

(No Model.)

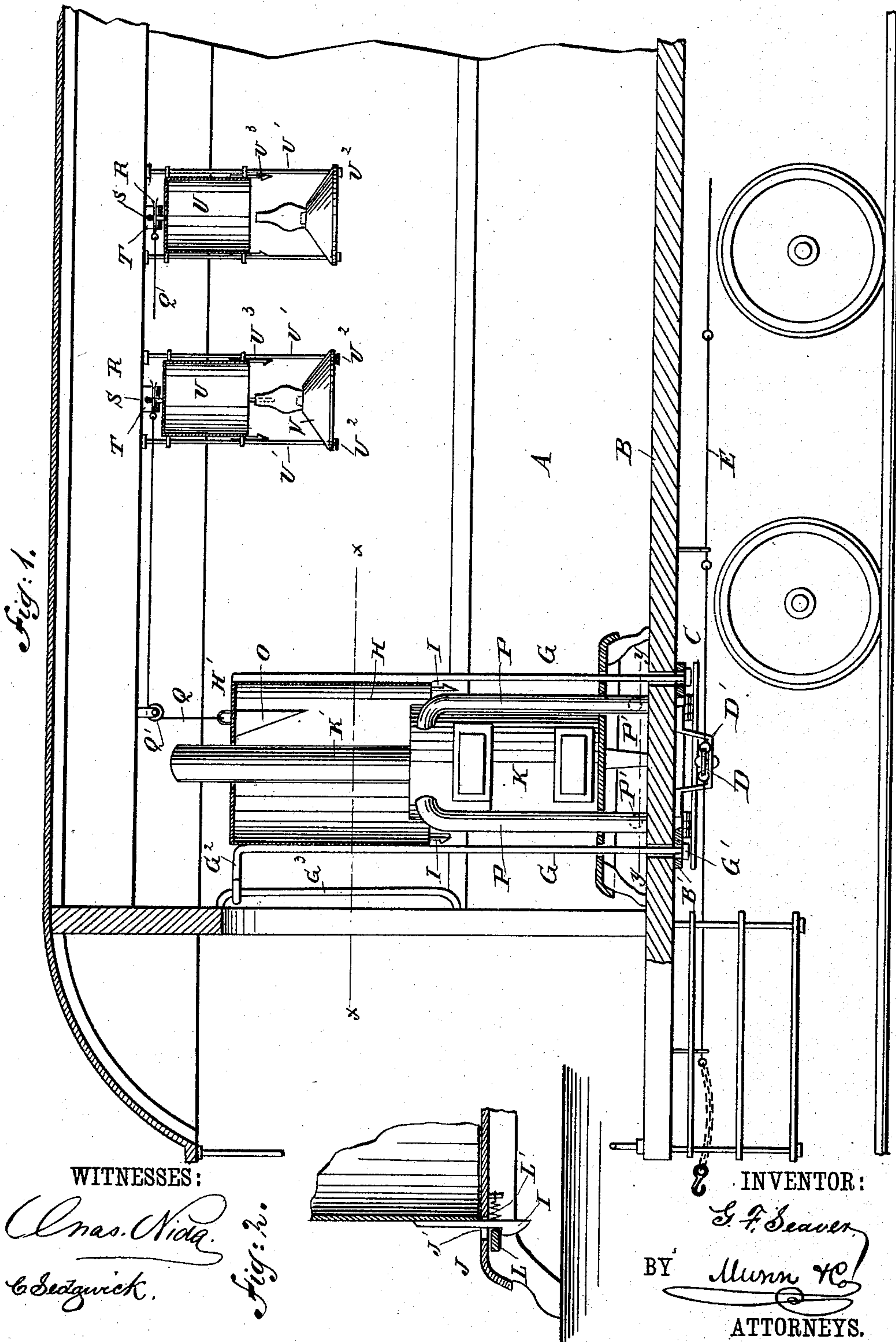
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G. F. SEAVER.

SAFETY ATTACHMENT FOR CAR HEATERS AND CAR LAMPS.

