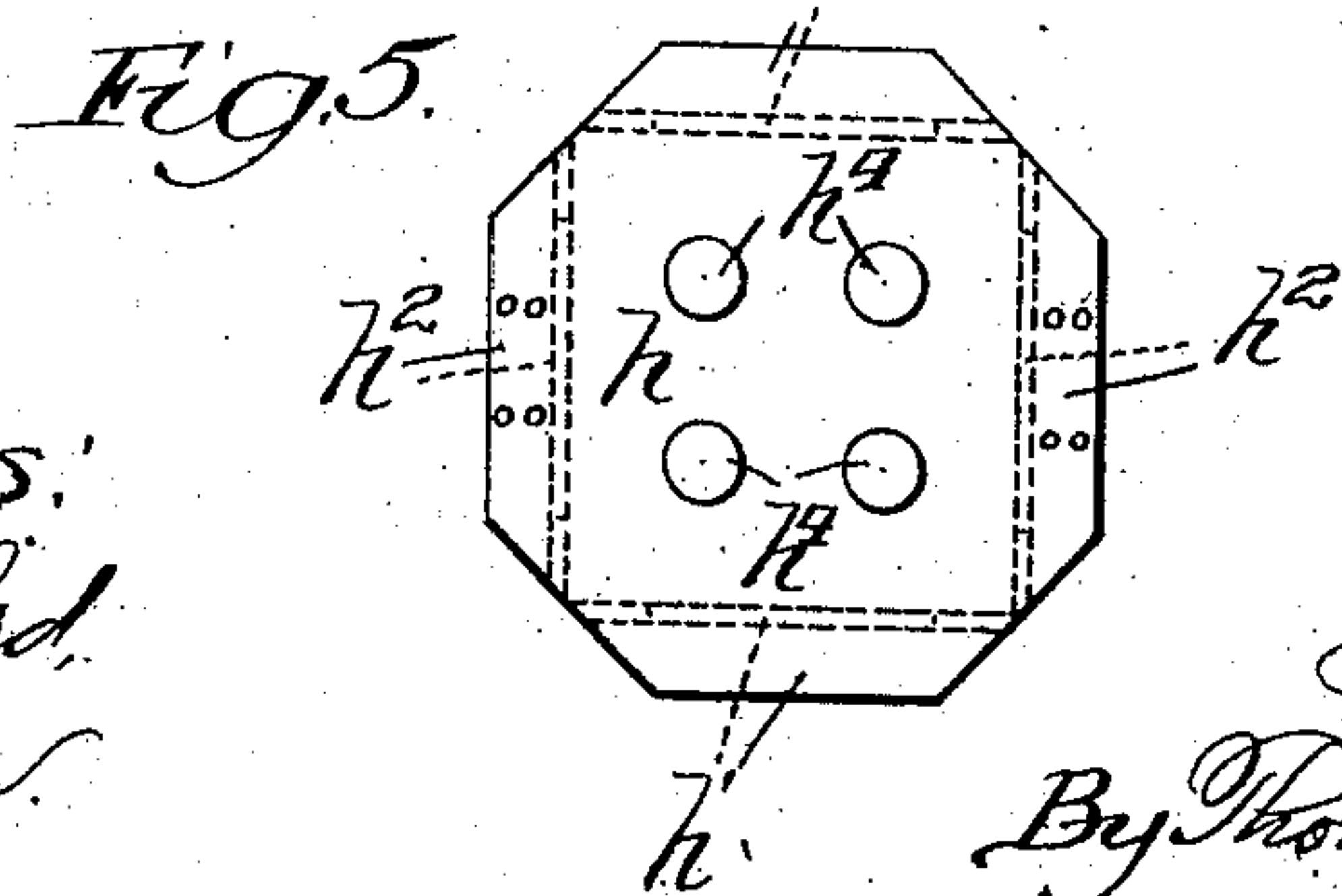
