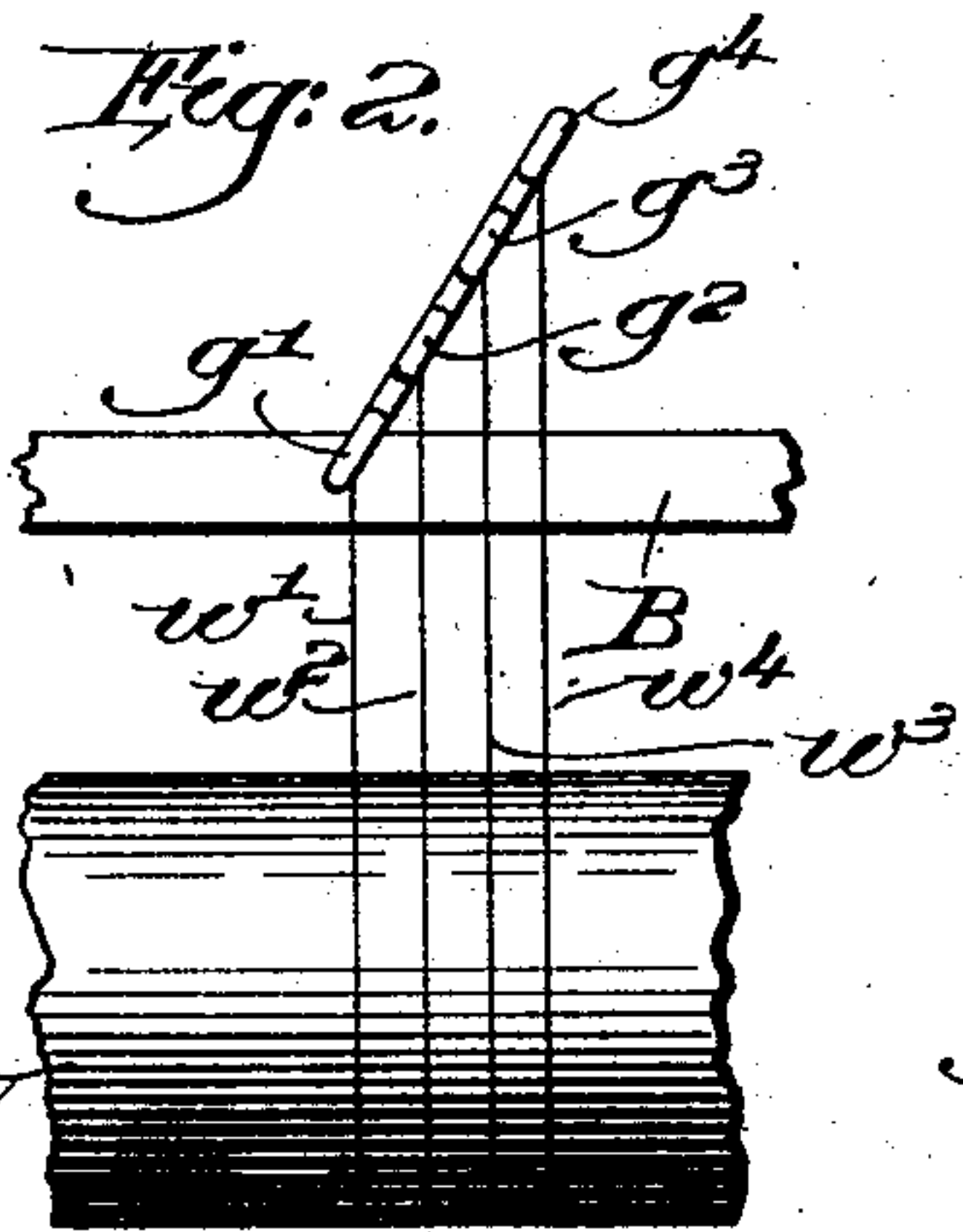
