

No. 763,006.

PATENTED JUNE 21, 1904.

T. LEE.
SPREAD ROLLER.

APPLICATION FILED FEB. 3, 1904.

NO MODEL.

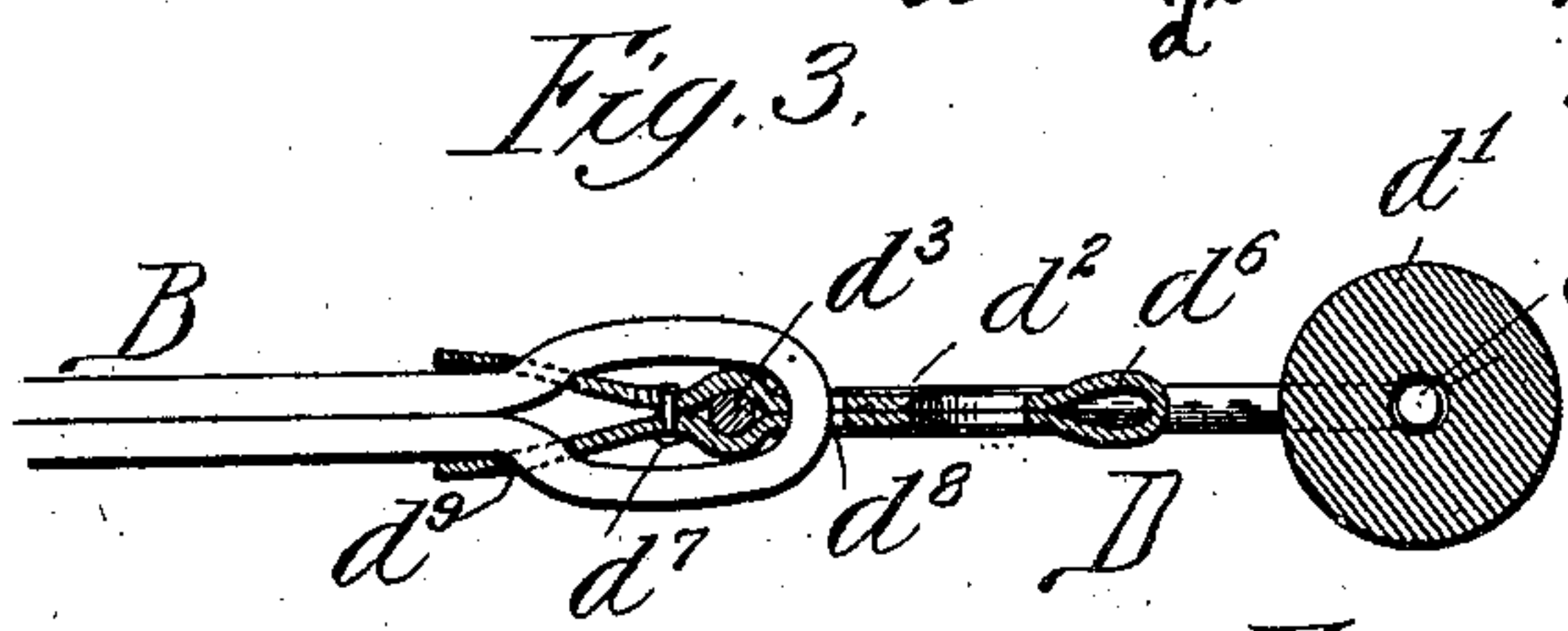
