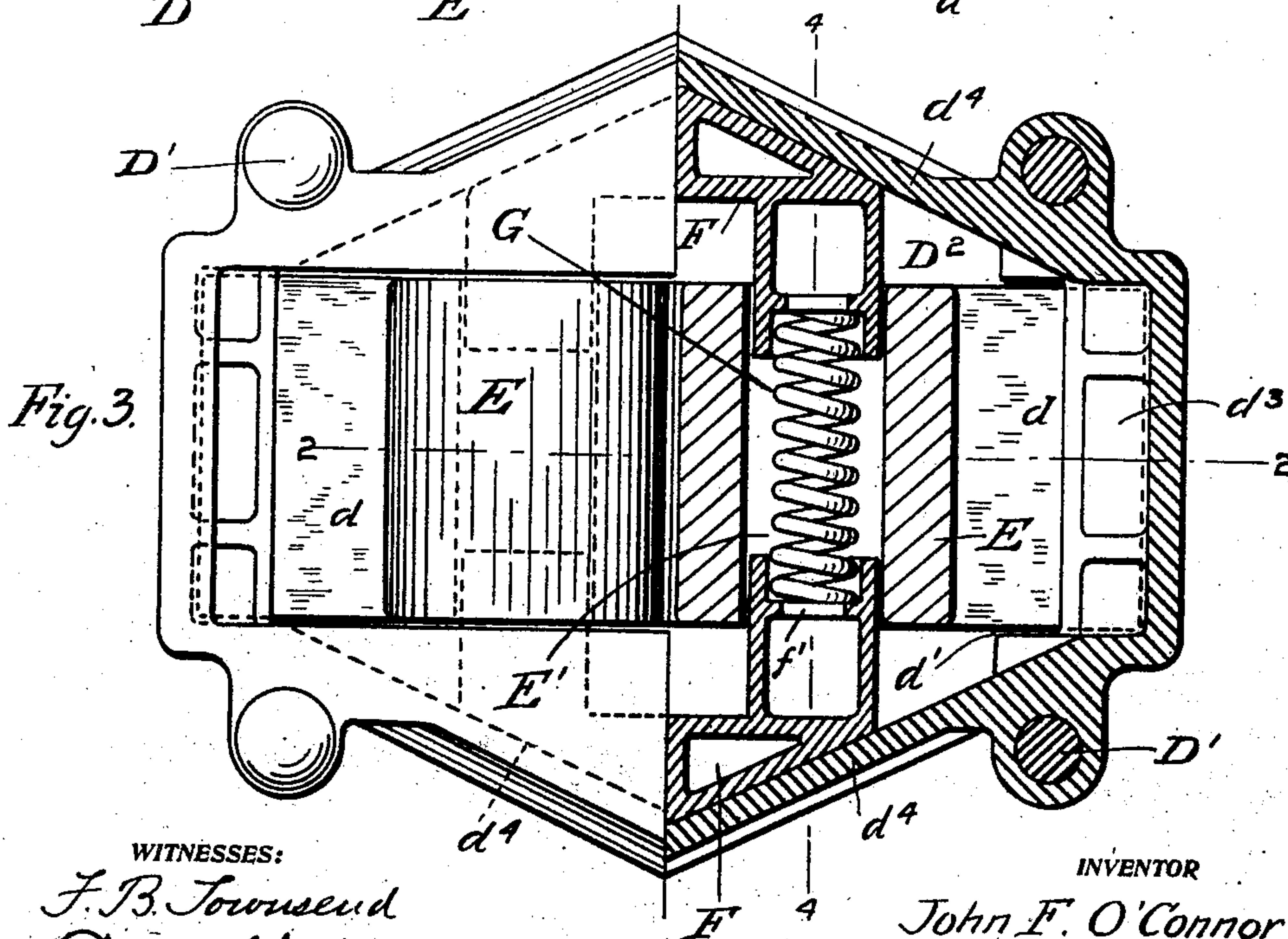
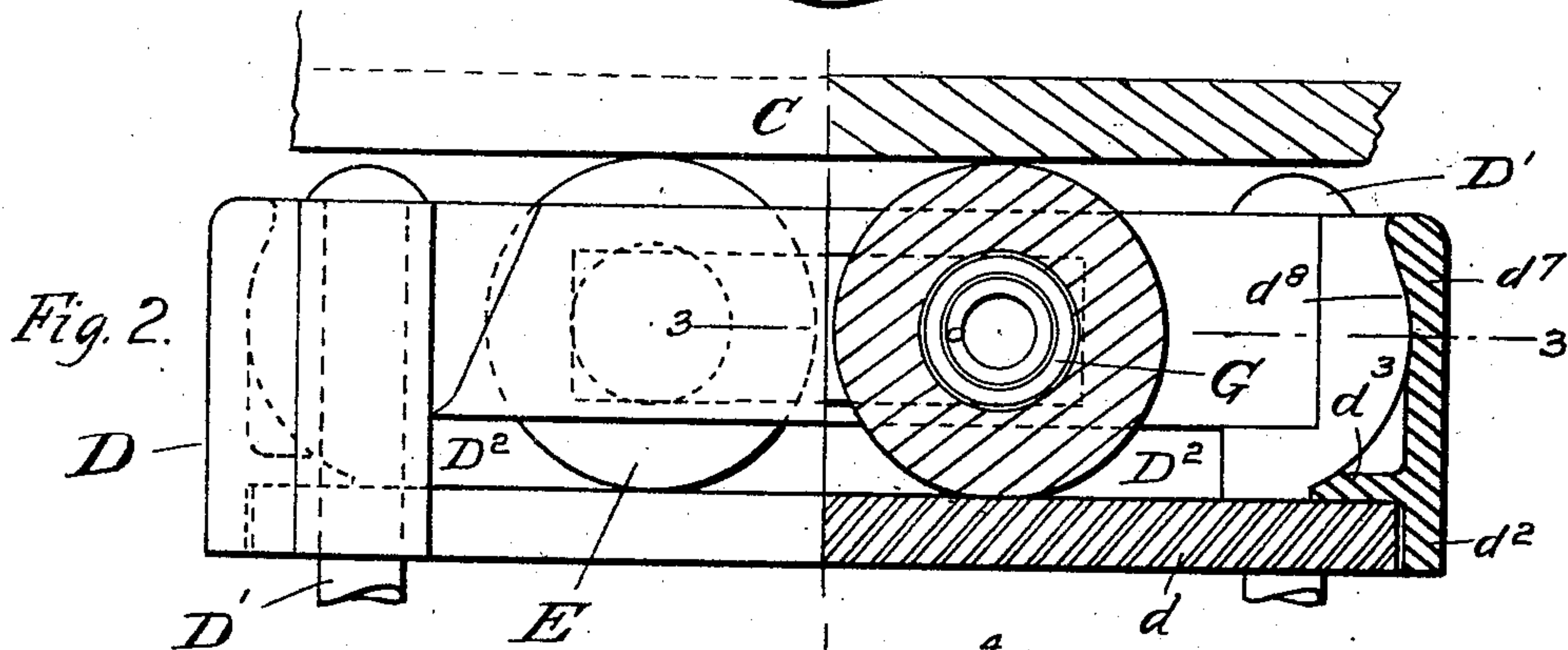
