

No. 627,905.

Patented June 27, 1899.

C. W. COLLER & J. S. NAERY.
PLATFORM FOR RAILWAY CARS.

(Application filed June 28, 1898.)

(No Model.)

4 Sheets—Sheet 1.

Fig. 1.

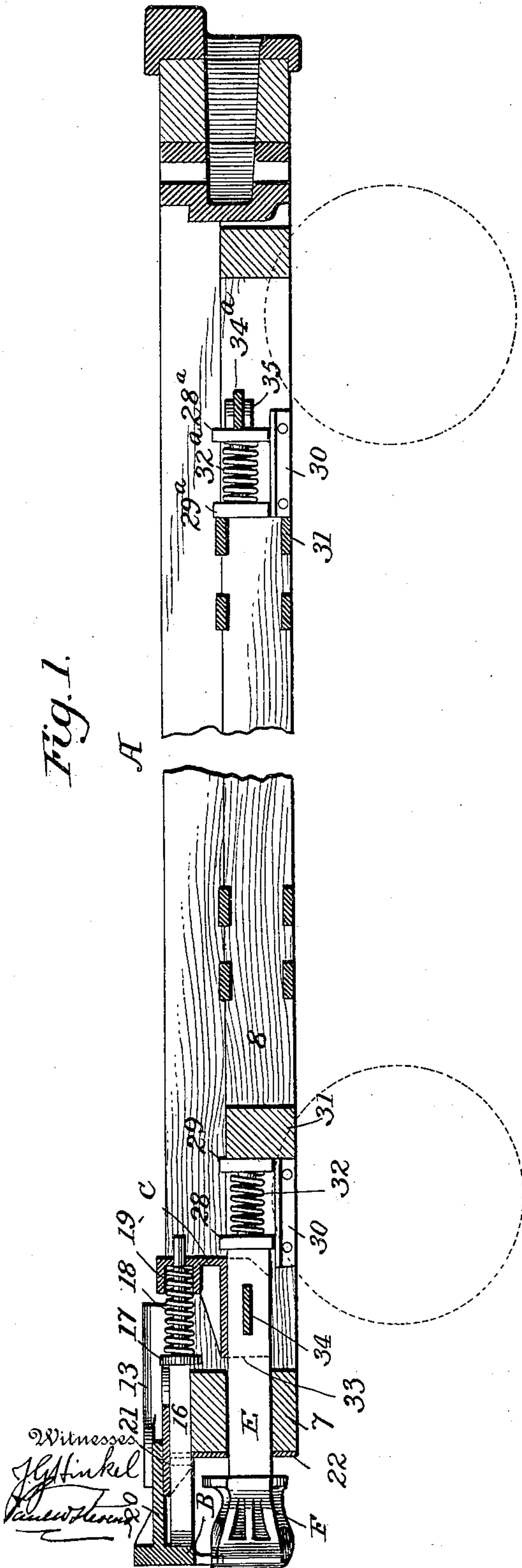
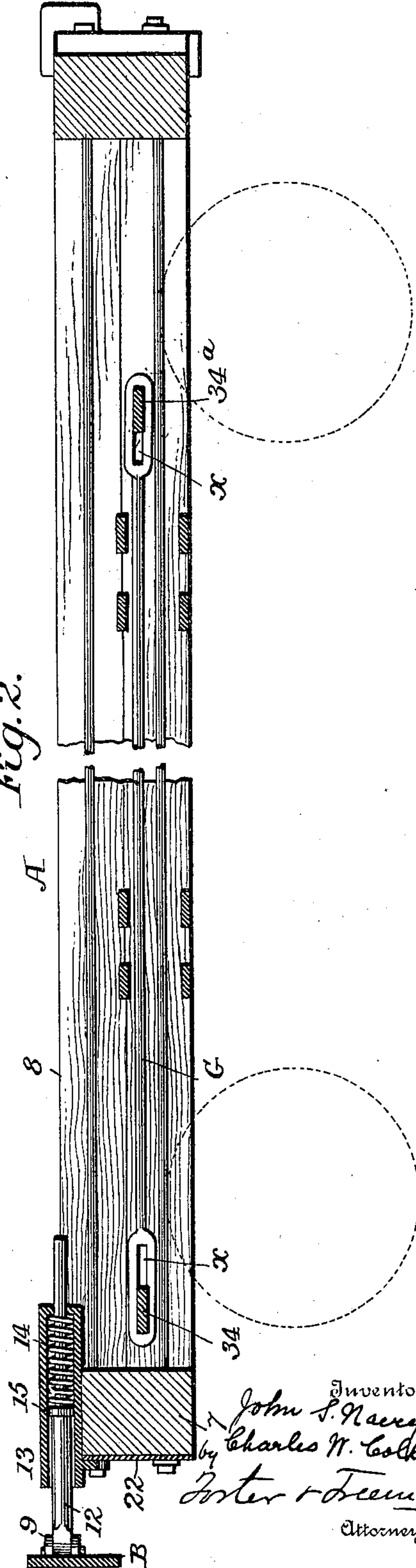