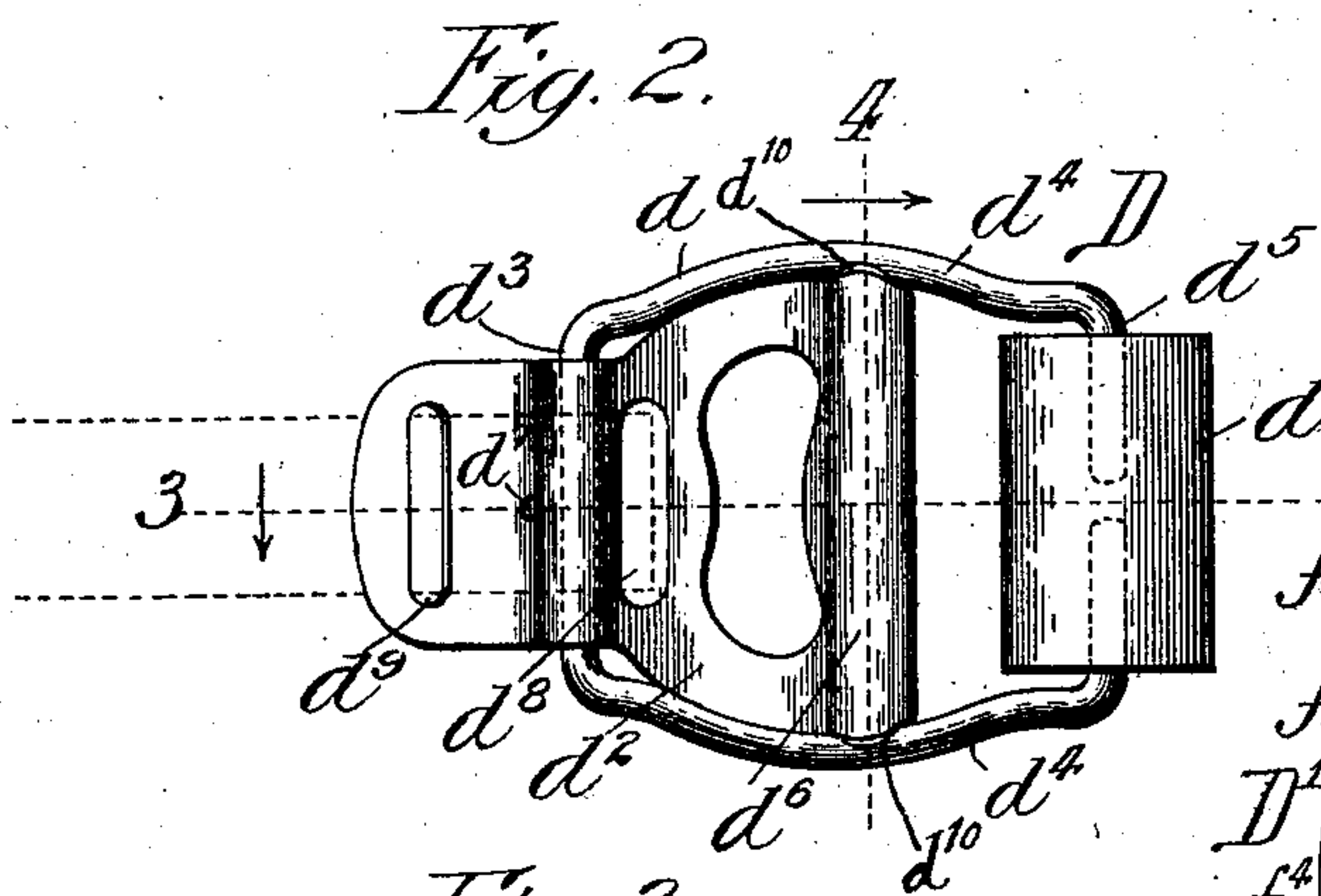