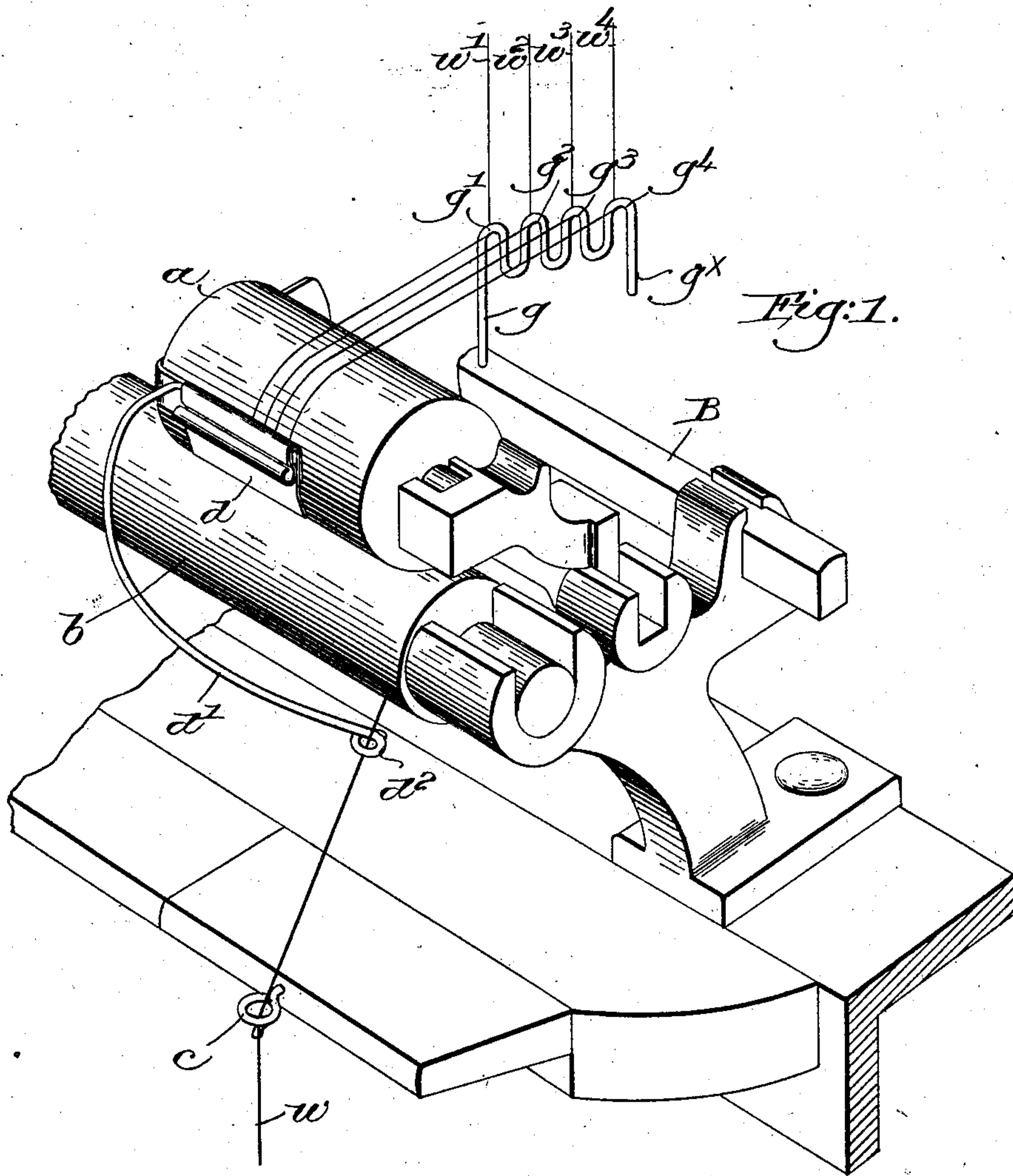
PATENTED MAR. 3, 1903.