Fig. 2.



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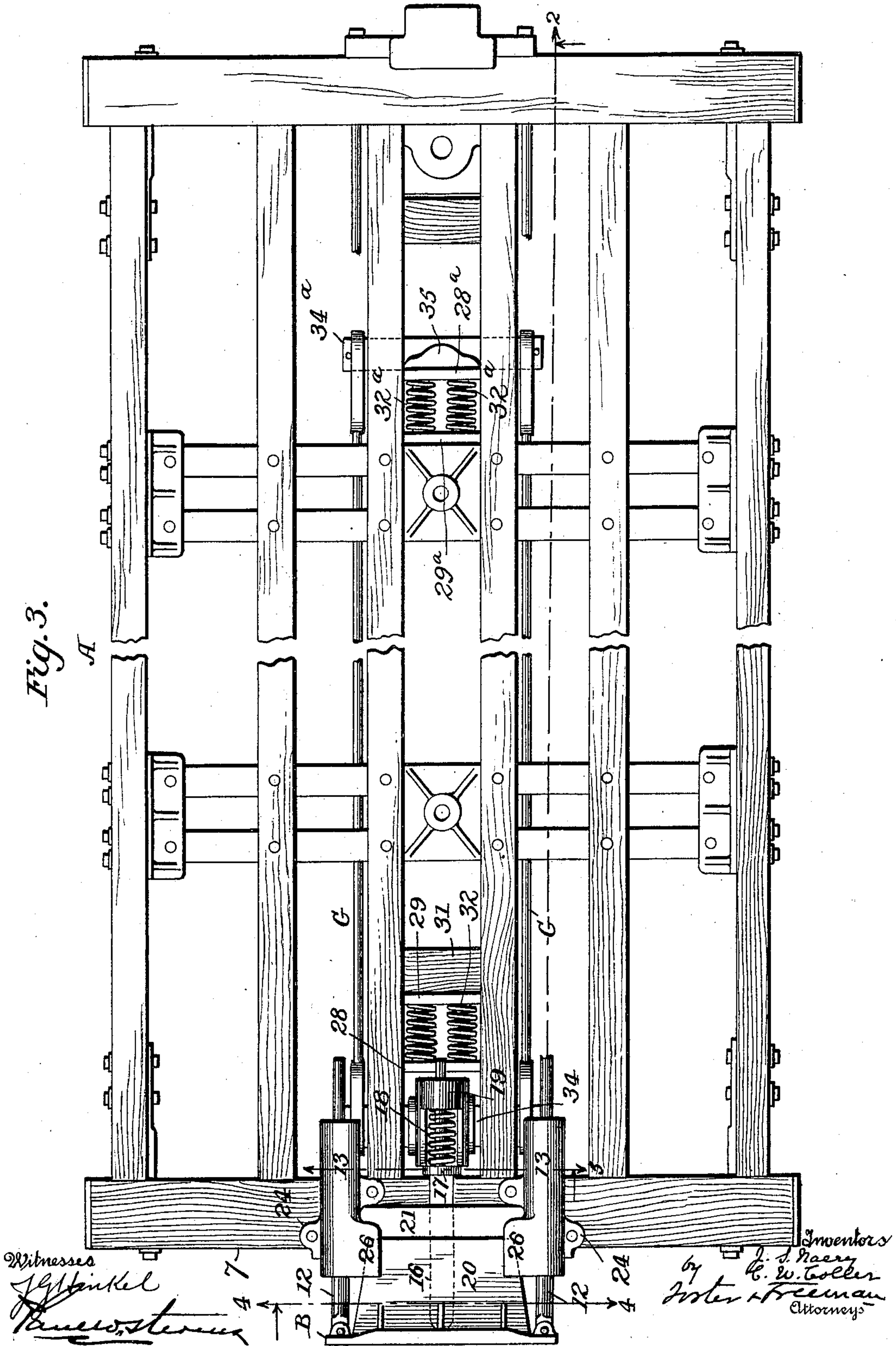
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Fig. 3.



