

(No Model.)

2 Sheets—Sheet 1.

F. G. SUSEMIHL & A. TORREY.
CAR SIDE BEARING.

No. 545,256.

Patented Aug. 27, 1895.

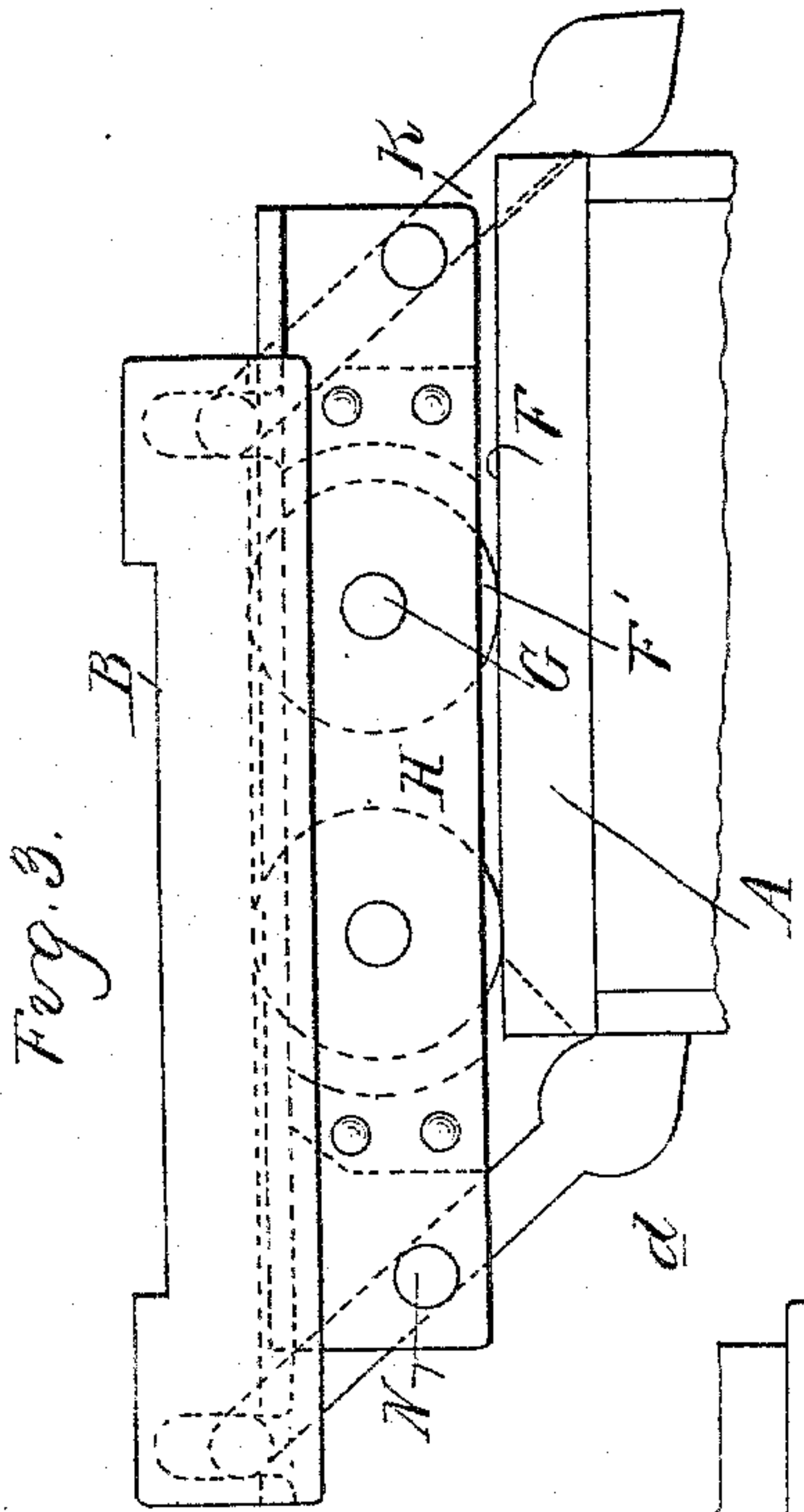


Fig. 3.