J. R. O'NEIL.

# THREAD GUIDE FOR TWISTERS.

APPLICATION FILED JULY 26, 1902.

NO MODEL.



Witnesses,  
Edward H. Allen.  
Herman J. Sartoris.

Inverdon;  
John R. O'Neil,  
by Crosby Gregory.



# UNITED STATES PATENT OFFICE.

JOHN R. O'NEIL, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

## THREAD-GUIDE FOR TWISTERS.

SPECIFICATION forming part of Letters Patent No. 721,828, dated March 3, 1903.

Application filed July 26, 1902. Serial No. 117,082. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. O'NEIL, a citizen of the United States, residing at Hopedale, in the county of Worcester and State of Massachusetts, have invented an Improvement in Thread-Guides for Twistors, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a thread-guide particularly adapted for twistors to guide the threads of a set as they pass from the spools on the creel-frame to the delivery-rolls and maintain such threads separated from each other.

It is now the usual practice to collect the several threads of a set in a guide-eye or pigtail back of the rolls, the collected threads passing therefrom in a loose rope or mass to the rolls, and it is extremely difficult for the attendant to readily observe whether or not all of the threads of the set are passing to the rolls. This is not very objectionable when a comparatively large number of threads constitute a set; but when three or four threads are being twisted together the resultant thread is much weaker than it should be if for any length of time less than the entire set enter into its composition.

In my present invention I have provided a novel guide which separates from each other the several threads and maintains them separated between the guide and the rolls, so that the attendant can see at a glance whether or not all of the threads of the set are running properly, the guide also causing the threads to be delivered uniformly to the rolls, so that the twist is more uniform.

Figure 1 is a perspective view of a sufficient portion of a twister to be understood with one embodiment of my invention applied thereto, and Fig. 2 is a partial plan view showing the relative position of the combined guide and separator and the rolls.

The top and bottom delivery-rolls  $a$   $b$ , mounted in suitable bearings, the pigtail  $c$  for the thread or end  $w$  as it passes to the twisting devices, the tongue  $d$ , and the wire leg  $d'$ , having a guide-eye  $d^2$  for the thread, may be and are all substantially as illus-

trated in United States Patent No. 616,850, dated December 27, 1898, the several threads  $w$   $w^2$ , &c., Fig. 1, passing from the spools supported on the usual creel-frame. (Not shown.)

For convenience I have shown the novel thread-guide as arranged to cooperate with a set of four threads, and preferably it is made of stout wire, comprising an upright straight shank  $g$ , bent laterally at its upper end to form a head, the head being corrugated or crimped in the direction of its length to present a series of downturned open loops or eyes  $g'$   $g^2$   $g^3$   $g^4$ . They are separated from each other by the intervening oppositely-turned loops, and the end of the wire at the extremity of the head is extended downward, as at  $g^x$ , below the corrugations to form a species of guard, said guard being a continuation of the outer side of the last loop  $g^4$ . The shank  $g$  is secured in upright position in the transverse bar  $B$  behind the rolls, it being understood that one of the guides is located back of each top roll for the set of threads passing thereto. Usually the spools on the creel are mounted one above the other, and in order to secure the best results I mount the guide so that the head thereof is in a vertical plane at an acute angle to the axes of the rolls. (See Fig. 2.) The several threads of the set pass through the loops or eyes  $g'$   $g^2$ , &c., as they lead down from the spools and are kept separate from each other as they pass to the rolls, so that the attendant can readily see at a glance whether or not the set is complete, and if one of the threads breaks it will be shown instantly and can be pieced up promptly. By means of the depending guard  $g^x$  a slack thread is prevented from leaving the guide should it slacken sufficiently to swing down out of its proper eye. The threads are delivered uniformly to the rolls by means of the guide, and as a result of such uniform delivery the twist will be more uniform.

The guide will be provided with as many eyes or downturned loops as may be necessary, according to the number of threads in each set.

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



1. In a twister, delivery-rolls, and a wire thread-guide located behind them and having a laterally-extended, corrugated head, to thereby present a series of downturned open  
5 loops or bends to receive and guide the threads of a set and maintain the same separated from each other on their passage to the rolls.

2. In a twister, delivery-rolls, and a combined thread guide and separator mounted  
10 behind them and presenting a series of laterally-separated, downturned open loops in a plane at an acute angle to the axes of the rolls, to receive and maintain separated the threads of a set and guide the same on their  
15 passage to the rolls.

3. As a new article of manufacture, a thread guide and separator, consisting of an upright shank having at one end a laterally-extended head bent to present a plurality of  
20 downturned, open loops, substantially as and for the purpose specified.

4. As a new article of manufacture, a

thread guide and separator, comprising a straight wire shank bent at its upper end to form a lateral corrugated or wave-like head  
25 presenting a plurality of downturned, open loops for the threads of a set, and a depending guard at the extremity of the head.

5. As a new article of manufacture, a thread guide and separator, comprising a  
30 supporting-shank and a lateral head integral therewith having a plurality of downturned thread-eyes open at their lower ends, to receive and maintain separated from each other the threads of a set as they pass through the  
35 guide.

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

JOHN R. O'NEIL.

Witnesses:

GEORGE OTIS DRAPER,  
ERNEST WARREN WOOD.