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Fig. 4.

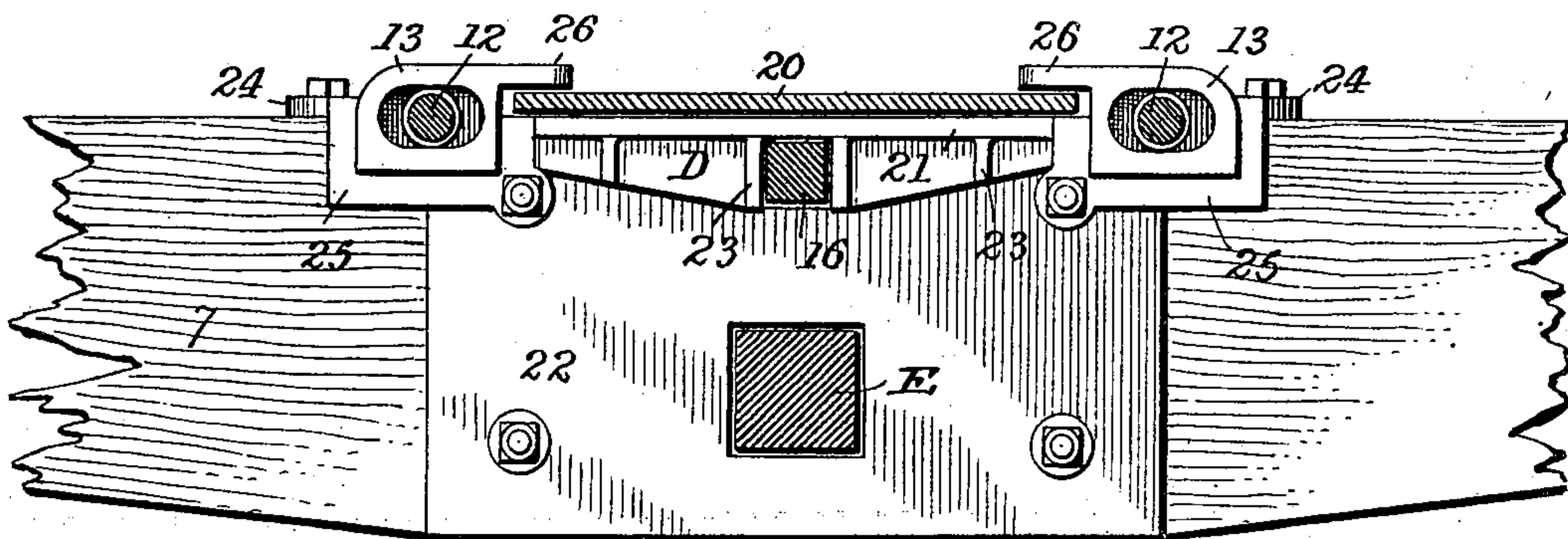
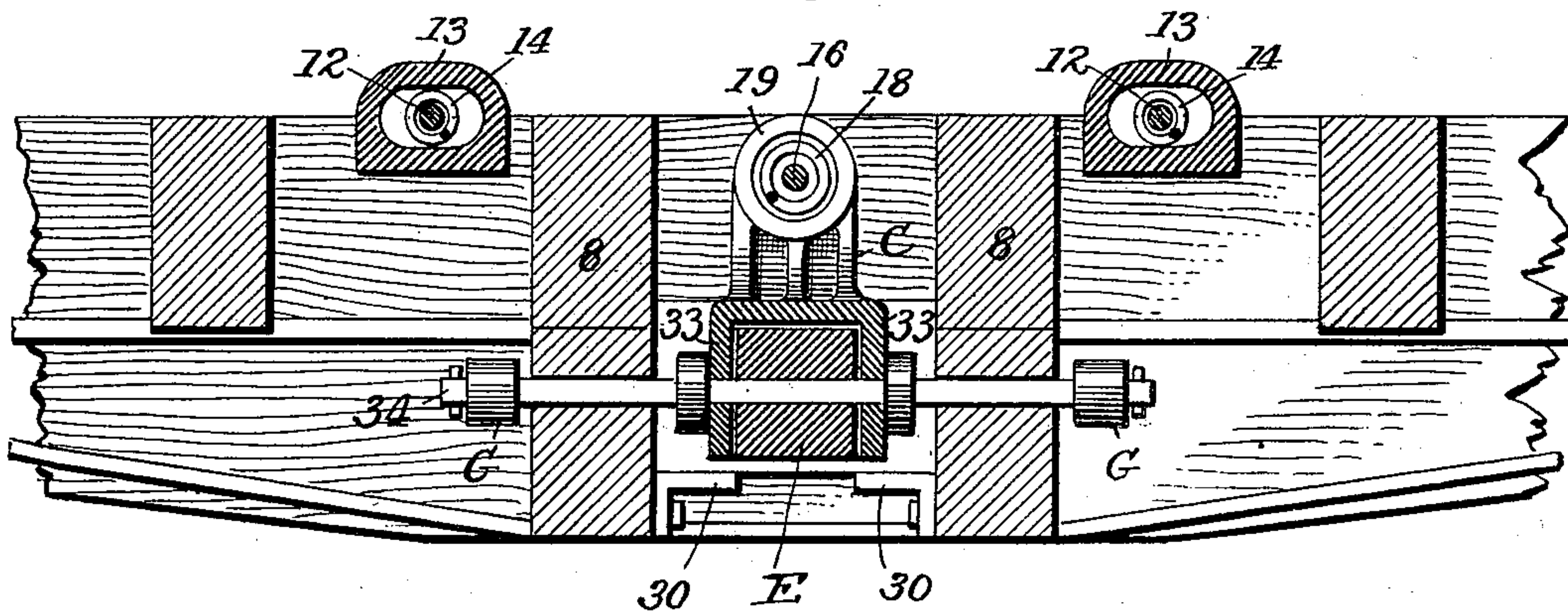