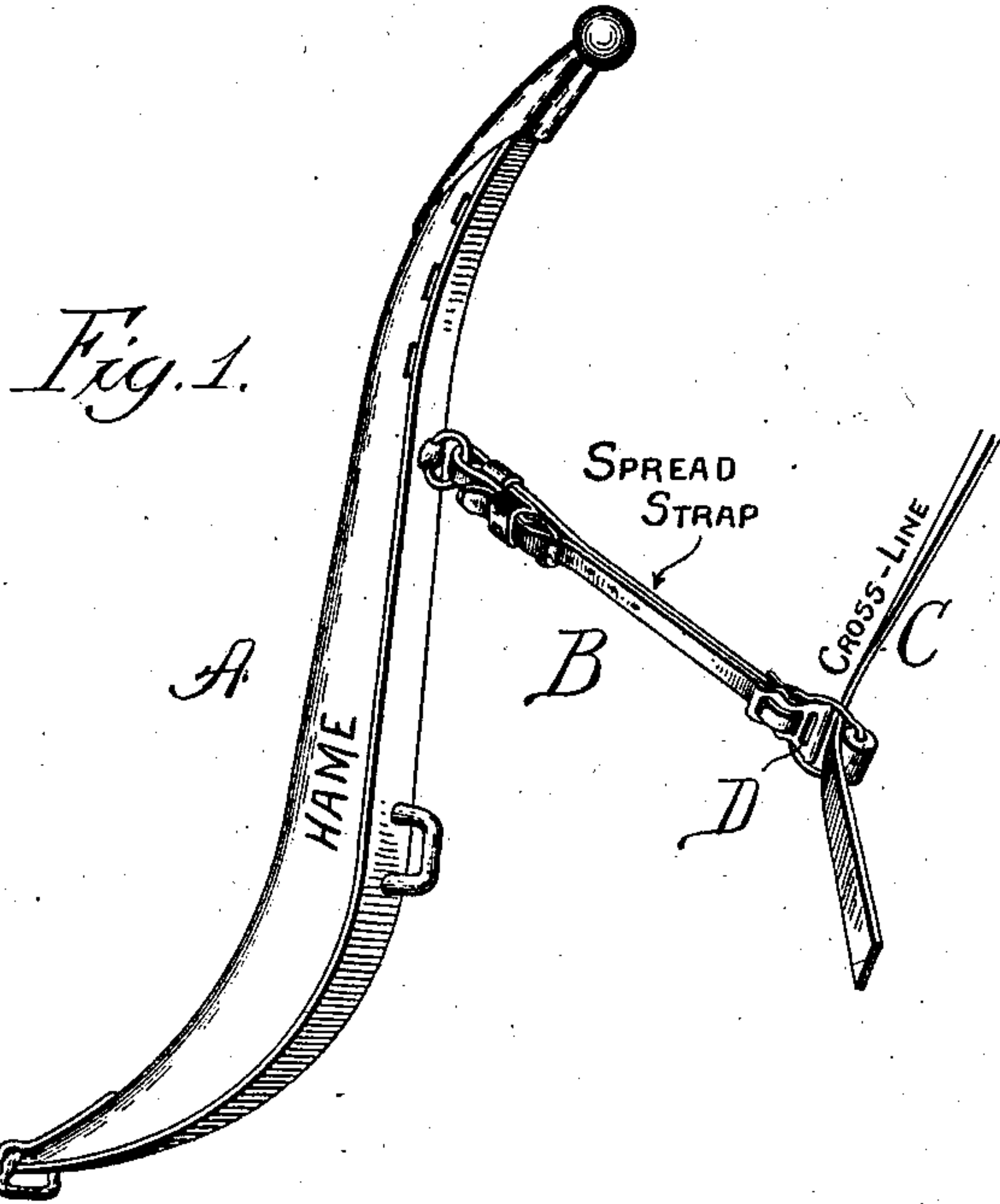
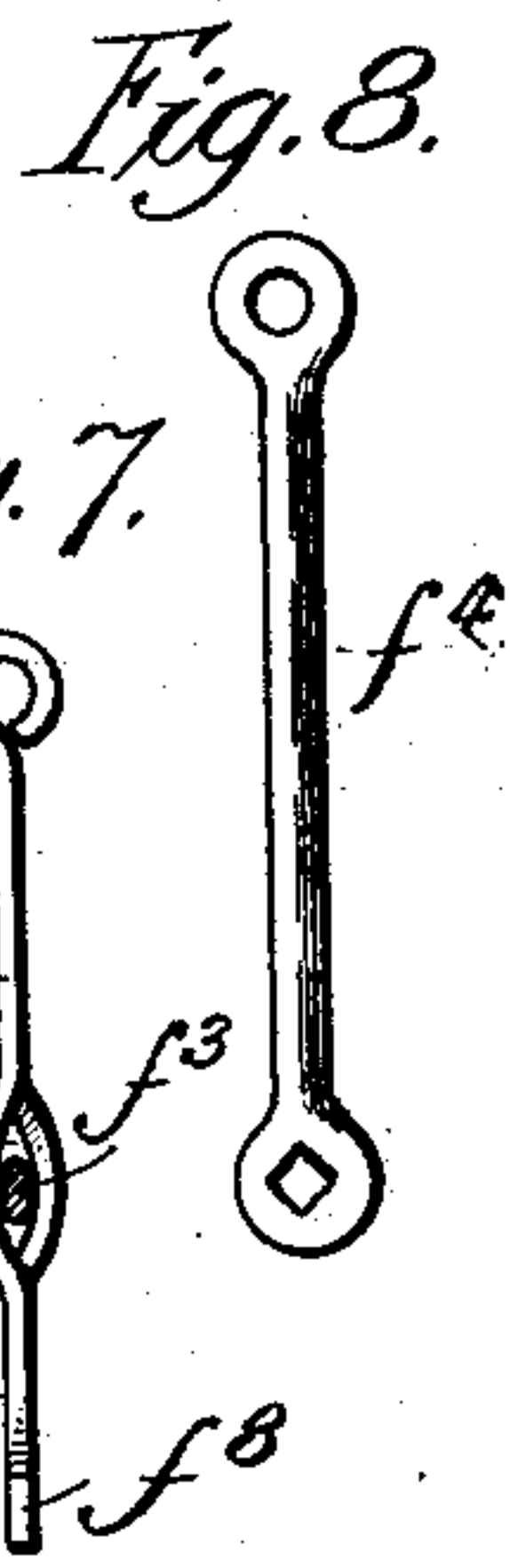