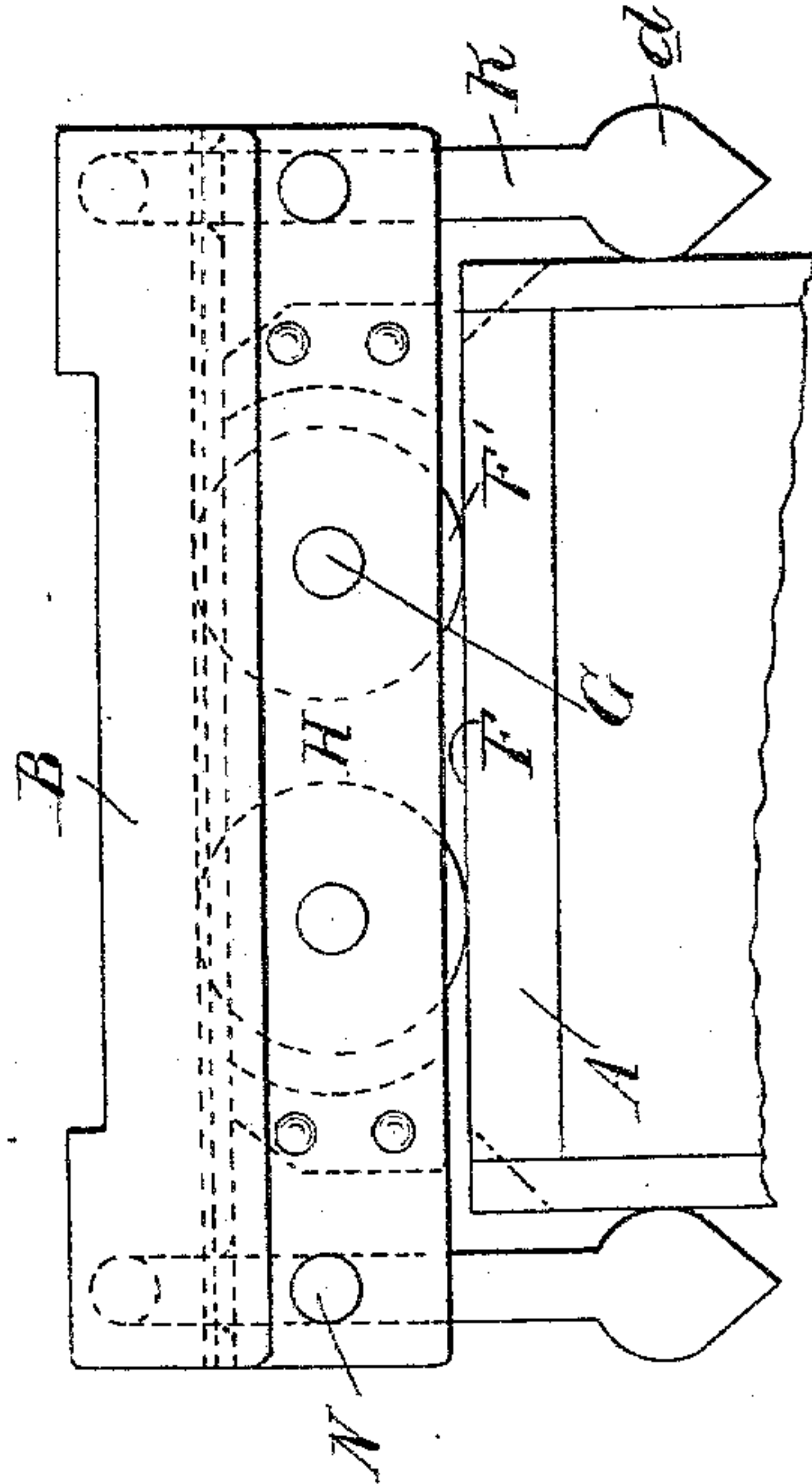


Fig. 4.

