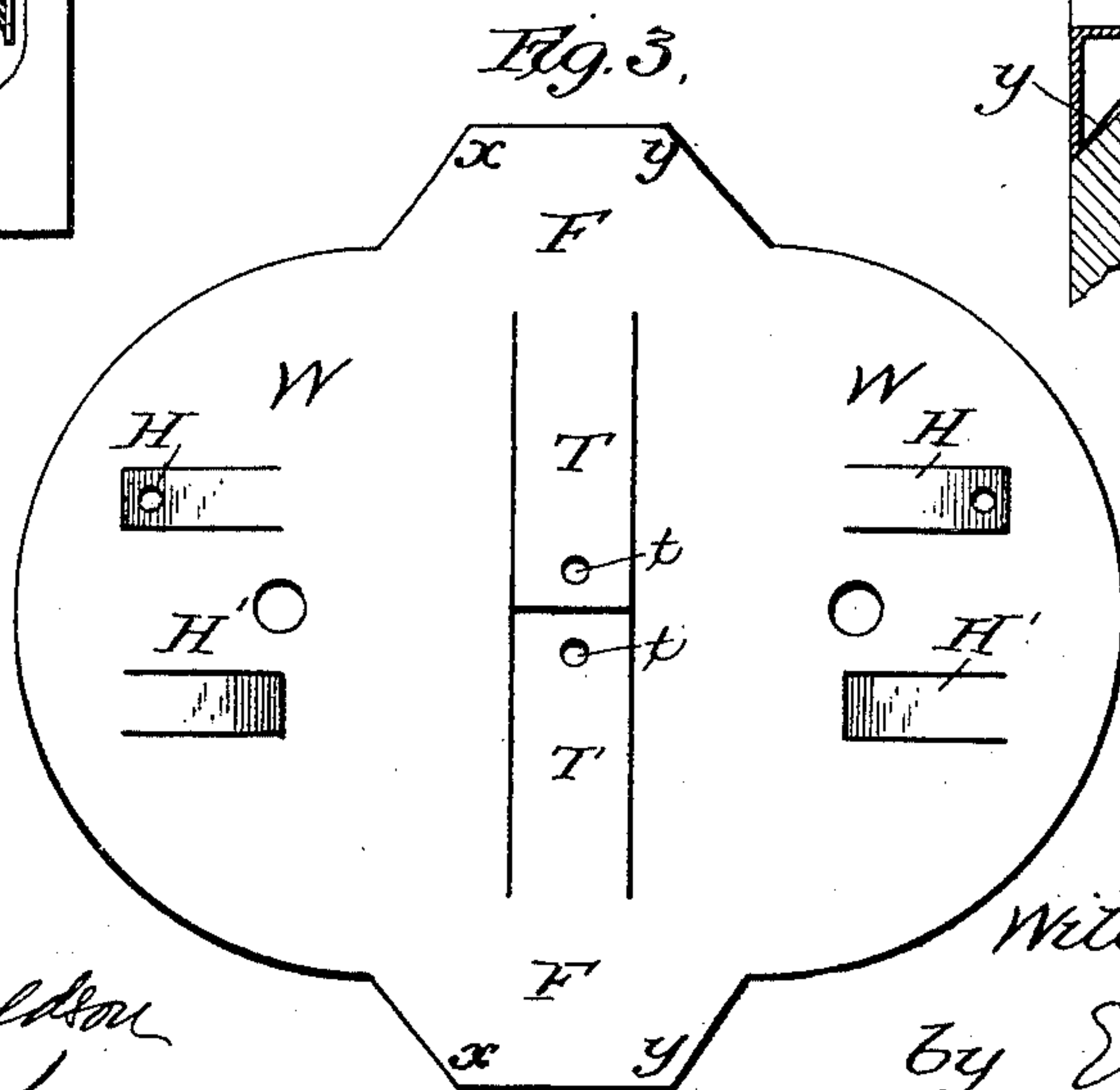