Fig. 5.



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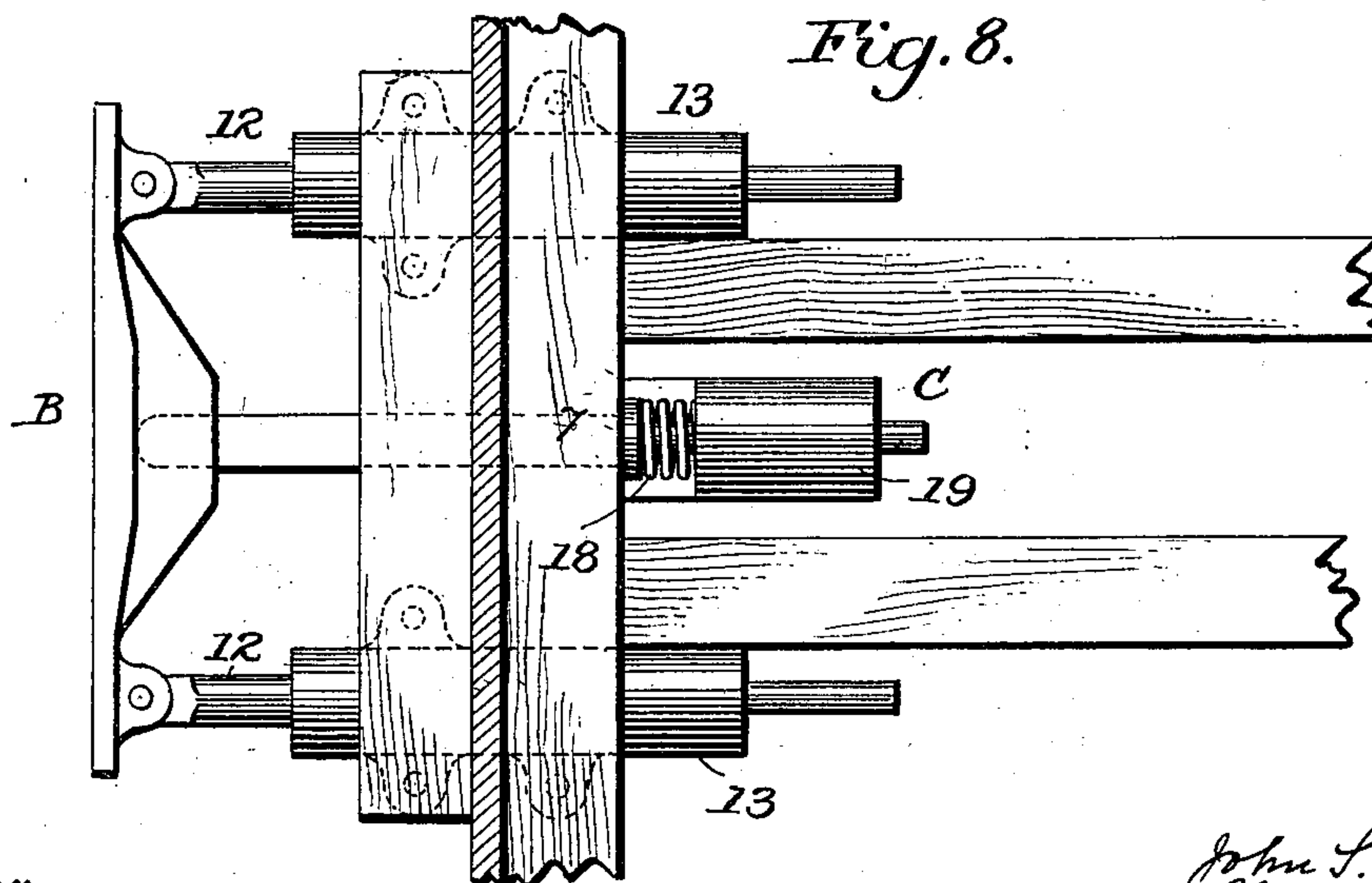