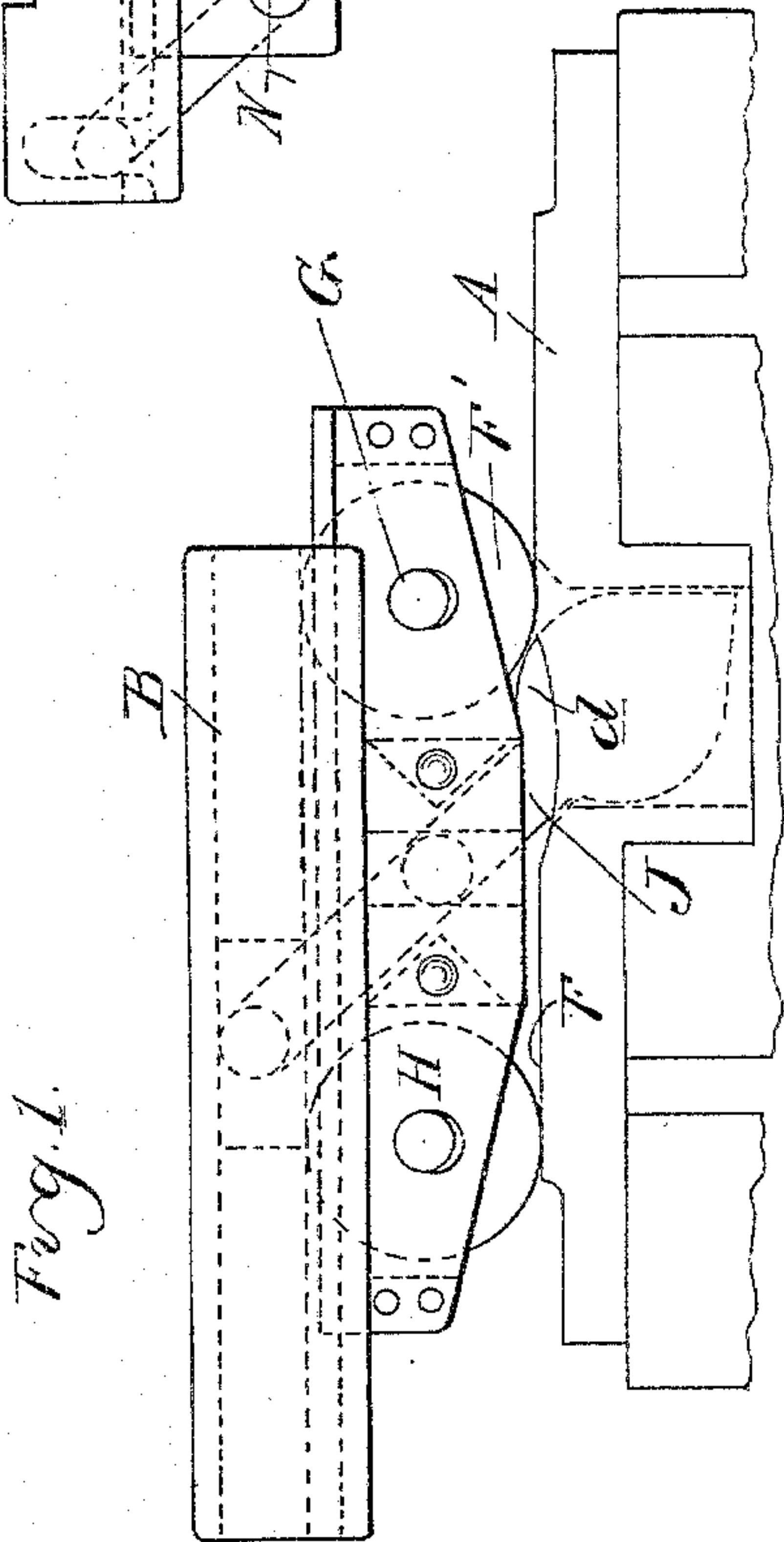