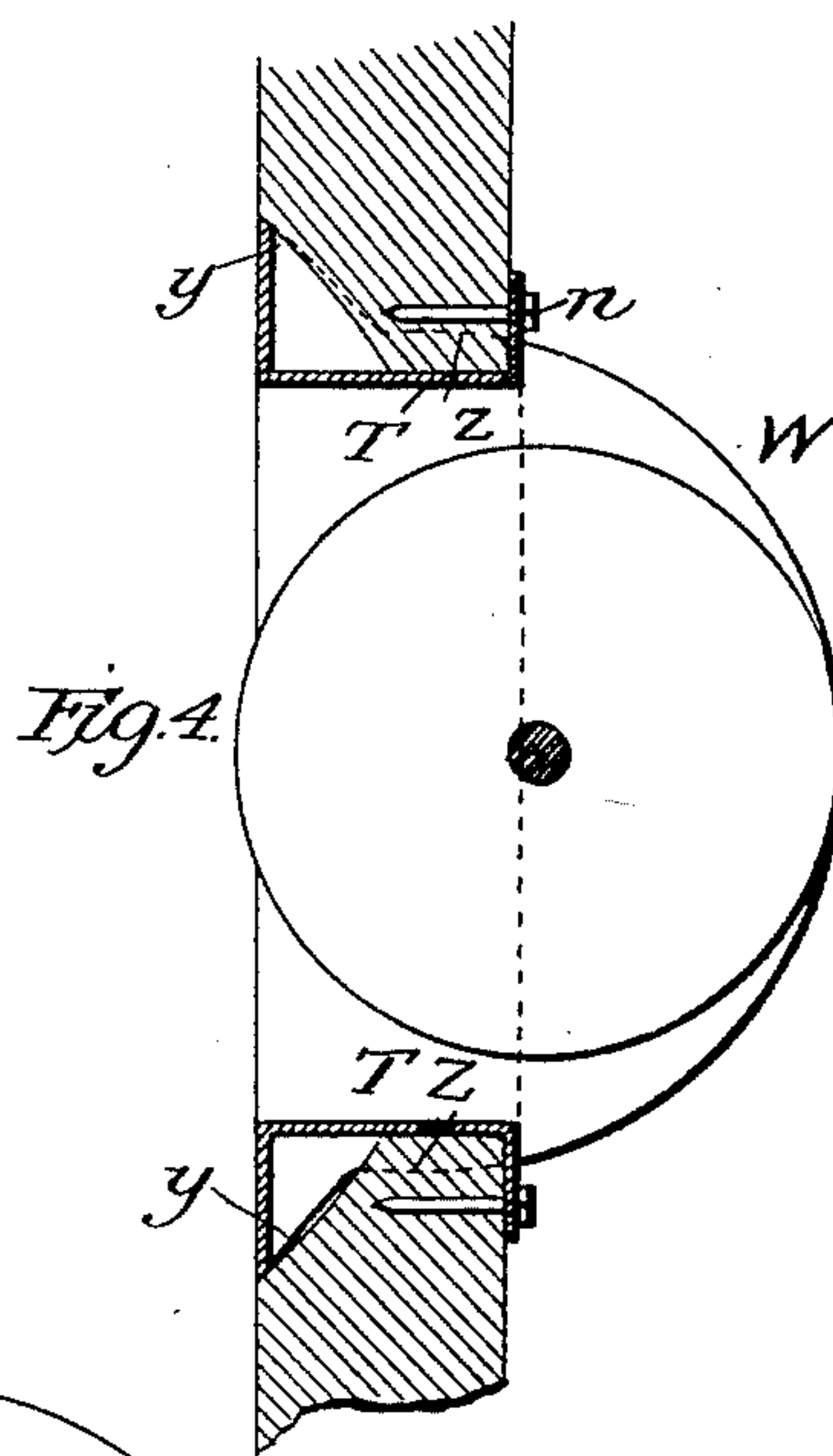
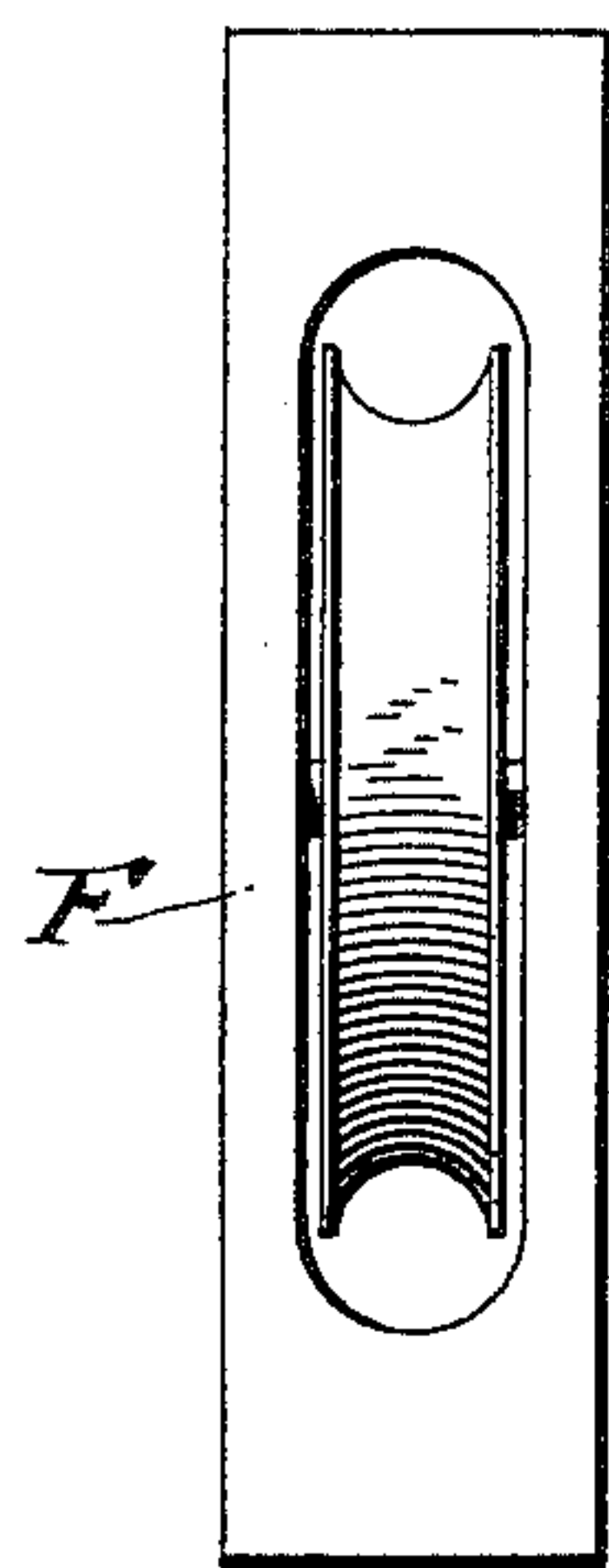