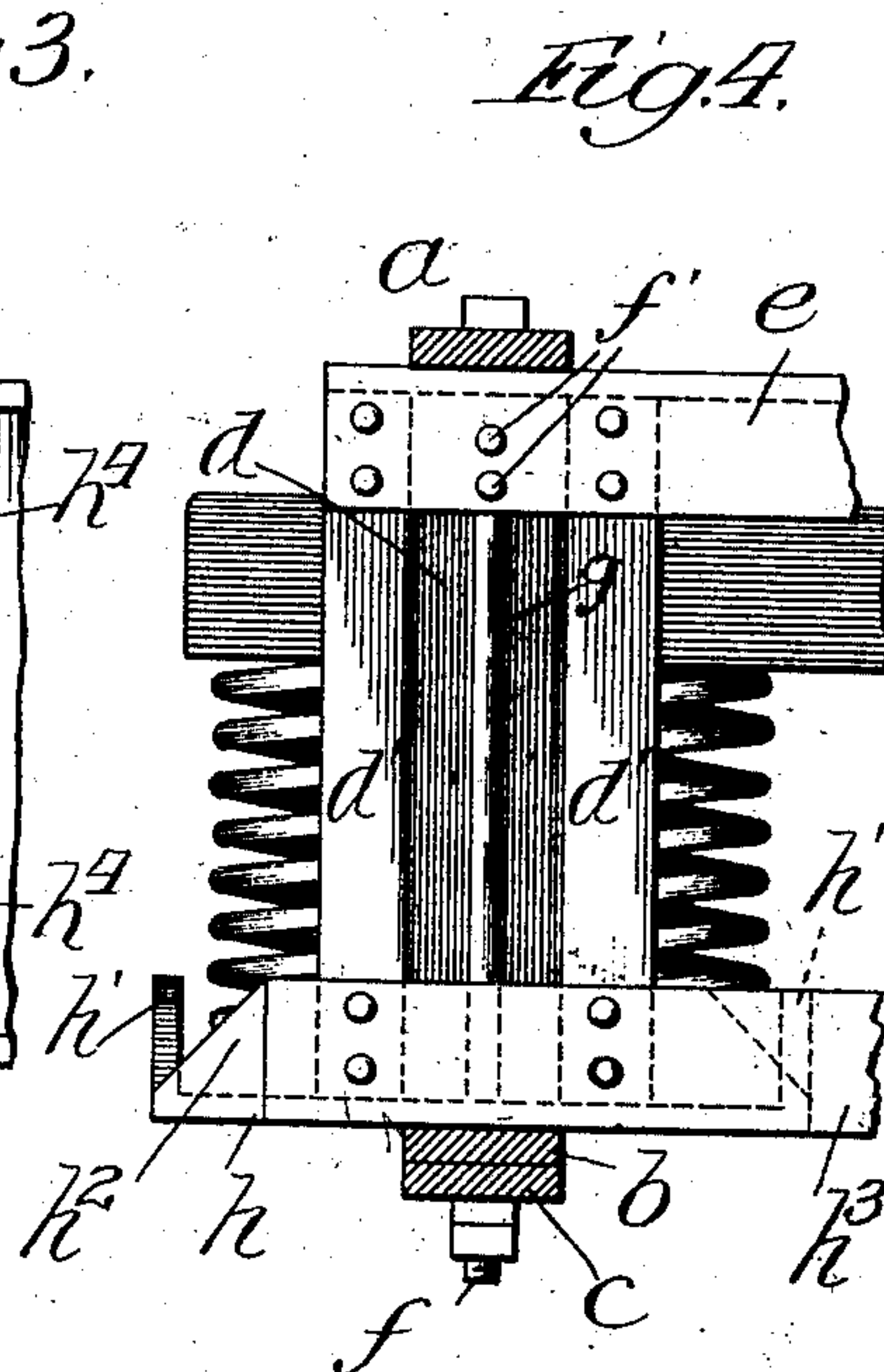