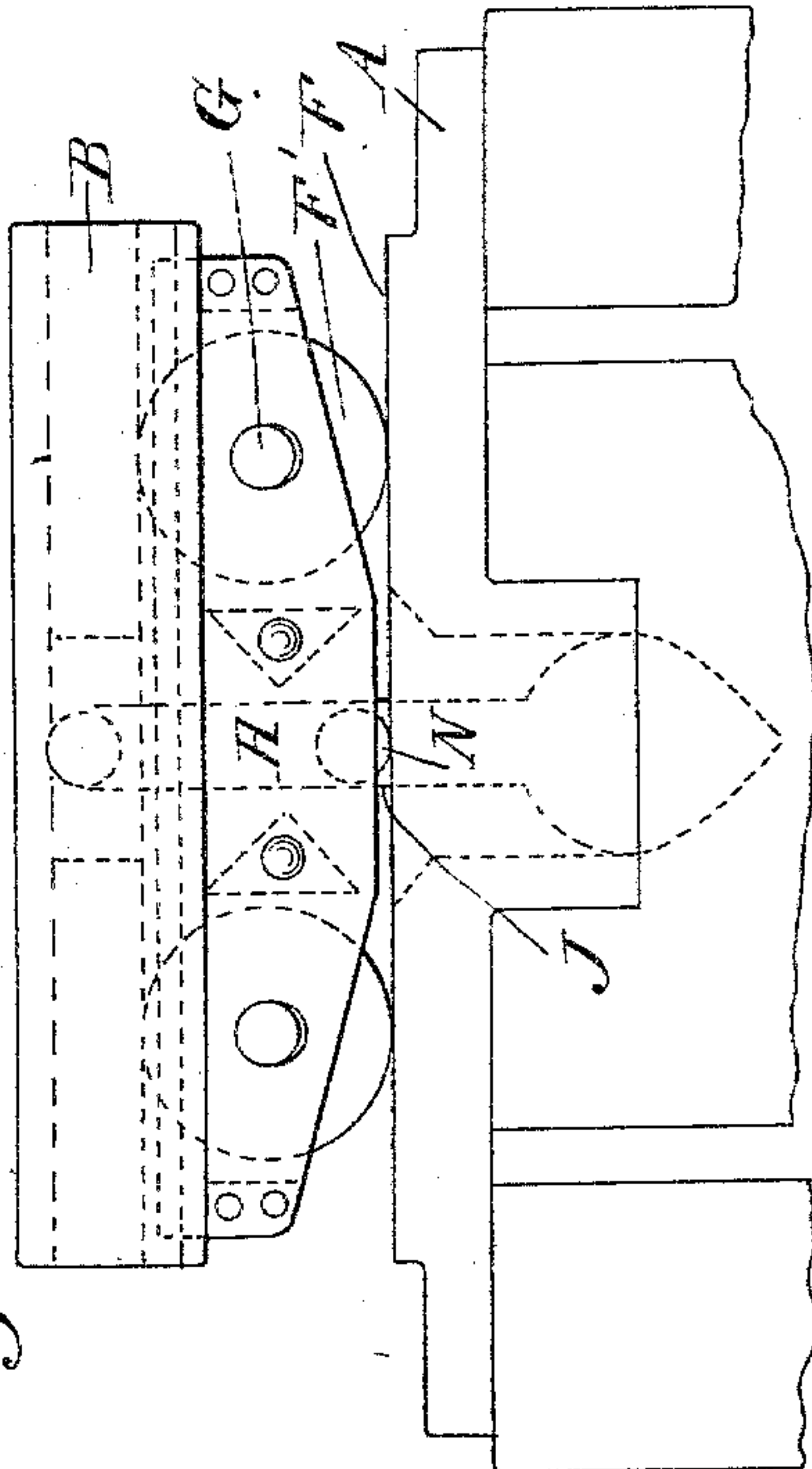


