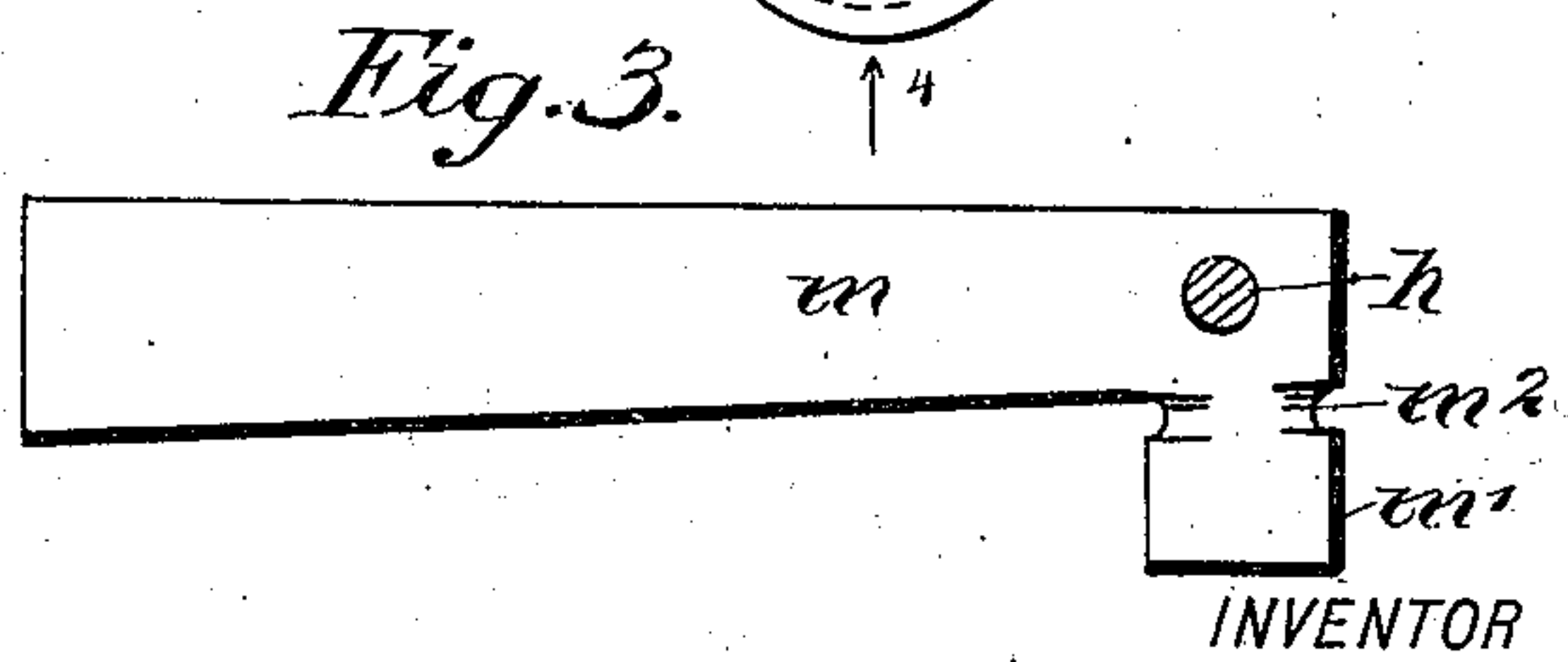
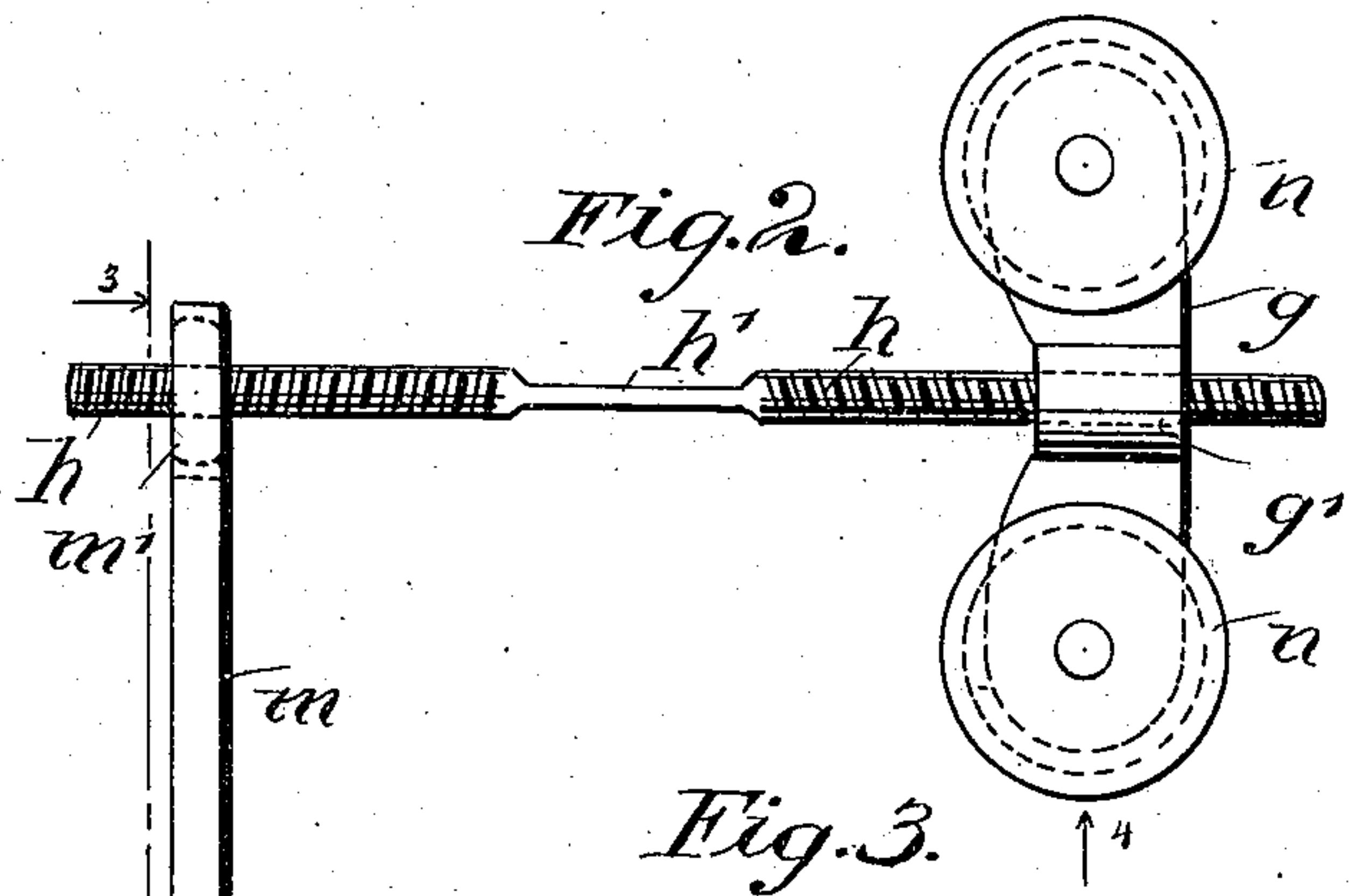