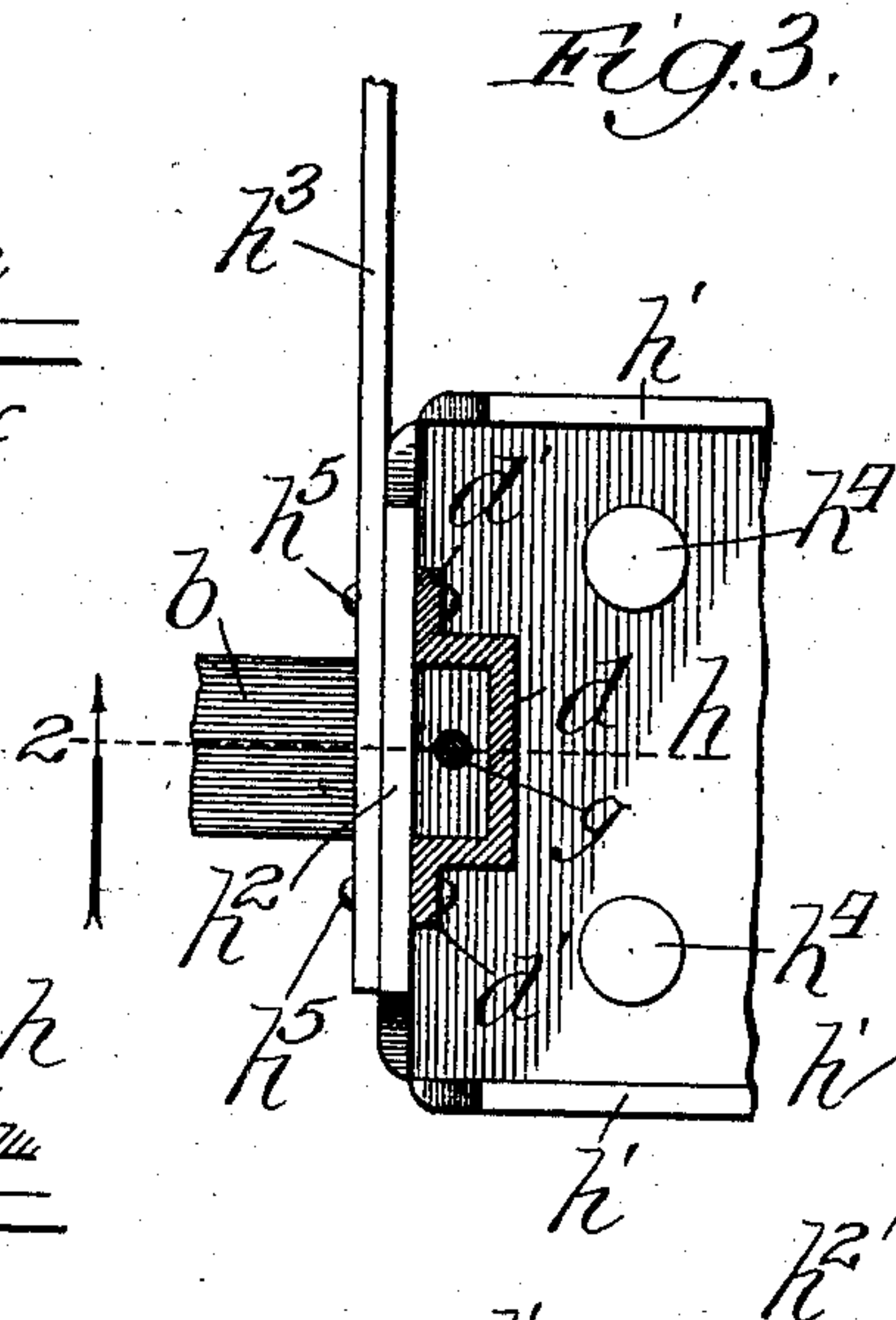