Fig. 1.



Witnesses
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Fig. 5.

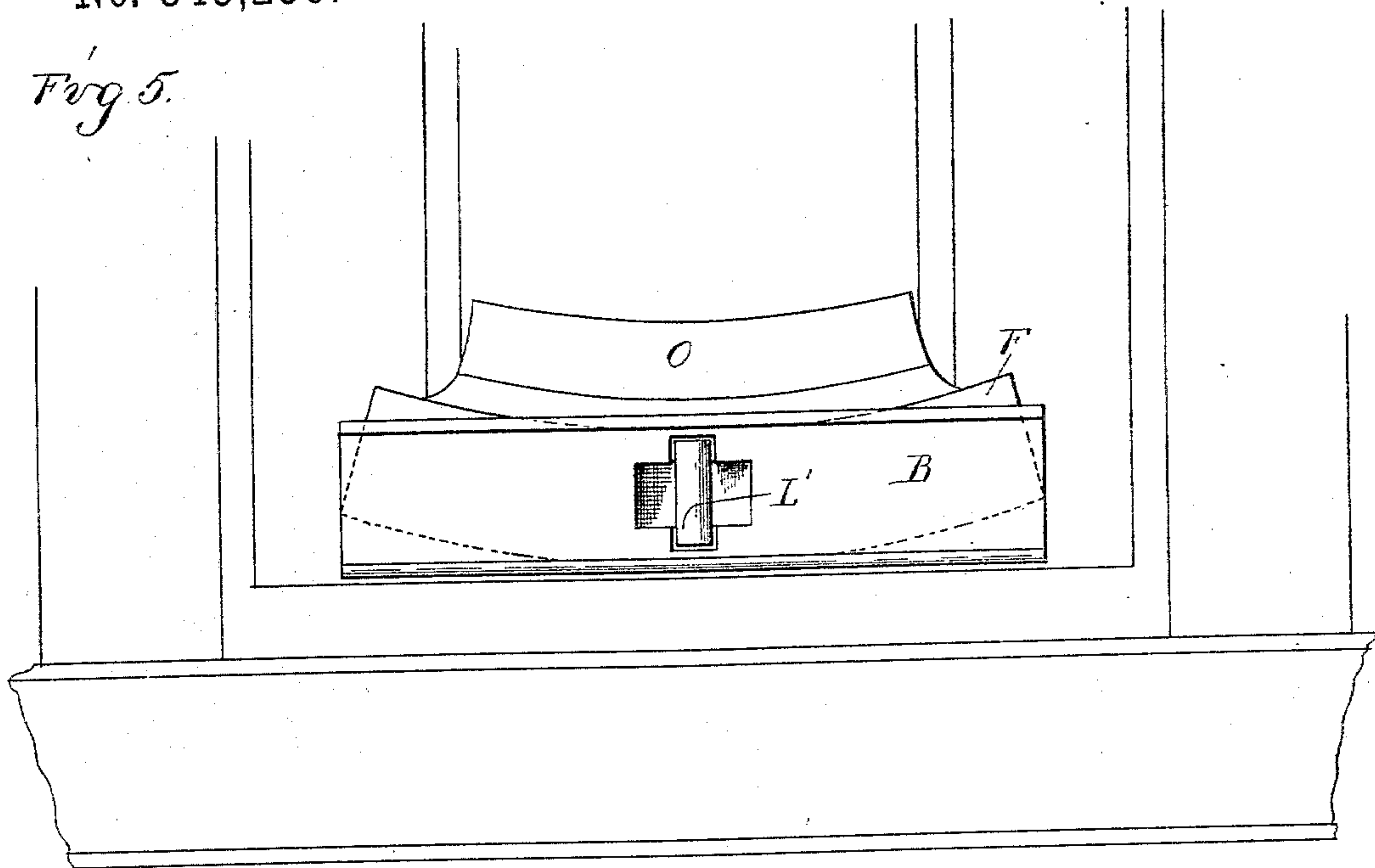


Fig. 6.