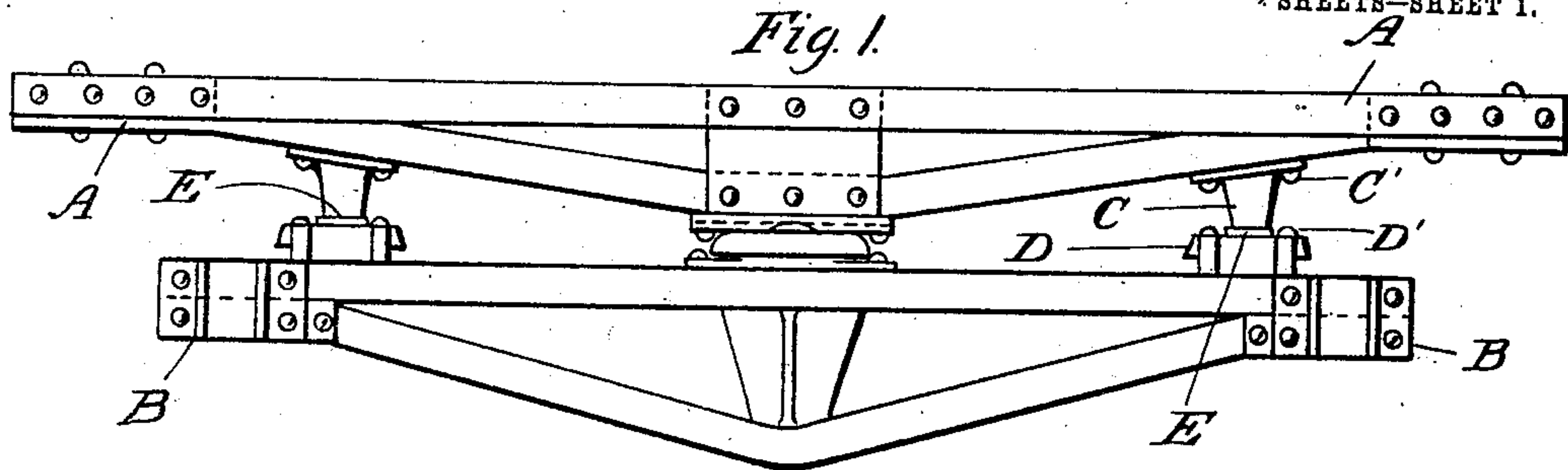