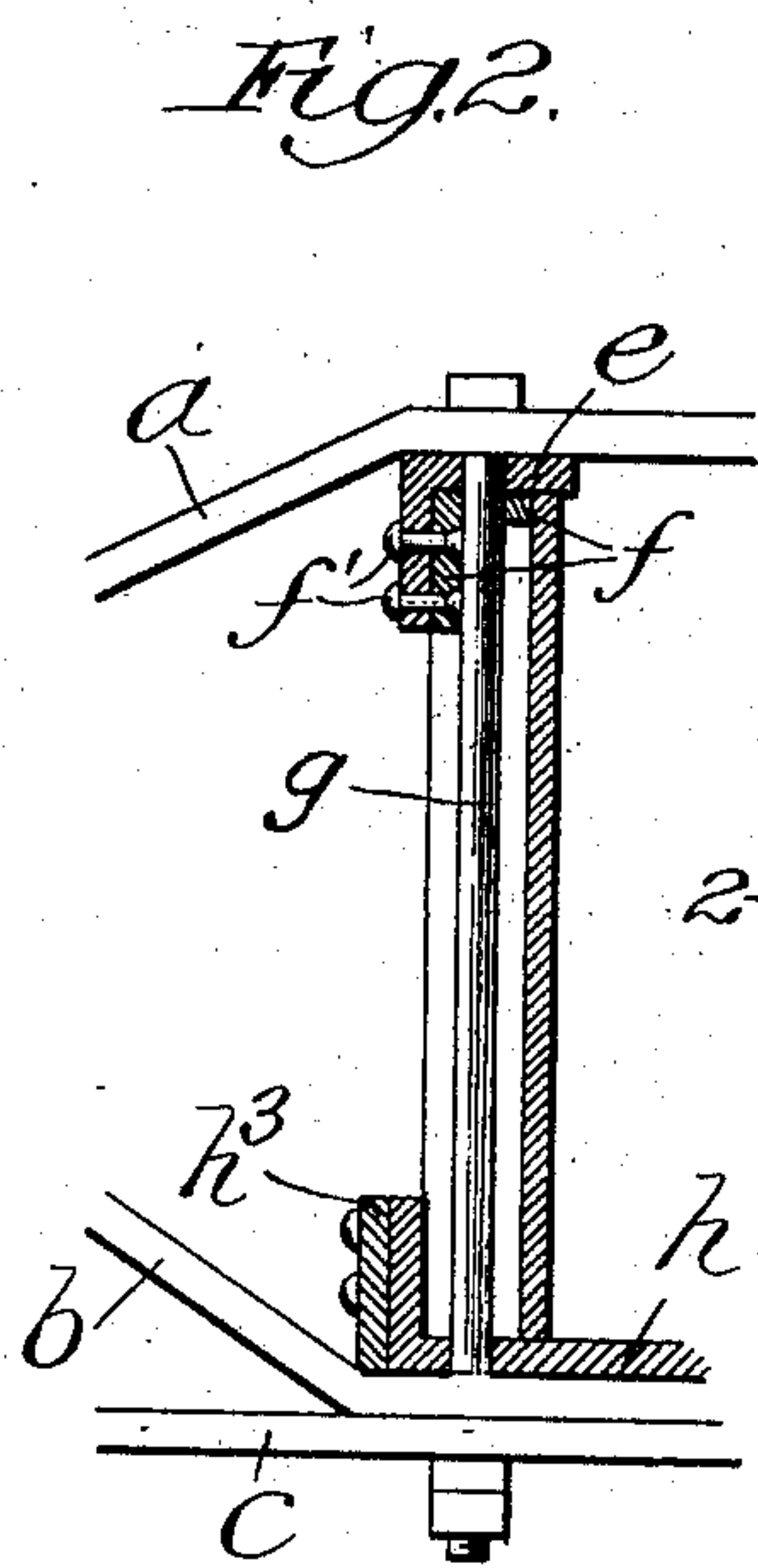