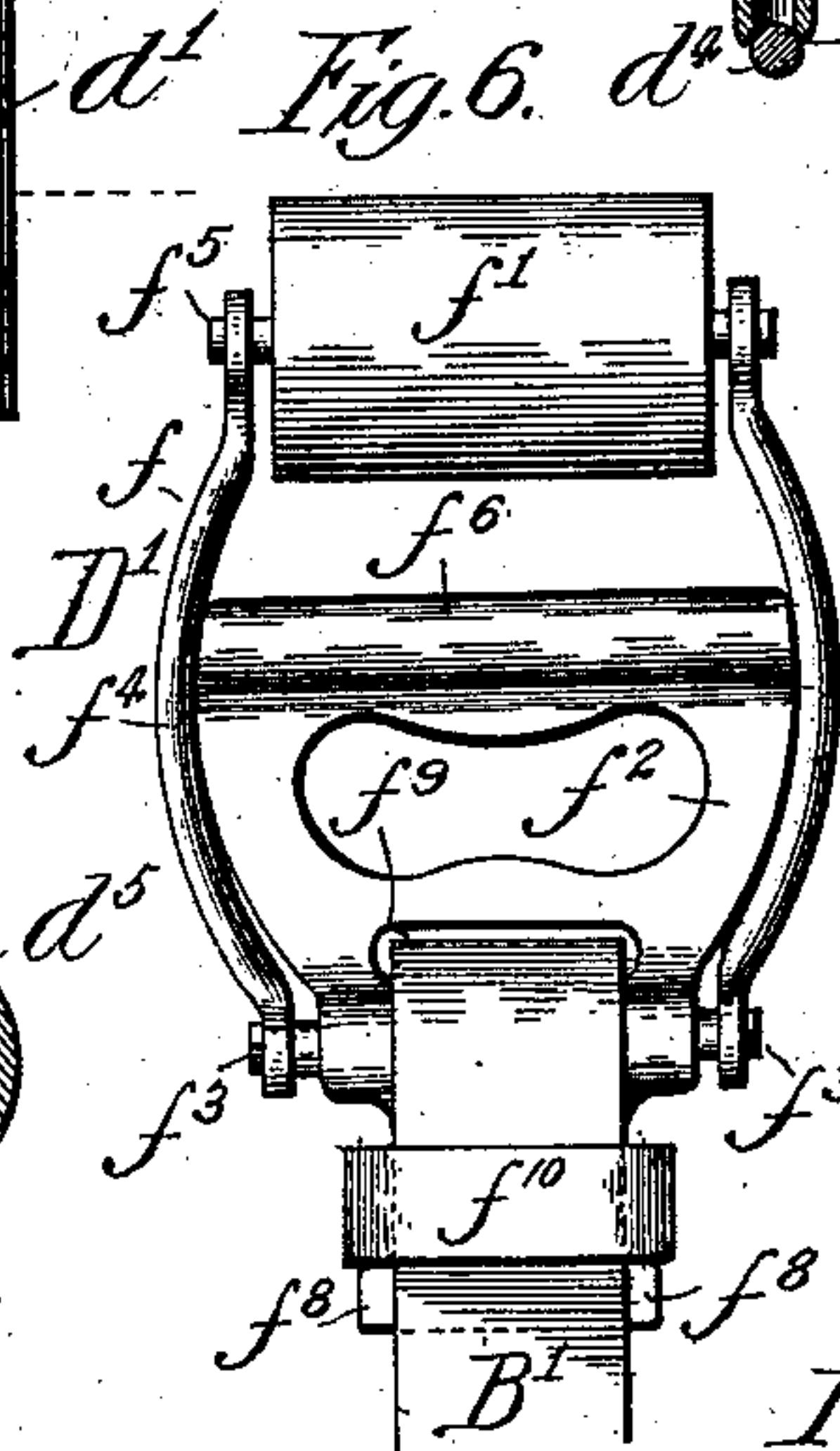