J. F. O'CONNOR.  
 ROLLER SIDE BEARING.  
 APPLICATION FILED OCT. 9, 1909.

946,261.

Patented Jan. 11, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

*F. B. Townsend*  
*Carl Abrams*

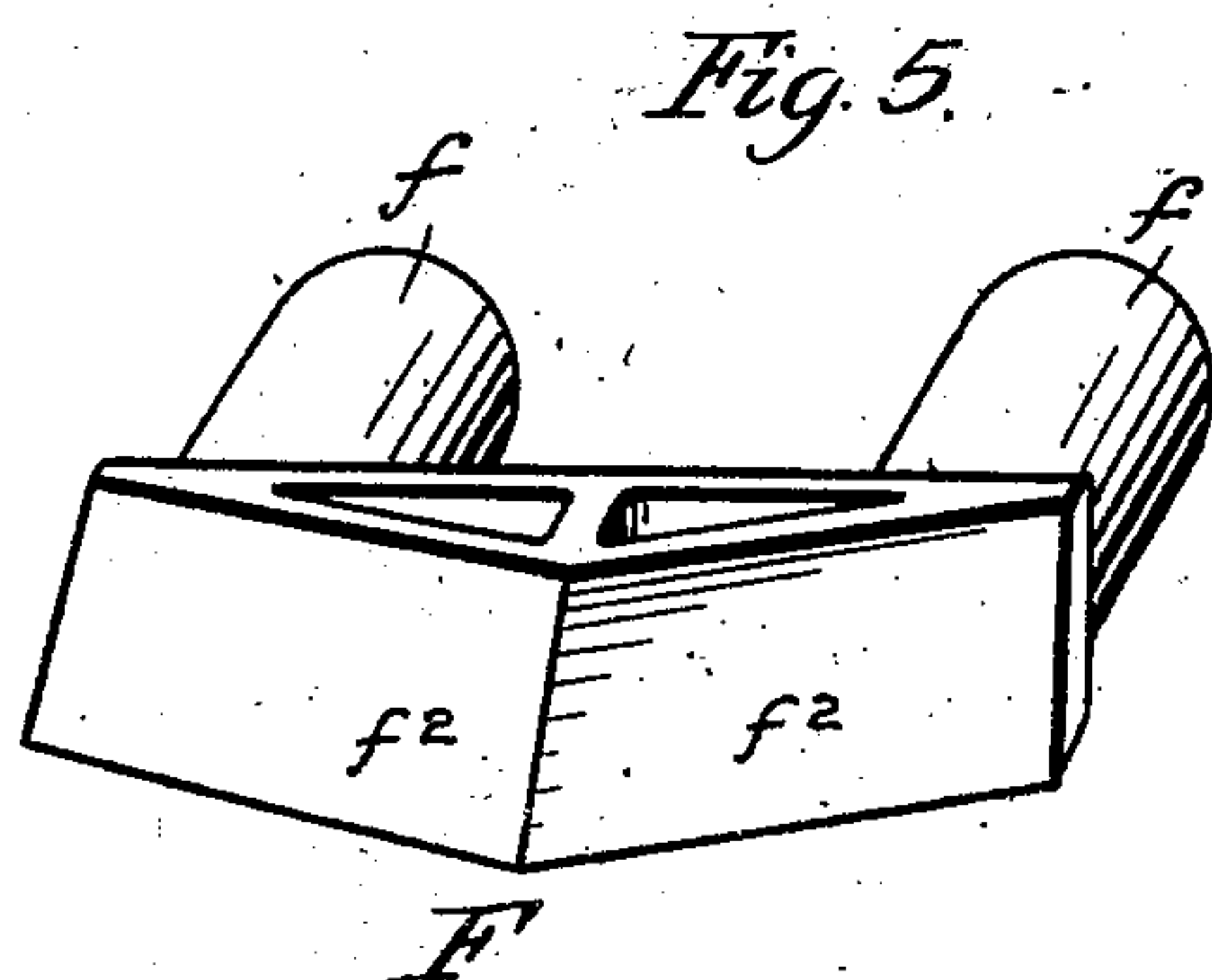
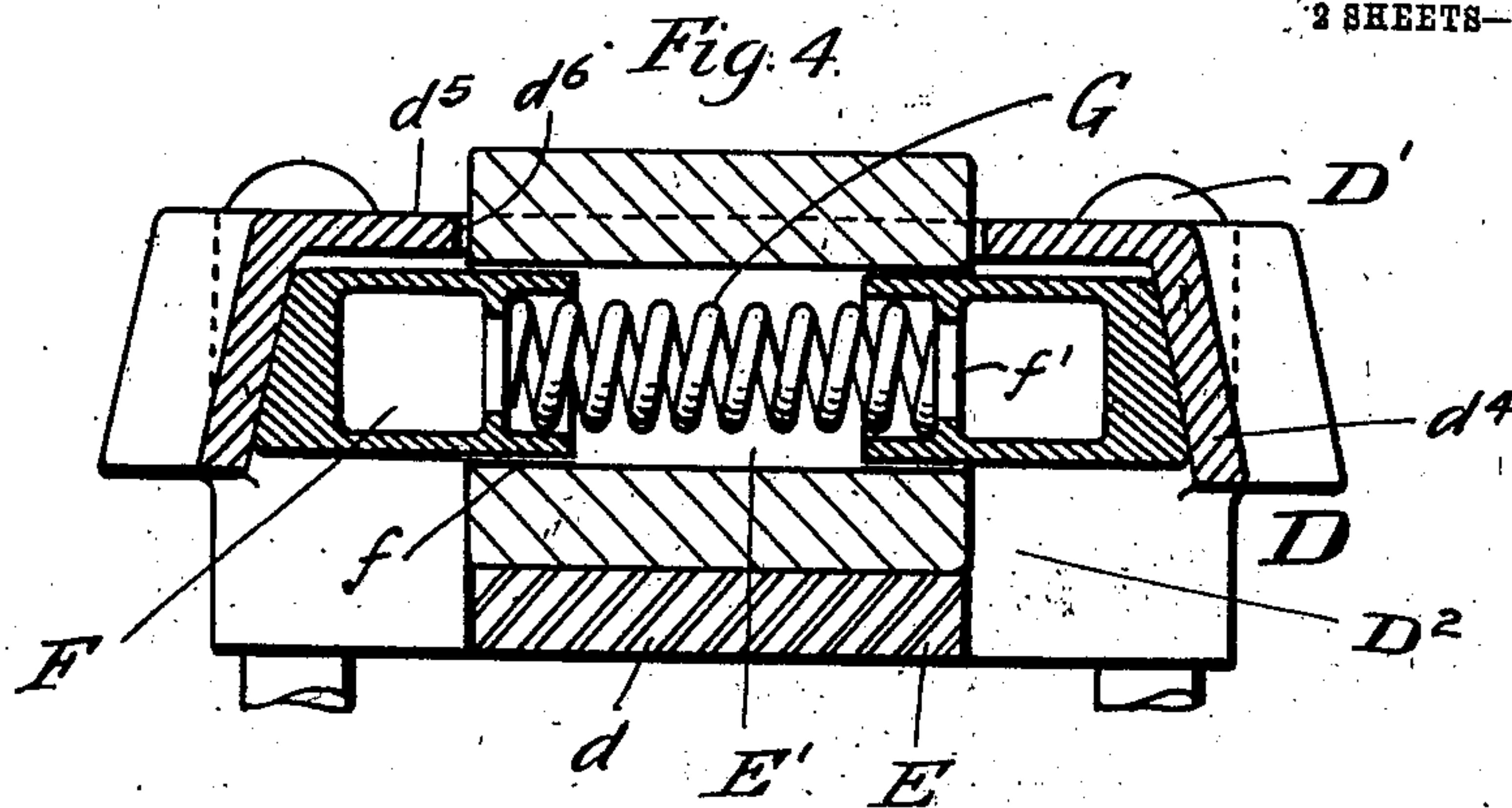
INVENTOR