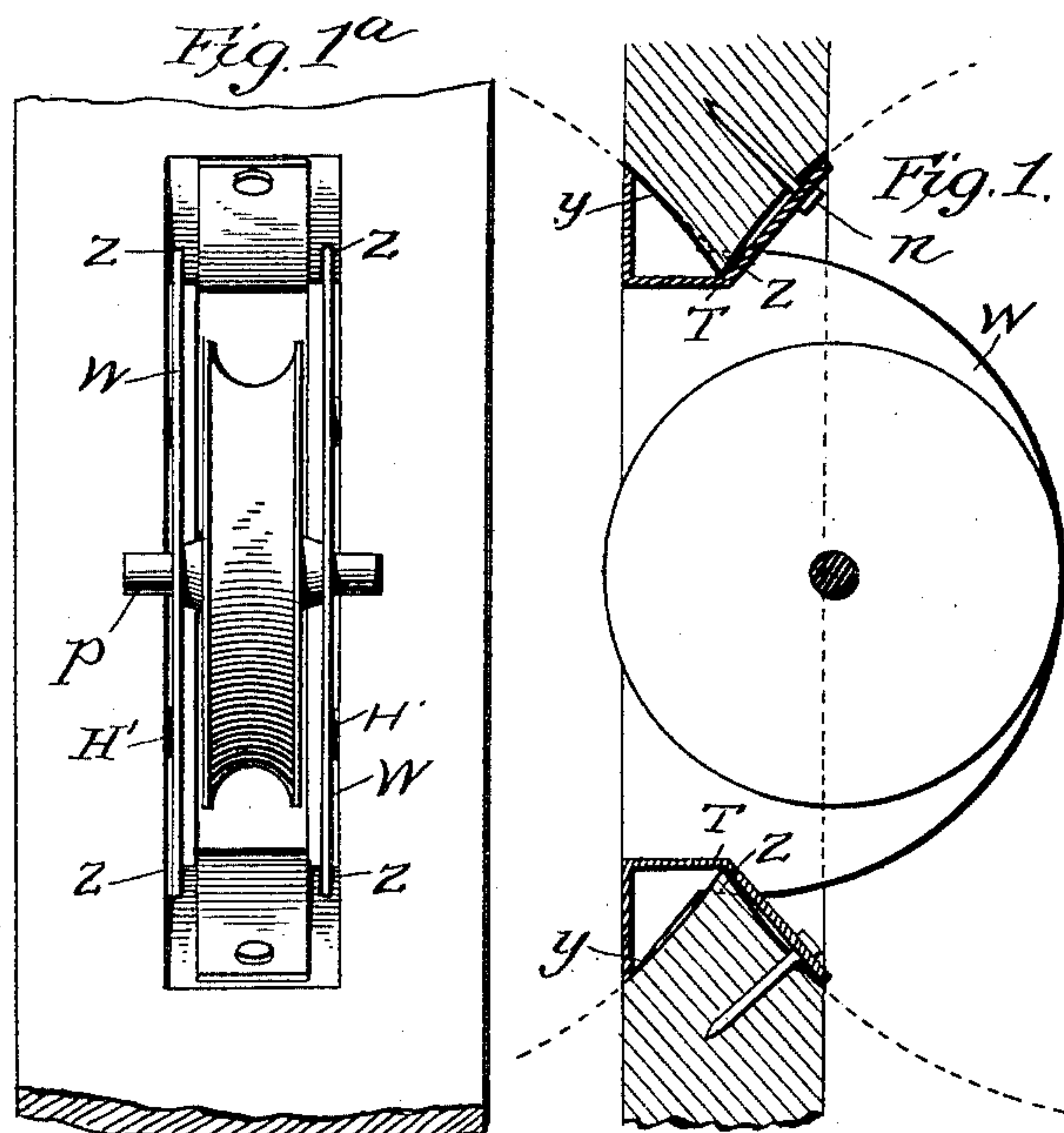