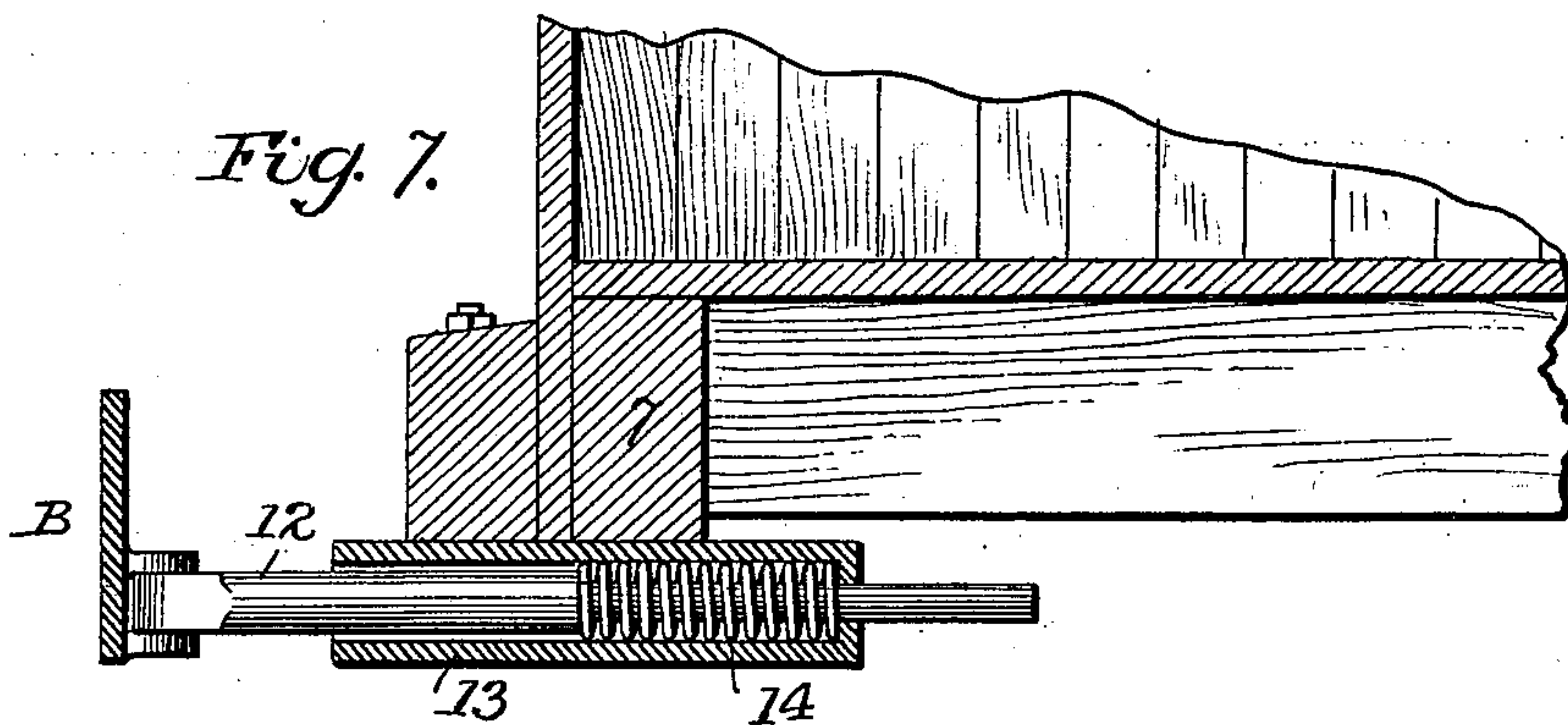
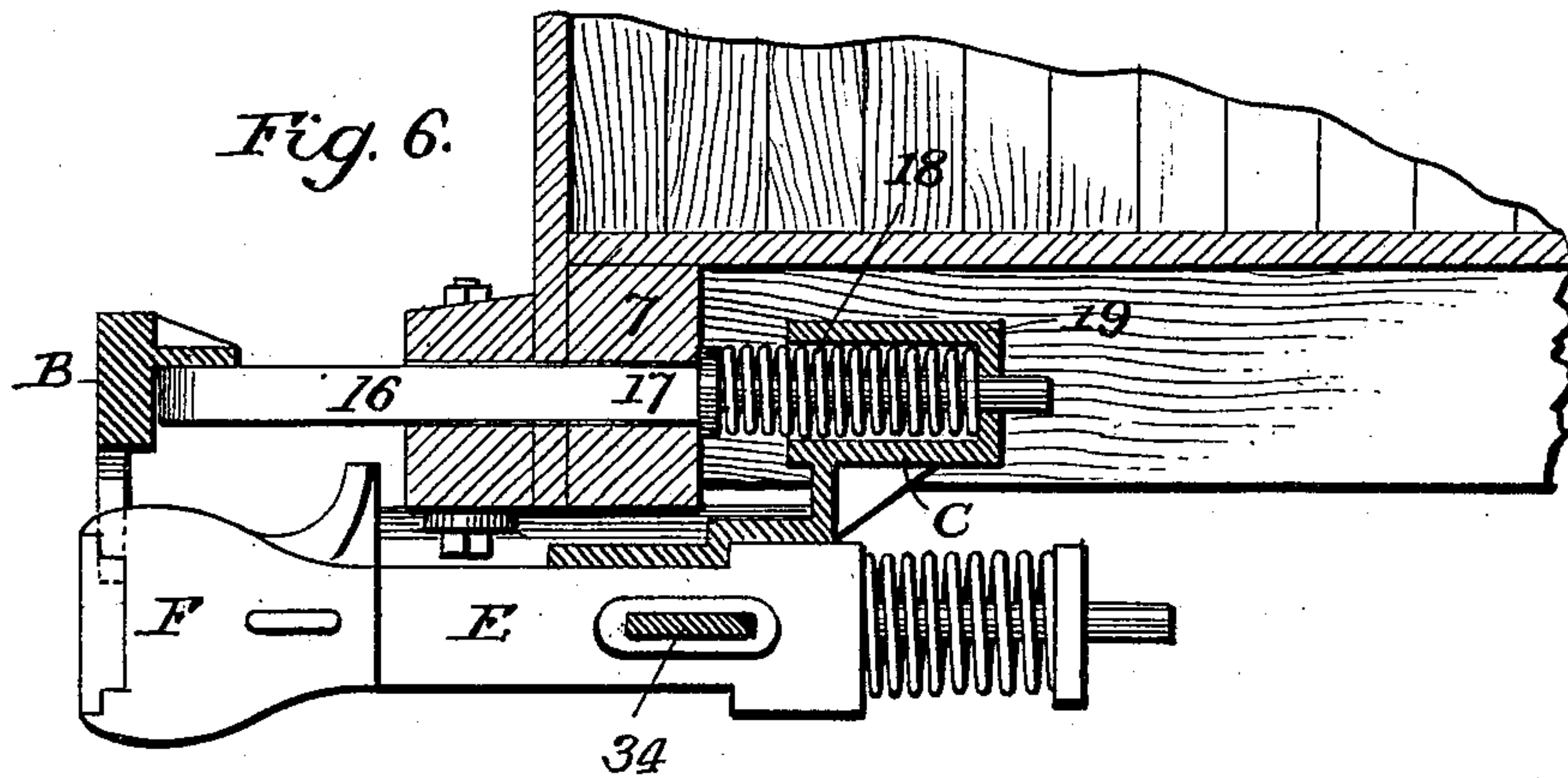
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4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