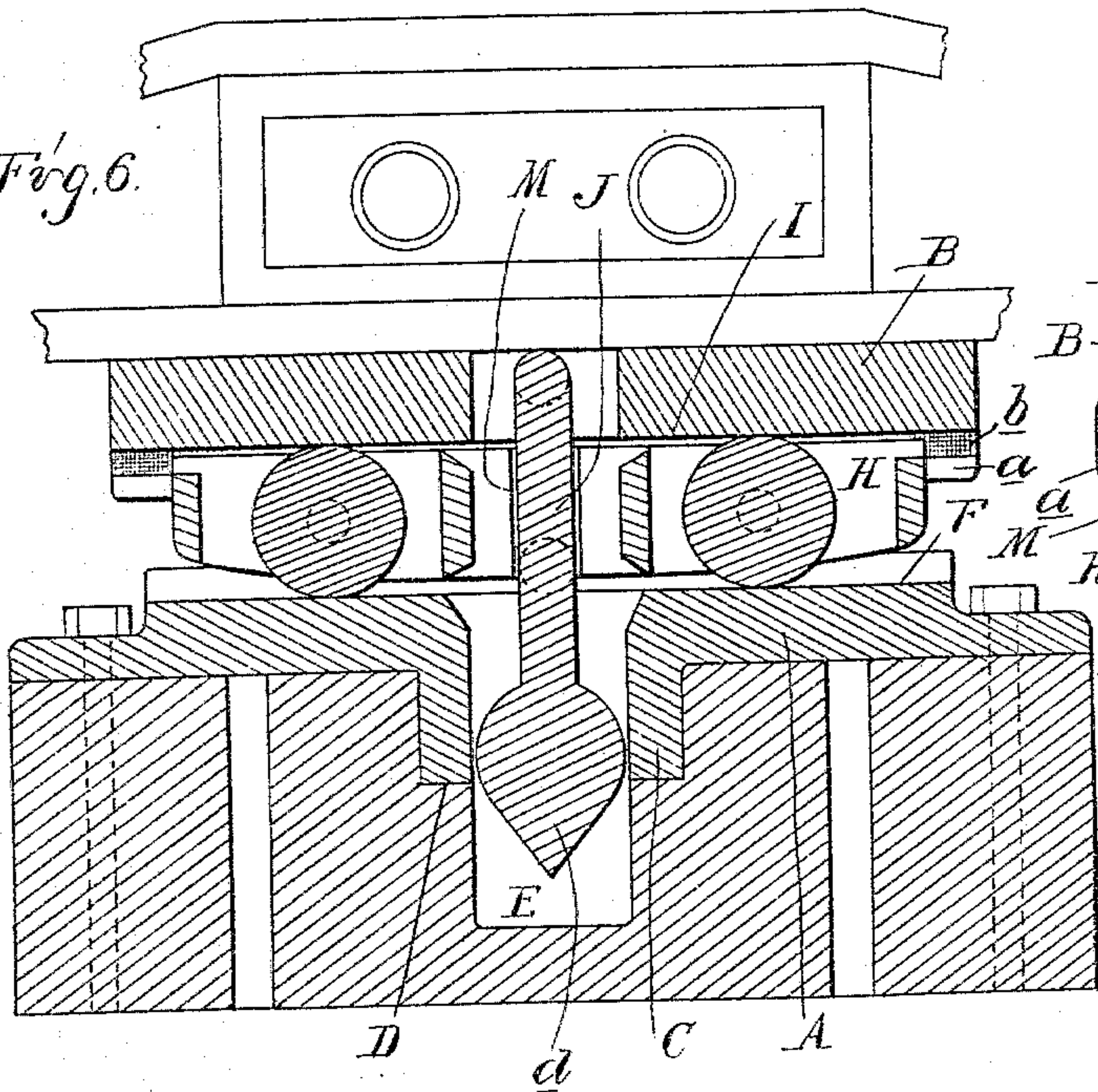
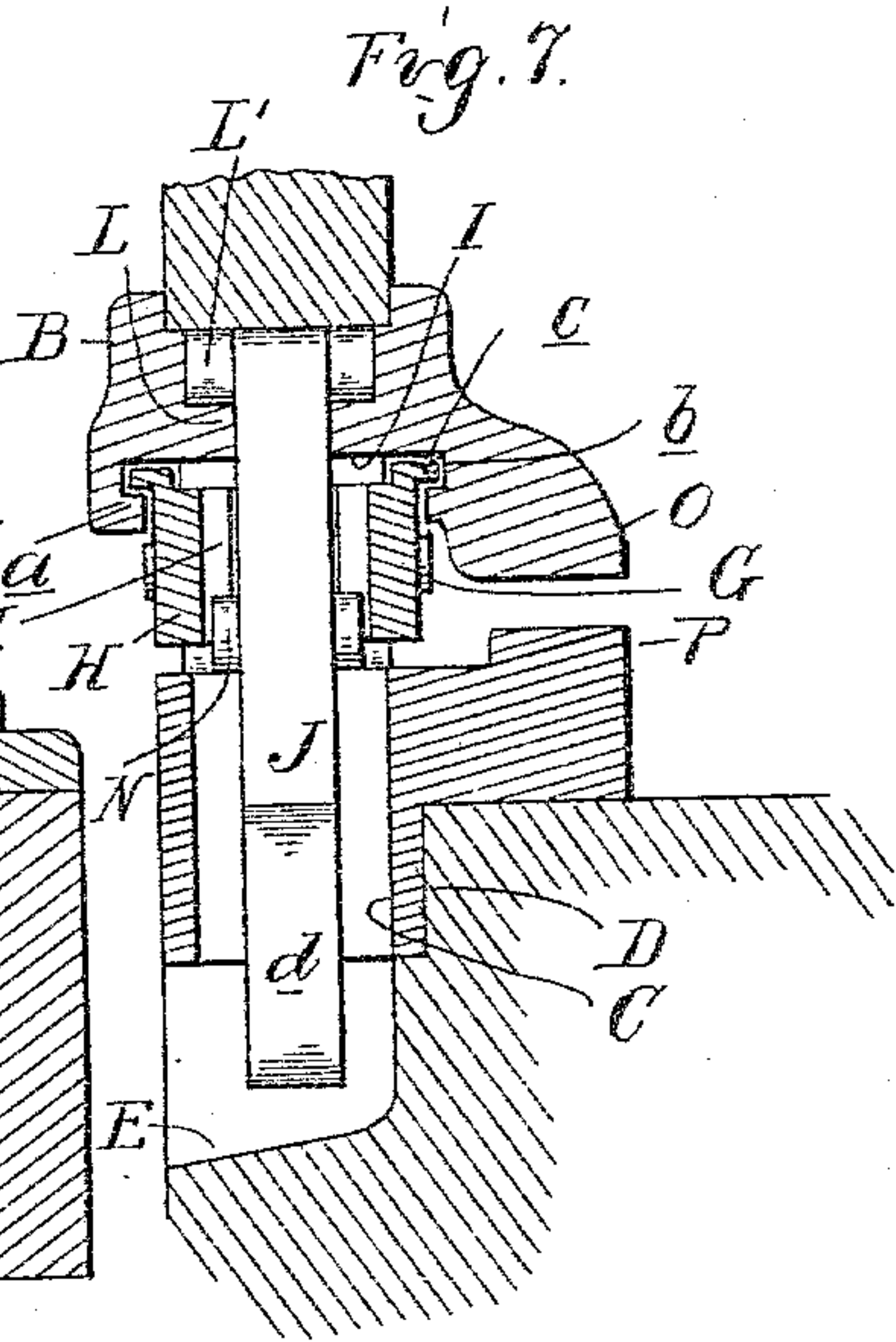