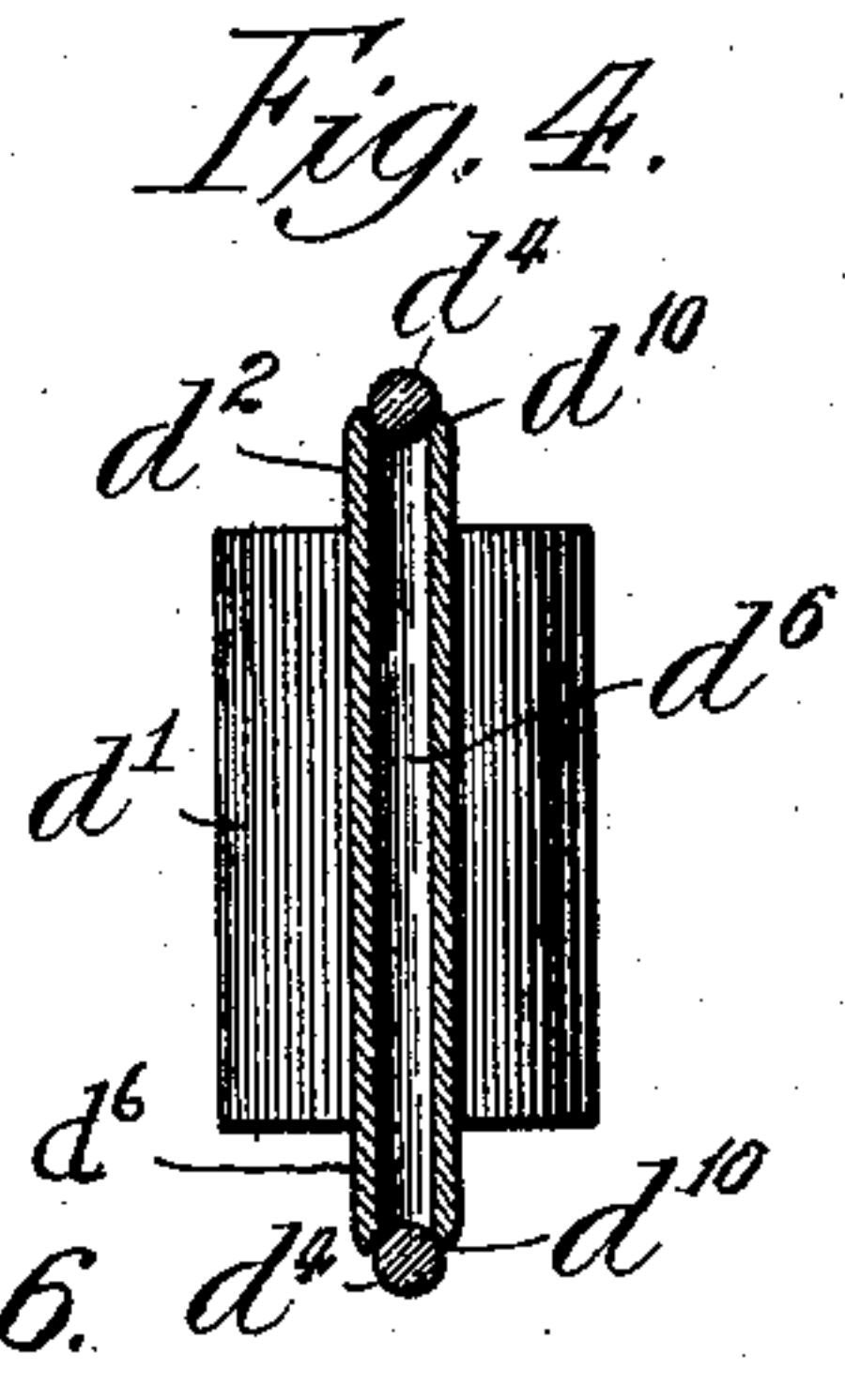
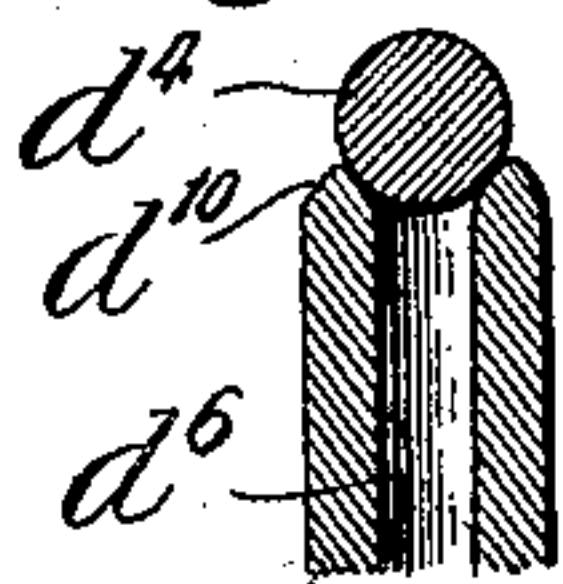