CHARLES WILLIAM COLLER AND JOHN S. NAERY, OF LAFAYETTE, INDIANA.

PLATFORM FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 627,905, dated June 27, 1899.

Application filed June 28, 1898, Serial No. 684,647. (No model.)

To all whom it may concern:

Be it known that we, CHARLES WILLIAM COLLER and JOHN S. NAERY, citizens of the United States, residing at Lafayette, in the county of Tippecanoe and State of Indiana, have invented certain new and useful Improvements in Platforms for Railway-Cars, of which the following is a specification.

Our invention relates to railway-cars; and it consists of certain detailed features of construction connected with the frame and buffers and draw-bars and of parts thereof, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of part of a tender, illustrating our improvements; Fig. 2, a longitudinal section on the line 2, Fig. 3; Fig. 3, a plan; Fig. 4, a transverse section on the line 4 4, Fig. 3; Fig. 5, a transverse section on the line 5 5, Fig. 3. Figs. 6 and 7 are longitudinal sections illustrating a modification; Fig. 8, a plan of the modified construction of Figs. 6 and 7.

The frame A may be the frame of a passenger or other car, or, as shown in Figs. 1 to 5, the frame of a tender, provided with longitudinal sills and cross-beams of wood or metal, all suitably arranged and connected together and mounted upon trucks, as usual.

At one end, in the case of a tender, as shown, or at both ends in other car structures, are mounted the buffer and draft mechanism, the latter provided with any suitable form of coupler-head.

The buffer face-plate B is arranged at a suitable distance from the end or buffer-beam 7 and has at or adjacent to each end ears 9, to which are pivoted bars 12 12, each of which extends into a spring-box 13, containing a spring 14, against which bears a plate 15, having its bearing upon the shoulder of the bar 12 at a point where the latter is reduced in thickness, the end of the reduced portion extending through an opening in the end of the box 13. Against the center of the buffer face-plate bears the rounded end of a center bar 16, carrying a washer 17, having its bearing upon a spring 18, which bears against the end of a spring-box 19, formed in and constituting a part of a bracket C, connected with the draw-bar, as described hereinafter.

From the inner face of the buffer face-plate

B extends a platform-plate or foot-plate 20, which slides upon a friction-plate 21, constituting the upper member of a bracket D, 55 bolted to the face of the buffer-beam 7, which may be faced with a metallic plate 22. The bracket D is cut away at the center for the passage of the bar 16 and is provided with strengthening-webs 23, as shown. 60

Each spring-box 13 has an interior pocket wider than it is high to allow of a lateral play of the rod 12 and is provided with side lugs 24 for the passage of bolts, by which the box is bolted to the buffer-beam, and also has a 65 vertical flange 25 at the forward end, extending downward over the face of the buffer-beam and also perforated for the passage of the securing-bolts. At the inner edge of each box 13 a flange 26 extends inward and above 70 the foot-plate 20, serving to keep the other down upon the friction-plate 21.

While we have described the spring-boxes 13 as separate structures, they may constitute parts of one cast-metal structure or may 75 be formed in one piece with the bracket D. This we do not here claim, as it will form the subject of a separate application for Letters Patent.

The draw-bar E is provided with the coupling-head F and extends centrally through or is suspended below the buffer-beam 7 and carries at the rear end a follower-plate 28, which, together with a bearing-plate 29, rests upon angle-iron guides 30, bolted to the faces of 85 the opposite draft-sills 8 8, as shown. Between these draft-sills is secured a butting-block 31, against which the plate 29 bears, and between the plates 28 and 29 intervenes a spring or springs 32, (two springs being 90 shown,) the plates 28 and 29 being provided with bosses for entering the ends and centering said springs.

The bracket C, which rests upon the upper face of the draw-bar E, also straddles the latter, being provided with side plates or flanges 95 33, which extend downward past the sides of the draw-bar and are slotted for the passage of a transverse key 34, which also passes through the draw-bar, through slots in the sills 8 8, and through eyes α in the ends of 100 two draft rods or links G G, arranged between the sides of the bracket C and the inner faces of the sills 8 8. The eyes at the

opposite ends of the draft-rods receive a similar key 34^a, which in the case of a freight or passenger car or platform-car is arranged as before described; but in the case of a tender
 5 (where there is no draft-bar at one end) the key 34 passes between lips 35 35 upon a follower-plate 28^a, which bears against the spring 32^a, confined between the follower-plate and a bearing-plate 29^a, the said plates resting
 10 upon guides 30 like the plates 28 and 29.