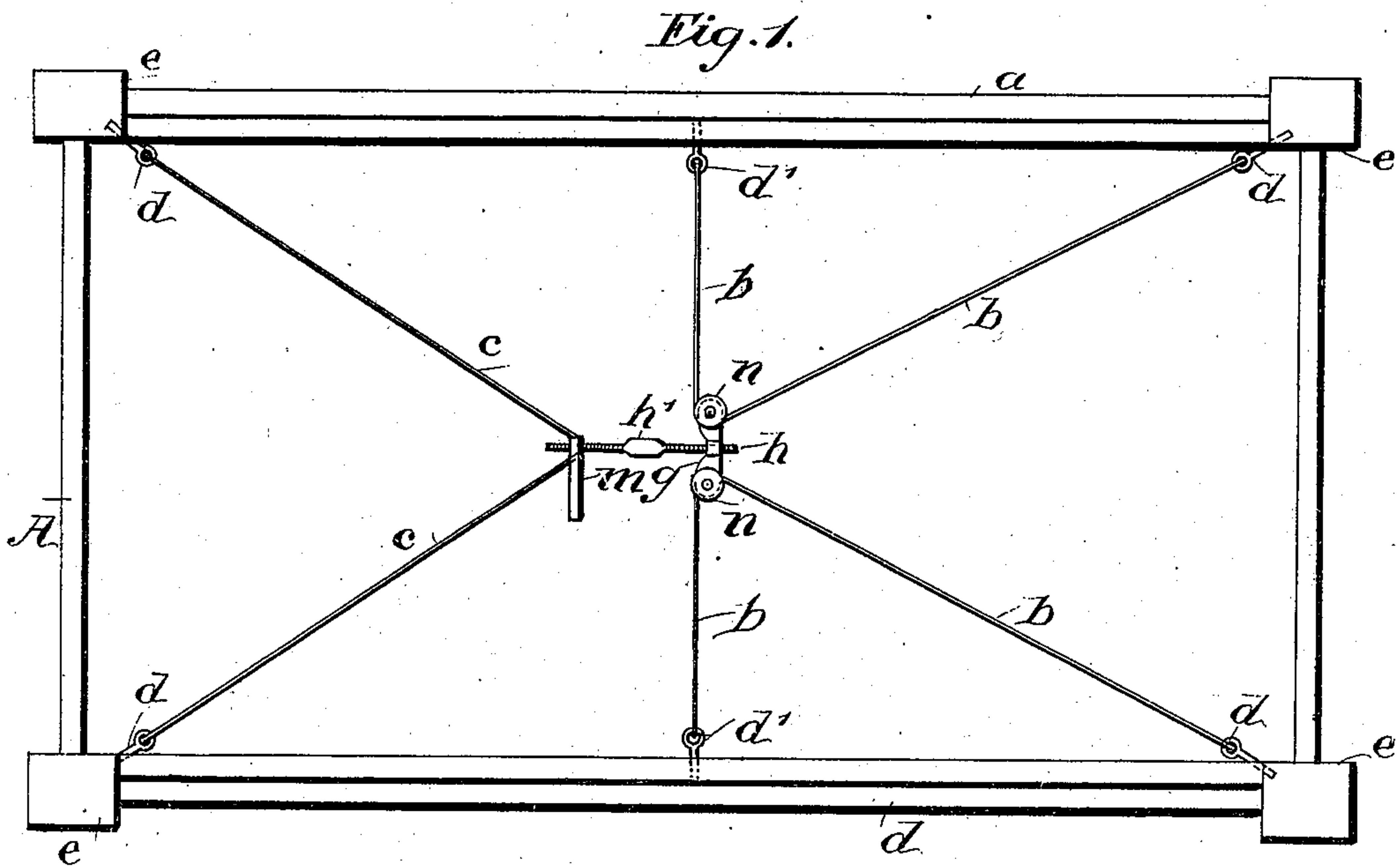