Fig. 7.



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UNITED STATES PATENT OFFICE.

FRANCIS G. SUSEMIHL AND AUGUSTUS TORREY, OF DETROIT, MICHIGAN.

CAR SIDE BEARING.

SPECIFICATION forming part of Letters Patent No. 545,256, dated August 27, 1895.

Application filed April 11, 1895. Serial No. 545,372. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS G. SUSEMIHL and AUGUSTUS TORREY, citizens of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Car Side Bearings, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention consists in the construction of a side bearing for cars; and it consists in the construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

15 This is intended to be an improvement upon the prior patent of F. G. Susemihl, No. 311,618, of February 3, 1885.

20 In the drawings, Figures 1 and 2 are front elevations of the device, showing the parts in different positions. Figs. 3 and 4 are similar elevations of a slightly-modified form of our invention. Fig. 5 is a top plan view of our improved bearing. Fig. 6 is a vertical longitudinal section, and Fig. 7 is a vertical central cross section thereof.

25 The object of our invention is to provide a roller-bearing between the car-body and truck which shall reduce the friction between those parts as a car moves around a curve in the track and in which the rollers will always be maintained in proper relation to the upper and lower plates, or car and bolster plates.

30 A is the bolster-plate, and B is the car-plate, these plates being secured by suitable means to the bolster and car, respectively, one above the other. The plate B is centrally apertured, and depending around the lower edge of the aperture is the flange C, fitting in a gain or recess D in the end of the bolster. This recess 40 has an end opening E, so that any dust or cinders falling through the aperture in the plate may drop out upon the ground.