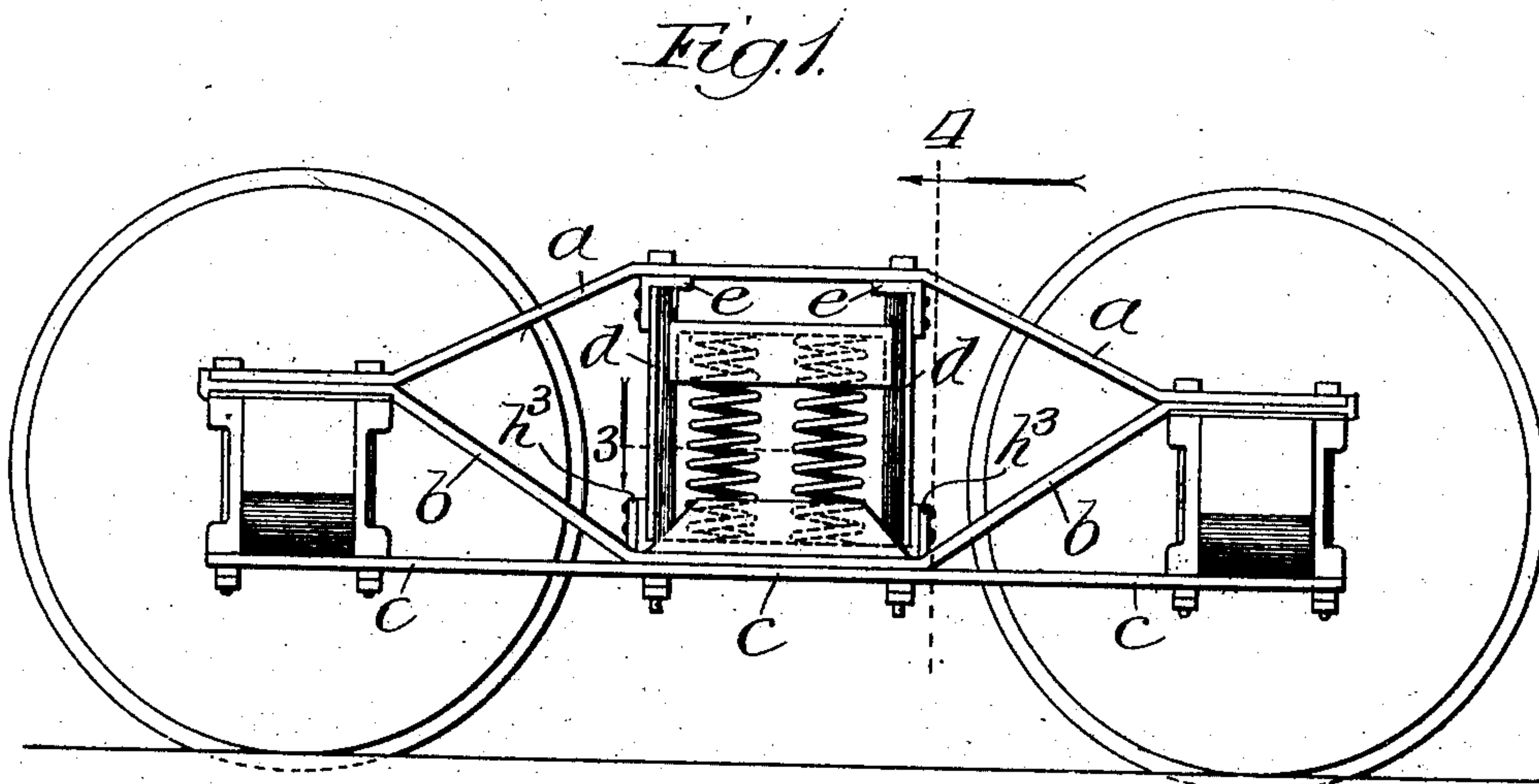