(No Model.)

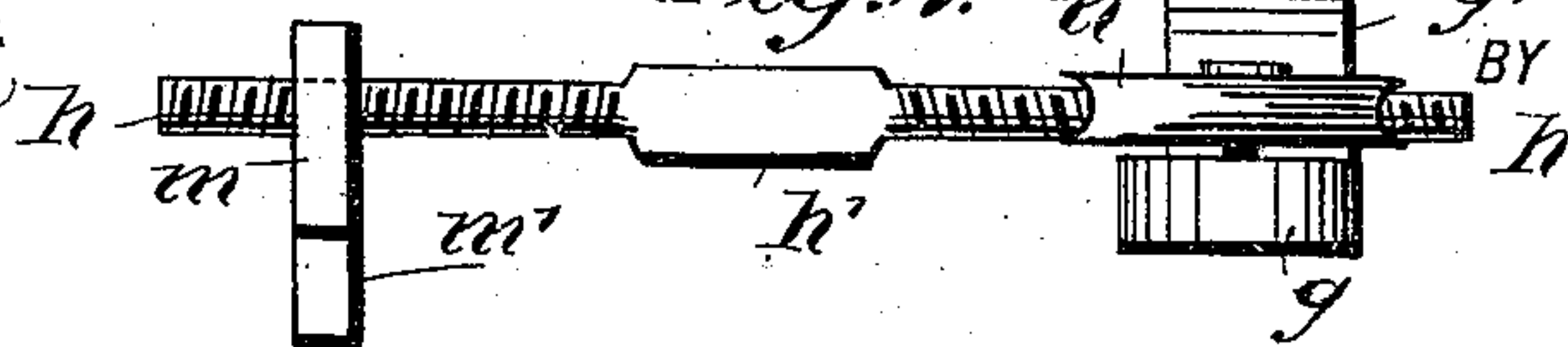
W. H. FITZGERALD.  
BED BRACE.

No. 502,115.

Patented July 25, 1893.



WITNESSES:  
*J. M. A. de.*  
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# UNITED STATES PATENT OFFICE.

WILLIAM HENRY FITZGERALD, OF MONROE, ASSIGNOR TO IRA ADDISON  
FITZGERALD, OF SAPONA, NORTH CAROLINA.

## BED-BRACE.

SPECIFICATION forming part of Letters Patent No. 502,115, dated July 25, 1893.

Application filed February 23, 1893. Serial No. 463,392. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY FITZGERALD, of Monroe, in the county of Union and State of North Carolina, have invented a new  
5 and useful Improvement in Bed-Braces, of which the following is a full, clear, and exact description.

My invention relates to an improvement in devices provided to stiffen and strengthen  
10 bedsteads of the usual construction known as open beds.

It is desirable for portability and the easy movement of an open bedstead, that its parts be made light, while rigidity at the joints is  
15 necessary, as well as transverse support for the side rails, so as to prevent swaying of the bed at the corner joints, and the outward bulging of the side rails, which would permit the slats to drop at the center to the discom-  
20 fort of an occupant.