*John F. O'Connor*  
 BY *Wendell Covatt*  
*Adesack & Clarke*  
 HIS ATTORNEYS

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2 SHEETS—SHEET 2.



WITNESSES:  
F. B. Townsend  
Pearl Abrams.

INVENTOR  
John F. O'Connor  
BY Munday, Evans,  
Adcock & Clarke.  
HIS ATTORNEYS



# UNITED STATES PATENT OFFICE.

JOHN F. O'CONNOR, OF CHICAGO, ILLINOIS, ASSIGNOR TO W. H. MINER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## ROLLER SIDE BEARING.

946,261.

Specification of Letters Patent. Patented Jan. 11, 1910.

Application filed October 9, 1909. Serial No. 521,787.

To all whom it may concern:

Be it known that I, JOHN F. O'CONNOR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Roller Side Bearings, of which the following is a specification.

My invention relates to improvements in roller side bearings for railway cars.

The object of my invention is to provide a roller side bearing of a strong, simple, efficient and durable construction, composed of few parts, and capable of being cheaply manufactured, and in which the rollers will automatically return to central or normal position.

My invention consists in connection with an upper shoe or bearing plate fixedly secured to the body bolster, of a lower bearing plate fixedly secured to the truck bolster, and provided with double or reversely inclined sides, a pair of antifriction rollers interposed between the upper shoe and lower bearing plate, a pair of double inclined or wedging followers having trunnions engaging the rollers and inclined faces engaging the inclined side walls of the lower bearing plate, and springs in the rollers and between the followers.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described and more particularly specified in the claims.

In the accompanying drawing forming a part of this specification, Figure 1 is a front elevation showing a railway car truck and body bolster furnished with my improved roller side bearings. Fig. 2 is a detail side elevation of one of the roller side bearings, partly in section on line 2—2 of Fig. 3. Fig. 3 is a plan view partly in horizontal section on line 3—3 of Fig. 2. Fig. 4 is a vertical cross section on line 4—4 of Fig. 3 and Fig. 5 is a detail perspective view of one of the wedge faced followers.

In the drawing, A represents the body bolster, B the truck bolster of a railway car, C the upper bearing plate or shoe fixedly secured to the body bolster by suitable bolts C<sup>1</sup>, D the lower bearing plate fixedly secured by bolts D<sup>1</sup> to the truck bolster, E E anti-friction rollers between the upper and lower bearing plates, F the wedge faced followers and G the springs.

The lower bearing plate D is preferably furnished with a separate piece or removable wearing plate or tread piece *d* of steel or other suitable metal for the rollers to roll upon, the same fitting within a suitable recess *d*<sup>1</sup> formed by surrounding flanges *d*<sup>2</sup> and shoulders *d*<sup>3</sup> to confine the removable wearing plate in position. The lower bearing plate D is provided with double inclined or wedging side walls *d*<sup>4</sup>, the side walls *d*<sup>4</sup> *d*<sup>4</sup> converging from the middle portion of the bearing plate D toward each end. The side walls *d*<sup>4</sup> *d*<sup>4</sup> are also preferably upwardly converging so that when the followers F F are in position, they will slightly compress the springs G or put them under an initial tension. The lower bearing plate D is also provided with a top web or flange *d*<sup>5</sup>, the edges *d*<sup>6</sup> of which serve as guides for the ends of the rollers E to keep the rollers in position lengthwise.

The rollers E are preferably two in number and cylindrical in form, and are each furnished with a large central bore or opening E<sup>1</sup> to receive the springs G and the hubs or studs *f* of the followers F.