Fig. 5.



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UNITED STATES PATENT OFFICE.

TURNER LEE, OF ROCKFALLS, ILLINOIS.

SPREAD-ROLLER.

SPECIFICATION forming part of Letters Patent No. 763,006, dated June 21, 1904.

Application filed February 3, 1904. Serial No. 191,782. (No model.)

To all whom it may concern:

Be it known that I, TURNER LEE, a citizen of the United States, residing at Rockfalls, in the county of Whiteside and State of Illinois, have invented a new and useful Improvement in Spread-Rollers, of which the following is a specification.

My invention relates particularly to rollers employed in connection with the spread-straps attached to the inner hames of team-harnesses for receiving the cross-lines; and my primary object is to provide a thoroughly-practicable device of this character which permits ready insertion and withdrawal of the cross-line, presents only smooth surfaces to the cross-line, has means for receiving the spread-strap in a secure manner, and is equipped with a catch or lock for the pivoted guard employed.

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

Figure 1 represents a hame equipped with my improved spread-roller; Fig. 2, a detached view of the improved device; Fig. 3, a section taken at line 3 of Fig. 2; Fig. 4, a section taken at line 4 of Fig. 2; Fig. 5, an enlarged broken section similar to the section shown in Fig. 4; Fig. 6, a view showing a modification of the improved spread-roller; Fig. 7, an edge view of the guard in its modified form, and Fig. 8 a view of one of the side members of the frame in the modified form.

Referring to Figs. 1 to 5, inclusive, A represents the inner hame of a harness; B, a spread-strap attached thereto; C, the cross-line of the harness, and D my improved spread-roller supported by the spread-strap and in turn supporting the cross-line.

The device D comprises a frame d , a roller d' , journaled on one end of the frame, and a guard d^2 , pivoted on the opposite end of said frame. The side members of the frame are preferably curved out somewhat, as shown in Fig. 2. The frame preferably is formed from a single piece of wire bent to form the end d^3 at the central portion of the wire, the side members d^4 , and the inturned pivot-sections d^5 . The guard d^2 preferably comprises a suitable blank of sheet metal bent upon itself to form the curved lower end d^6 , the

members formed by the bending operation being struck outwardly at a distance from the upper end of the guard to form interior pivotal grooves, as shown in Fig. 3. The members of the guard are preferably secured together above the frame end d^3 , which affords a pivot for the guard, by a rivet d^7 . The members of the guard are provided below the pivot with alined strap-receiving perforations d^8 , and above the pivot the extremities of said members are separated somewhat and provided with strap-receiving perforations d^9 . The spread-strap B is threaded through the perforations in the manner illustrated. The formation of the guard provides longitudinal grooves at the lateral edges of the lower portion of the guard, from which project lips d^{10} , beveled as shown and yieldingly engaging the inner beveled edges of the side members of the frame, so that the guard is normally held yieldingly in a closed position. The wire employed in forming the frame being of circular cross-section presents the beveled surfaces desired for engagement with the lips d^{10} .

It will be noted that the construction affords a yielding locking device for the guard which serves independently of the spread-strap to hold the guard in the closed position. The spread-strap, however, tends also when the device is in use to hold the guard normally in a closed position, owing to the fact that the spread-strap is secured to the guard both above and below the pivot thereof. The independent locking means for the guard serves the important purpose of preventing accidental displacement of the guard when the device is in use. When it is desired to insert or withdraw the cross-line, the guard may be swung upon its pivot readily by applying the necessary force, thereby giving a large opening in the frame. In practice the guard serves to maintain the cross-line in contact with its roller and prevent twisting of the cross-line. It is incidental to the construction that only smooth surfaces are presented to the cross-line, thereby avoiding injury to the cross-line and preventing danger of accidental displacement of the parts.