45 F is a segmental flat track or runway for the rollers F', which have end trunnions G, journaled in the sides of the carriage H. This carriage is curved longitudinally to conform to the shape of the track F. Its upper edges run within the flanges a on the lower edges of the plate B. These flanges have inwardly-cut 50 grooves b, in which the guide-flanges c on the top of the carriage engage, and thus prevent the dropping of the carriage or disarrangement

of the parts when the car-body is lifted from the truck, as in making repairs. On the under face of the plate B, between the flanges a, is a 55 flat segmental circular track or bearing I, which rests on the top of the rollers, forming an opposite runway for rollers, as mentioned for lower plate. It becomes necessary with such a construction of bearing comprising a 60 carriage between the bolster and body to have some means to maintain the rollers always in the same relation to the tracks on which they run, regardless of whether the truck bears on the rollers constantly or not. This we have 65 shown accomplished by means of a single coupling-bar J in Figs. 1, 2, 5, 6, and 7 and by two of such bars K in Figs. 3 and 4.

70 In the single-bar construction we have shown the upper plate provided with an aperture to receive the bar, and on the sides of the aperture are the saddle-bearings L, in which the ends of the trunnion L' on the top of the bar rest. The carriage is provided with the vertical guides M on the inner face of its sides, 75 in which the circular lugs or bosses N engage and are adapted to slide vertically in the operation of the device. The lower end of the bar engages in the central aperture in the bolster-plate and is preferably formed with an 80 enlarged head d, having curved sides. In use, as the car goes around a curve the upper plate moves on the rollers, and the carriage moves in the same direction with one-half the speed, the coupling-bar maintaining the 85 plates and carriage in proper relation to each other at all times. The different positions of the parts are illustrated in Figs. 1 and 2, and also in the modification shown in Figs. 3 and 4.

90 In the construction embodying the double coupling-bars the bars depend at the ends of the car-plate, and their lower ends bear against the sides of the bolster. On its inner edge the car-plate is provided with the emergency-flange O, arranged above the face P on the 95 bolster-plate, so that in case the carriage is broken these faces will form a bearing between the car and truck.

100 From the description heretofore given it is evident that when the bolster-plate is in its normal middle position the rollers will be held in their middle position, as shown in Fig. 6. Just in proportion as the truck turns at an angle to the car in going around a curve the

rollers will travel to one end under the top plate, resting on the bolster-plate. It is also evident that this coupling-bar always controls the relation of the rollers to the plate and maintains them in proper position, regardless of whether the car-plate or bolster-plate bears against the rollers or not.

Although the rollers are normally moved by the contacting plates, yet the coupling-bar is needed to move the carriage or rollers in case the plates should separate or the rollers should tend to become displaced from any other cause, such as gradual displacement.

What we claim as our invention is—

1. In a side bearing for cars, the combination of the car plate, the bolster plate, a roller carriage between said plates, flanges on the carriage engaging grooves in the car plate, for the purpose described, and means for controlling the movement of the carriage on the car plate, substantially as described.

2. In a side bearing for cars, the combination of the car plate, the bolster plate, a roller carriage between, flanges on the carriage engaging grooves in the car plate for the purpose described, and a coupling bar suspended from the car plate acting to control the movement of the carriage, substantially as described.

3. In a side bearing for cars, the combination of the car plate, the bolster plate, the roller carriage between, and a coupling bar suspended from the car plate, passing through the carriage, and having its lower end engaging the bolster plate for the purpose described.

4. In a side bearing for cars, the combination of the apertured car plate, the apertured bolster plate, the intermediate roller carriage, a coupler having trunnions at the top, saddle bearings in the car plate in which the trunnions are supported, lugs on the side of the bar, vertical guides in the carriage with which said lugs engage, and the head as described engaging bearings on the bolster plate.

5. In a side bearing for cars, the combination of the car plate, the bolster plate, the roller carriage between said plates, and the emergency flanges O, P on said plates, as and for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANCIS G. SUSEMIHL.
AUGUSTUS TORREY.

Witnesses:

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