(No Model.)

W. R. FOX.  
SASH CORD GUIDE.

No. 462,248.

Patented Nov. 3, 1891.



Attest  
*Walter P. Keene*  
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Inventor  
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by *Ellis Spear*  
Atty.



# UNITED STATES PATENT OFFICE.

WILLIAM R. FOX, OF GRAND RAPIDS, MICHIGAN.

## SASH-CORD GUIDE.

SPECIFICATION forming part of Letters Patent No. 462,248, dated November 3, 1891.

Application filed October 27, 1890. Serial No. 369,395. (No model.)

### *To all whom it may concern:*

Be it known that I, WILLIAM R. FOX, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Sash-Cord Guides, of which the following is a specification.

My said invention is an improvement in sash-cord guides, and in this invention I have sought so to improve ordinary sash-cord guides as to reduce the cost, improve the construction, and facilitate the work of putting them in place.

The invention relates particularly to the casing in which the pulley runs, and in my invention this is made of sheet metal struck up into suitable form.

The invention is shown in the accompanying drawings, in which—

Figure 1 represents a section through the plane of the sheave. Fig. 1<sup>a</sup> is an elevation from the right of Fig. 1. Fig. 2 presents a front elevation of the pulley-casing with the pulley in place. Fig. 3 represents a plan view of the shell of the blank out of which the shell is formed. Fig. 4 shows a modified form.