In the modified form of construction shown

in Figs. 6, 7, and 8 D' represents the spread-roller, and B' the spread-strap. In this construction f represents the frame, f' the roller, and f'' the guard. The frame comprises an end f^3 , side members f^4 , and an end f^5 . The side members f^4 may be cast metal or stampings, and the end members may be simply rivets. The guard comprises a piece of sheet metal having its lower end curved to form the bearing f^6 adjacent to the cross-line, while at the pivotal point the metal is split longitudinally of the guard and stamped in two directions, as shown in Fig. 7, to afford a pivot-bearing. The pivot-receiving perforation f^6 is preferably somewhat oval in cross-section, and the central portion of the rivet f^3 is also somewhat oval in cross-section, as shown in Fig. 7, the ends of the rivet f^3 being fixedly joined to the upper ends of the side f^4 of the frame. The construction is such that the pivotal connection serves normally to hold the guard yieldingly in a closed position, the lips corresponding with the lips d^{10} being omitted in this construction. The upper end of the guard forms a stem f^7 , provided with lateral lugs f^8 . The spread-strap is threaded through a perforation f^9 beneath the pivot of the guard, and the members of the strap lie on opposite sides of the stem f^7 . A strap-loop f^{10} , through which the members of the strap are threaded, is slipped down over the stem f^7 , the loop yielding sufficiently to pass the lugs f^8 . This serves to connect the spread-strap firmly to the stem of the guard, so that the spread-strap aids in maintaining the guard in its normally closed position, as is the case in the first-described construction.

It will be understood that the end of the device which is attached to the spread-strap is uppermost in use and is to be regarded as its upper end.

Changes in details of construction within the spirit of my invention are contemplated. Hence no undue limitation should be understood from the foregoing detailed description.

What I regard as new, and desire to secure by Letters Patent, is—

1. A device of the character described, comprising a frame having ends forming pivots, a roller supported on one end of said frame, and a guard pivoted on the other end of the frame and provided below its pivot with a strap-receiving perforation, for the purpose set forth.

2. A device of the character described, comprising a frame, a roller supported at one end of said frame, a pivotally-supported guard, and a strap connected with said guard above and below the pivot thereof, for the purpose set forth.

3. A device of the character described, comprising a frame, a roller supported at one end of said frame, and a pivoted guard mounted on said frame, said guard and frame having coacting means for maintaining the guard in

the closed position, independent of the supporting-strap, for the purpose set forth.

4. A device of the character described, comprising a frame, a roller supported at one end of said frame, and a pivoted guard mounted on said frame, said guard and frame having a yielding catch serving normally to maintain the guard in the closed position.

5. A device of the character described, comprising a frame, a roller supported at one end of said frame, and a pivoted guard mounted on said frame, said guard having lateral projections serving to yieldingly engage the sides of the frame and lock the guard in the closed position, for the purpose set forth.

6. A device of the character described, comprising a frame, a roller supported at one end of said frame, a guard pivoted at its intermediate portion at the other end of said frame, said guard having a strap-receiving perforation below its pivot and perforate strap-receiving ears above said pivot, for the purpose set forth.

7. A device of the character described, comprising a frame, a roller supported at one end of said frame, a guard pivoted at its intermediate portion at the other end of said frame, said guard comprising a sheet-metal member having the metal curved back upon itself at the lower end of the guard to present a smooth surface to the cross-line and having its upper end provided with strap-receiving means, for the purpose set forth.

8. A device of the character described, comprising a frame, a roller supported at one end of said frame, a guard pivoted at its intermediate portion at the other end of said frame, said guard comprising a sheet-metal member folded upon itself and grooved interiorly to afford a pivot-bearing, and provided beneath the pivot with alined strap-receiving perforations and above the pivot with perforate strap-receiving ears, for the purpose set forth.

9. A device of the character described, comprising a roller, a wire frame presenting bevel-surfaces interiorly at its sides, a roller journaled on one end of said frame, and a guard pivoted on the other end of said frame and having longitudinal grooves at the lower portions of its side edges receiving the side members of the frame, for the purpose set forth.

10. The combination of a frame having ends forming pivots, a roller journaled on one pivot-forming end of the frame, a guard mounted on the other pivot-forming end of the frame and provided below its pivotal support with a strap-receiving perforation, and a supporting-strap passing through said perforation and about the pivot of the guard, for the purpose set forth.

TURNER LEE.

In presence of—

WALTER N. WINBERG,
HARRIET C. MILLER.