No. 840,156.

PATENTED JAN. 1, 1907.

S. OTIS.
RAILWAY CAR TRUCK.
APPLICATION FILED DEC. 26, 1905.



Witnesses:
E. O. Byford,
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Inventor:
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UNITED STATES PATENT OFFICE.

SPENCER OTIS, OF CHICAGO, ILLINOIS, ASSIGNOR TO NATIONAL PATENT HOLDING COMPANY, OF RAPID CITY, SOUTH DAKOTA, A CORPORATION OF SOUTH DAKOTA.

RAILWAY-CAR TRUCK.

No. 840,156.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed December 26, 1905. Serial No. 293,377.

To all whom it may concern:

Be it known that I, SPENCER OTIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Car Trucks, of which the following is a specification.

My invention relates to railway-car trucks, and has for its object to provide an improved column, spring-plate, and tie-bars therefor, as hereinafter more particularly described.

In the accompanying drawings, Figure 1 is a side elevation of a car-truck embodying my invention. Fig. 2 is a sectional view on the line 2 of Fig. 3. Fig. 3 is a transverse section on the line 3 of Fig. 1. Fig. 4 is an end sectional elevation on the line 4 of Fig. 1. Fig. 5 is a plan view of the blank from which the spring-plate is formed.

Referring to the drawings, *a*, *b*, and *c* indicate the usual upper and lower arch-bars and the side tie-bar of a railway-truck. *d* represents the columns therefor. As shown, these columns are formed of wrought-metal channeled bars having flanges *d'*, substantially parallel with the web thereof. *e* represents an angle tie-bar riveted to the flanges *d'* of columns on opposite sides of the truck, forming a transverse tie-bar for the upper ends of opposite columns. Within the ends of the channeled bar is an angle-brace member *f*, as shown in Fig. 2, the horizontal flange of which forms a closure for the upper end of the channeled bar and bears against the upper end of the channeled column-bar, the vertical flange of the brace member being secured to the vertical flange of the tie-bar by suitable fastening means, as by rivets *f'*. As will be readily understood, the strain in the upper arch-bar is a compression strain which is taken up partly by the bolts *g*. A part of this strain is transferred through the angle-brace member to the column *d* by means of the bearing of the horizontal flanges of the brace against the column. The bolts *g* pass through the upper arch-bar, the angle tie-bar, the angle-brace member, the spring-plate *h*, the lower arch-bar, and the lower tie-bar, as clearly shown in Fig. 2. The columns *d* rest upon these spring-plates *h*, each of which is formed from a substantially rectangular wrought-metal plate having flanges *h'* *h''* on its opposite sides. The flanges there-

fore are on all four sides of the spring-plates. The flanges *d'* of the columns are secured to the flanges *h''* of the spring-plate by suitable fastening means, as by rivets *h''*, and the plates are further provided with spring-retaining projections *h''*. Secured also to the outer sides of the flanges *h''* are flat transverse tie-bars *h''*, connecting the spring-plates on opposite sides of the truck. The spring-plate is formed from a blank, as shown in Fig. 5, having the corners cut away, as indicated in this figure, the flanges being turned up along the dotted lines.

It will be seen that I have provided an extremely simple and strong truck which is firmly braced in all directions and which can be made for the most part of metallic shapes, which can be purchased in the open market without the necessity of employing special patterns therefor. The angle-brace member gives an additional bearing for the bolt and serves to transfer a part of the compression strain on the upper end of the bolt to the columns, as above described.

It will be understood that I desire to include in the claims such variations from the structure shown and described as may properly fall within the spirit and scope of my invention.

I claim—

1. In a railway-car truck, a column comprising a wrought-metal channeled bar having flanges substantially parallel to its web and substantially parallel members connecting the flanges and web.

2. In a railway-car truck, having columns on each side comprising channeled bars having flanges substantially parallel to their webs and substantially parallel members connecting the flanges and web, and tie-bars secured to the flanges connecting the opposite sides of the truck.

3. In a railway-car truck, a substantially rectangular wrought-metal spring-plate having flanges on its four sides.

4. In a railway-car truck, the combination of a substantially rectangular metallic spring-plate having flanges on its four sides of flanged metal columns secured through their flanges to the spring-plate flanges on opposite sides of said plates.

5. In a railway-car truck, the combination of flanged metal spring-plates, flanged chan-

neled columns secured thereto, an angle tie-bar connecting the upper ends of the columns on opposite sides of the truck, and a flat tie-bar connecting the lower ends thereof.

5 6. In a railway-car truck, a column comprising a flanged channeled wrought-metal bar, and an angle-brace member in the upper end of the channeled bar.

10 7. The combination in a railway-car truck having the usual arch-bars and tie-bars of substantially rectangular metal spring-plates

and columns connected to the transverse tie-bars said columns comprising a channeled wrought-metal bar, an angle-brace member in the upper end thereof, and a bolt passing 15 through the tie-bars, spring-plate and angle-brace.

SPENCER OTIS.

Witnesses:

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