The followers F each have two hubs or studs *f* *f*, one fitting within one end of each of the rollers E. Each of the studs *f* is preferably provided with a hollow rim or flange *f*<sup>1</sup> to receive and support the end of the spring G. Each of the followers F has double or reversely inclined wedging faces *f*<sup>2</sup> adapted to fit against the double or reversely inclined side walls *d*<sup>4</sup> of the lower bearing plate D and thus cause the springs to be compressed when the rollers travel in either direction on the lower bearing plate. The lower bearing plate D on each side of its tread or wearing plate *d* has openings D<sup>2</sup> to permit the free escape of dirt or cinders. The followers F with their studs engaging the rollers serve both as spacing devices for keeping the rollers properly spaced and in alinement and also as followers to return the rollers to their normal position after each swinging movement of the truck and body bolsters in respect to each other. The end walls *d*<sup>7</sup> of the lower bearing plate D are preferably curved on the inside in conformity with the curvature of the rollers as indicated at *d*<sup>8</sup> on Fig. 2 of the drawing.

I claim:—

1. In a roller side bearing, the combination with an upper bearing plate fixed to



the body bolster, of a lower bearing plate fixed to the truck bolster and having reversely inclined side walls converging from the middle toward each end, rollers interposed between said bearing plates, followers engaging said rollers and having reversely inclined faces engaging said reversely inclined side walls of said lower bearing plate, and springs within the rollers interposed between said followers, substantially as specified.

2. In a roller side bearing, the combination of a bearing plate having inclined side walls, of followers having inclined faces engaging said side walls, a roller engaging said followers and a spring interposed between said followers, substantially as specified.

3. In a roller side bearing, the combination of a bearing plate having inclined side walls, of followers having inclined faces engaging said side walls, a roller engaging said followers and a spring interposed between said followers, said spring being within the roller, substantially as specified.

4. In a roller side bearing, the combination of a bearing plate having inclined side walls, of followers having inclined faces engaging said side walls, a roller engaging said followers and a spring interposed between said followers, said spring being within the roller, and said followers having studs fitting within the ends of the roller, substantially as specified.

5. In a roller side bearing, the combination with a bearing plate having side walls converging from the middle toward each end, of followers engaging said converging side walls, rollers engaging said followers and springs within the rollers and between the followers, substantially as specified.

6. In a roller side bearing, the combination with a bearing plate having side walls converging from the middle toward each end, of followers engaging said converging side walls, rollers engaging said followers and springs within the rollers and between the followers, and an upper bearing plate engaging the rollers, substantially as specified.

7. In a roller bearing, the combination with a bearing plate, having inclined side walls converging from the middle toward each end, of followers engaging said converging side walls, a roller engaging said followers and a spring between said followers, substantially as specified.

8. In a roller bearing, the combination with a bearing plate having inclined side walls converging from the middle toward

each end, of followers engaging said converging side walls, a roller engaging said followers and a spring between said followers, said spring being within the roller, substantially as specified.

9. In a roller bearing, the combination with a bearing plate having inclined side walls converging from the middle toward each end, of followers engaging said converging side walls, a roller engaging said followers and a spring between said followers, said spring being within the roller, and an upper bearing plate engaging the rollers, substantially as specified.

10. In a roller bearing, the combination with a bearing plate, of a hollow roller rolling on said plate, and a spring within the roller to return it to normal position, and a follower having a stud fitting within said roller and against which the spring coacts, substantially as specified.

11. In a roller bearing, the combination with a bearing plate, of a hollow roller rolling on said plate, a spring within the roller to return it to normal position, and a follower against which the spring acts, substantially as specified.

12. In a roller bearing, the combination with a bearing plate, of a hollow roller rolling on said plate, a spring within the roller to return it to normal position, and a follower against which the spring acts, said bearing plate having an inclined face against which said follower acts, substantially as specified.

13. In a roller bearing, the combination with a bearing plate, having inclined side walls converging from the middle toward each end, of followers engaging said converging side walls, a roller engaging said followers and a spring between said followers, said side walls of the bearing plate being also upwardly converging and operating in conjunction with the springs under an initial tension to hold the rollers snugly against the bearing plate to prevent rattling or jostling movements, substantially as specified.

14. In a roller side bearing, the combination of a bearing plate having inclined side walls, of followers having inclined faces engaging said side walls, a roller engaging said followers and a spring interposed between said followers, said side walls being also upwardly inclined, substantially as specified.

JOHN F. O'CONNOR.

Witnesses:

PEARL ABRAMS,  
EDMUND ADCOCK.