The objects of my invention are, to provide a novel, efficient, simple, durable and inexpensive device of the character indicated, which may be quickly applied to any open  
25 bedstead, and by proper adjustment stiffen the erected structure in all directions of strain that may result from the occupancy of the bed, and thus render a light bedstead comfortable and safe in service.

30 To these ends my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate  
35 corresponding parts in all the figures.

Figure 1 is a plan view of the device applied to an open bedstead. Fig. 2 is an enlarged plan view of an important part of the  
40 improvement. Fig. 3 is a side view of a detail of construction partly in section, taken on the line 3—3 in Fig. 2; and Fig. 4 is a side view of parts opposite the arrow 4, in Fig. 2.

45 A, represents a bedstead frame of the ordinary light construction, that for security in use is braced at the corners and at the longitudinal center of its side rails *a*. The improvement provided for such bracing consists of three flexible strands of wire, or other pre-  
50 ferred material, made up of a plurality of

smaller strands twisted together, and which are designated respectively by the reference letters *b*, *b*, *c*, said flexible strands being adjustably connected to the corners and side rails of the bedstead, as hereinafter described. 55 Four similar eye-bolts *d*, threaded in the body, are provided, which are inserted into the bed posts *e*, on inner corners, as represented in Fig. 1, after the bedstead is erected, and two similar screw eye-bolts *d'*, are screwed into the  
60 side rails *a*, at their center of length from their inner sides below the rabbet edges whereon the usual slats are placed, (not shown.)

A novel device is furnished for straining the flexible strands, the same comprising an  
65 elongated bracket block *g*, laterally and centrally perforated through a transverse hub enlargement *g'*, and internally threaded therein for the reception of a straining screw *h*, that is flattened at *h'*, for the application of a  
70 wrench of any suitable kind adapted by manipulation to rotate the screw body. The straining screw *h* is cut with a left handed thread on one side of the flat part *h'*, and is right hand threaded on the other portion 75 which may be the end which engages the block *g*, and on the other portion a handle piece *m* is located, the latter being a flat metallic bar of a suitable length, and furnished with an integrallug *m'*, that is grooved around  
80 one side and on the edges near its point of junction with the part *m*, as shown at *m*<sup>2</sup> in Fig. 3, said lug depending from the lower edge of the normally horizontal handle piece *m*, when the parts are in service. On one side  
85 of the bracket block *g*, near its ends, similar grooved pulleys *n* are pivoted on integral studs which project from the block, or shouldered and headed screws of common make may be used to pivot the wheels on the block. 90

When the parts are to be assembled for reinforcing the bedstead, one end of each wire strand *b* is secured to one of the eye-bolts *d*, and the other end of each of the mentioned wire strands is in a like manner attached to the  
95 screw eye-bolt *d'*, on the same side of the bedstead that its other terminal is located. The bracket block *g*, is now connected to the bights of the strands *b*, by an engagement of the latter with the peripheries of the grooved 100



pulleys *n*. The wire strand *c*, has its ends connected firmly with the eye-bolts *d*, at the opposite end of the bedstead *A*, and its bight is hooked over the depending lug *m'* on the handle piece *m*, being seated in the groove *m*<sup>2</sup>, and thus is prevented from accidental displacement or injury from contact therewith, the rounded groove affording a non-angular seat therefor.

When the parts are assembled as stated, the adjuster holds the handle piece *m* with one hand, and manipulates a proper tool with the other hand, applying it to the flattened portion *h'* of the screw *h*, which by reason of its right and left hand screw formation, is adapted to draw the bracket block *g*, and handle piece *m* toward each other if the screw body is properly rotated to effect this; which movement will simultaneously stretch the wire strands *b*, *b*, *c*, so that if a sufficient tensional strain is put upon them by the means indicated, the bedstead will be stiffened at all its corners and sides, the improved brace rigging holding all the corner joints firmly, and the side rails also against swaying and lateral displacement when the bed is subjected to a heavy load strain.

As will be noted, the bights of the wire strands may be readily applied to or detached from the pulleys *n*, and lug, *m'*, owing to the

fact that the latter two project free from the parts to which they are attached.

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

1. The combination, with the bedstead and wire strands attached thereto, of the bracket block, *g*, and pulleys, *n*, *n*, journaled on its upper side, the screw *h*, having right and left threads, the handle piece, *m*, having a grooved lug, *m'*, depending therefrom, the bights of said strands being looped over said pulleys and lug, and adapted to be detached from them, as shown and described.

2. In a bed brace, a stretching device for flexible strands attached to the side rails and corner posts of the bedstead, comprising an elongated bracket block, two grooved pulleys rotatable thereon near the ends of said block, a handle piece, a laterally grooved depending lug thereon, and a right and left hand screw engaging threaded holes in the handle piece and in the bracket block centrally of said block, and having a flattened central portion, substantially as described.

WILLIAM HENRY FITZGERALD.

Witnesses:

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WM. C. WOLFE.