In the drawings I have represented a shell or case for the pulley made out of a single piece of sheet metal. This is cut in the form shown in Fig. 3. The wings W in Fig. 3 form the sides of the wall of the case. The parts F F form the front. The edge is formed by a bend on the lines *xx* and *yy*, the metal here being bent at right angles, so that the wings W are at right angles to the front F. The front is cut to form tongues T, severed at their inner ends and preferably provided with holes *t*, but entire with the metal at their outer ends. These may be bent straight inward at right angles to the face, as shown in Fig. 4, or they may be bent up at their inner ends, as shown at Fig. 1. The opening formed by the inward bending of these tongues leaves a space for the pulley B, and the ends of the opening may be formed rectangular, as shown in Fig. 1 and 3, or rounded, as shown in Fig. 2. When the ends of the tongues are bent up, as shown in Fig. 1 or 4, they are bent to fit the mortise, whatever it may be. In Fig. 4 the mortise is formed by a saw in part. It is formed with

a saw on the front and with a chisel on the rear, cutting the square faces; or a saw may be used on both sides, as in Fig. 1. The ends of the tongues are fastened by a nail *n*. Other means may be easily provided for holding the casing in place—for example, the casing may be held by an extension of the wheel-pivot *p*, extending past the faces of the mortise and bearing against the rear face of the window-case, as in Fig. 1<sup>a</sup>; but I have also provided tongues cut in the wings, which serve the purpose. Of these tongues cut out of the wings I have shown two forms. The one H is cut with its free end outward or to the rear, leaving the end integral with the metal of the wall toward the front. After the shell is in place these tongues H (one on each side) may be turned out against the rear face of the window-casing, and this alone will be sufficient to hold the pulley-casing in place; but for greater security a nail or tack may be driven through a hole in the end of the tongue and into the wood; or the tongue may be cut, as shown at H', in a reversed position, and sprung slightly out, as shown in Fig. 1<sup>a</sup>, so that the end will spring in as the casing is pushed into the mortise or sprung out when it is through and bear against the rear face of the window-casing.

As the shell is formed of thin metal, it is not necessary to have it conform exactly to the shape of the cut at the points *y*, as owing to the thinness of the edge it can cut into the wood at these points until the shell is properly seated in the opening, it being only necessary to have the shell conform in length and width to the opening in order to make a flush joint. While this rear part of the cut conforms approximately to the shell, the part at points *z* may be of shorter lengths, so that the edges of the wings will enter the wood and thus help to secure the shell in place. In order to permit this, the edges of the wings which cut into the frame must extend outside or beyond the plane of the outwardly-bent tongues T. After the guide-casing has been inserted from the front so that its wings will cut into the window-frame, as before mentioned, the pulley is inserted from the rear of the stile and the pin or journal is driven through the wings and pulley, it being



understood that the guide is fixed in position, as described, before the frame is put up.

I claim as my invention—

5 1. A casing for sash-cord guides, formed of sheet metal, having a front F and wings W W, said wings having tongues cut out from the body portion and projecting laterally therefrom to bear upon the frame, substantially as described.

10 2. A sash-cord guide formed of sheet metal, having wings and a front F, the said front having a tongue cut and bent back from its central or body portion to engage with the frame for holding the guide in place, the opening  
15 thus formed receiving the pulley, substantially as described.

20 3. A casing for sash-cord guides, formed of sheet metal, having the front and the wings W, the tongues T, cut out of the front, and the tongues H H', cut out of the wings, substantially as described.

4. In combination, the frame, the sash-cord guide held therein and having wings projecting beyond the rear face of the frame, and the pulley having its journals projecting 25 through said wings and bearing upon the rear face of the frame, substantially as described.

5. In combination, the frame, the sash-cord guide formed of sheet metal, with inwardly-projecting tongues cut from the front, adapted 30 to be bent for connection with the frame, the wings projecting from the front, the pulley between the wings, and the pintle passing through the wings and pulley and projecting beyond the wings, substantially as described. 35

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

WILLIAM R. FOX.

Witnesses:

WILLARD F. KEENEY,  
MARY B. CAMPBELL.