The springs 32^a serve to throw outward the buffer bar or bars and as yielding bearings for resisting any inward thrust upon the said bars, and when any draft is exerted upon the
 15 buffer-bar at either end of the car the follower-plate at the opposite end will be drawn against its spring 32, so as to gradually resist the said draft. The slots *x* in the ends of the draft-rods are longer than the width
 20 of the keys 34 34^a, so that either draft-bar E may be thrust inward without any compression or strain from the draft-rods.

When the buffer face-plate B is thrust inward on bringing opposite cars together, the
 25 springs 14 will be compressed and tend to gradually reduce the inward movement, as will also the spring 18, which resists the inward movement of the center bar 16, and as the spring 18 has a bearing upon the bracket
 30 C, connected with the draft-bar E, the inward movement of the buffer face-plate will tend to carry with it the draft-bar to a certain extent and compress the adjacent spring 32, so that
 35 all of the springs 14, 18, and 32 act to resist the inward movement of the buffer face-plate. Further, when any draft is exerted upon the draw-bar E, pulling it outward, the bracket C is carried forward, compressing the spring
 40 18 and exerting a pressure upon the center bar 16, which tends to thrust out the buffer face-plate and maintain it in contact with that of the opposing car. It will be seen that this action is specially effective in the case of vestibule-cars where the vestibule face-plates
 45 are connected with the buffer face-plate B, tending to maintain them in contact. The pivoting of the buffer face-plate to the rods 12 permits the said face-plate to assume any necessary angle to the buffer-beam 7 in rounding
 50 curves, &c., while the lateral play of the rods 12 facilitates this adjustment, as well as permits slight side movements, which are in no way interfered with by the center rods 16 inasmuch as the ends of the latter bear upon
 55 but are not connected to the face-plate, which can move laterally thereon.

In the construction shown in Figs. 6, 7, and 8 the parts are somewhat differently constructed and arranged from those above described. In these figures the center bar 16
 60 extends through the dead-wood and front cross-beam 7 upon a plane higher than the side rods 12, which pass through spring-boxes 13, bolted to the under faces of the cross-beam
 65 and dead-wood, as shown. In this case also

the bracket C is somewhat differently constructed, but straddles and is connected with the draw-bar E by the cross-key 34 and aids in supporting the latter. It will, however,
 be obvious that the above and other minor
 70 changes may in many instances be made in applying our invention to various styles of cars without departing from the main features of said invention.

Without limiting ourselves to the precise
 75 construction and arrangement of parts shown, we claim as our invention—

1. The combination of a car-frame, a buffer face-plate, a foot-plate extending therefrom, spring-boxes provided with flanges for over-
 80 lapping the foot-plate and containing springs, and rods bearing upon said springs and connected with the face-plate, substantially as set forth.

2. The combination of the car-frame, buffer
 85 face-plate, side and center rods, and springs bearing thereon, a bracket D recessed for the passage of the center rod and provided with a friction-plate, and a foot-plate extending
 90 from the face-plate and bearing on the friction-plate, substantially as set forth.

3. The combination of a car-frame, buffer face-plate, draw-bar, bracket fixedly connected with the draw-bar, a rod having its bearing
 95 upon the face-plate, but disconnected therefrom to permit the plate to slide thereon, a spring-box formed in said bracket concentric with said rod, and a spring interposed between the bearing on the rod and the bracket, substantially as described. 100

4. The combination with a car-frame, of a face-plate, draw-bar, bracket, intermediate rod and spring, the said bracket straddling
 105 the draw-bar, and a transverse key passing through and connecting the bracket and draw-bar, substantially as set forth.

5. The combination with the draw-bar, of a bracket C straddling the draw-bar secured thereto and provided with a spring pocket or
 110 box, substantially as described.

6. The combination with the draw-bar, springs 32, 32, bracket C straddling the draw-bar, links G, G, and cross-keys connecting the
 115 draw-bar, bracket and links, substantially as set forth.

7. The combination of the car-frame, buffer face-plate, draw-bar, bracket and intermediate rod and spring, keys connecting the draw-bar and bracket, spring 32 having bearings
 120 at opposite ends of the car and links having elongated eyes to receive the cross-keys, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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JNO. S. NAERY.

Witnesses:

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