No. 388,590.

Patented Aug. 28, 1888.



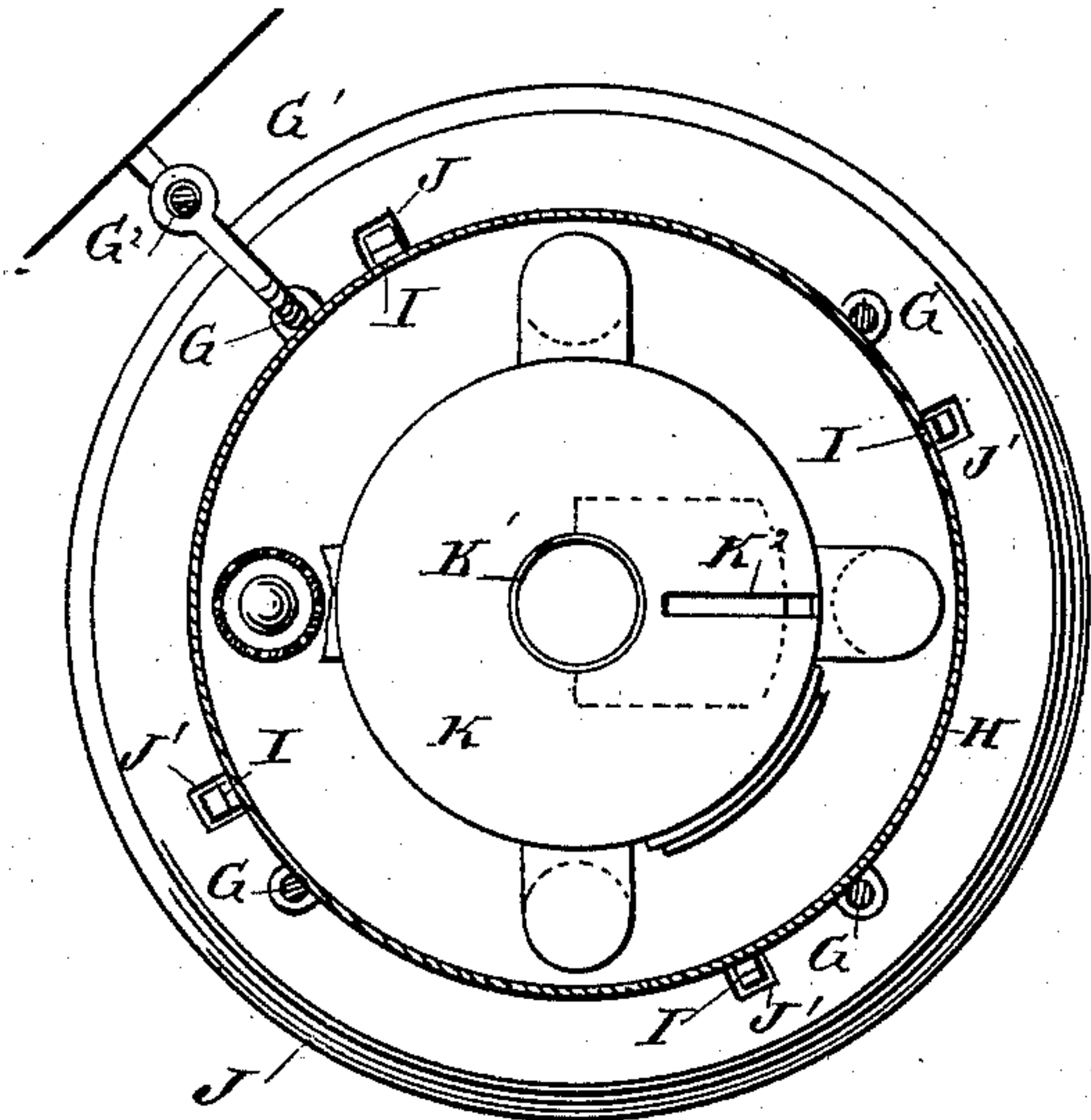
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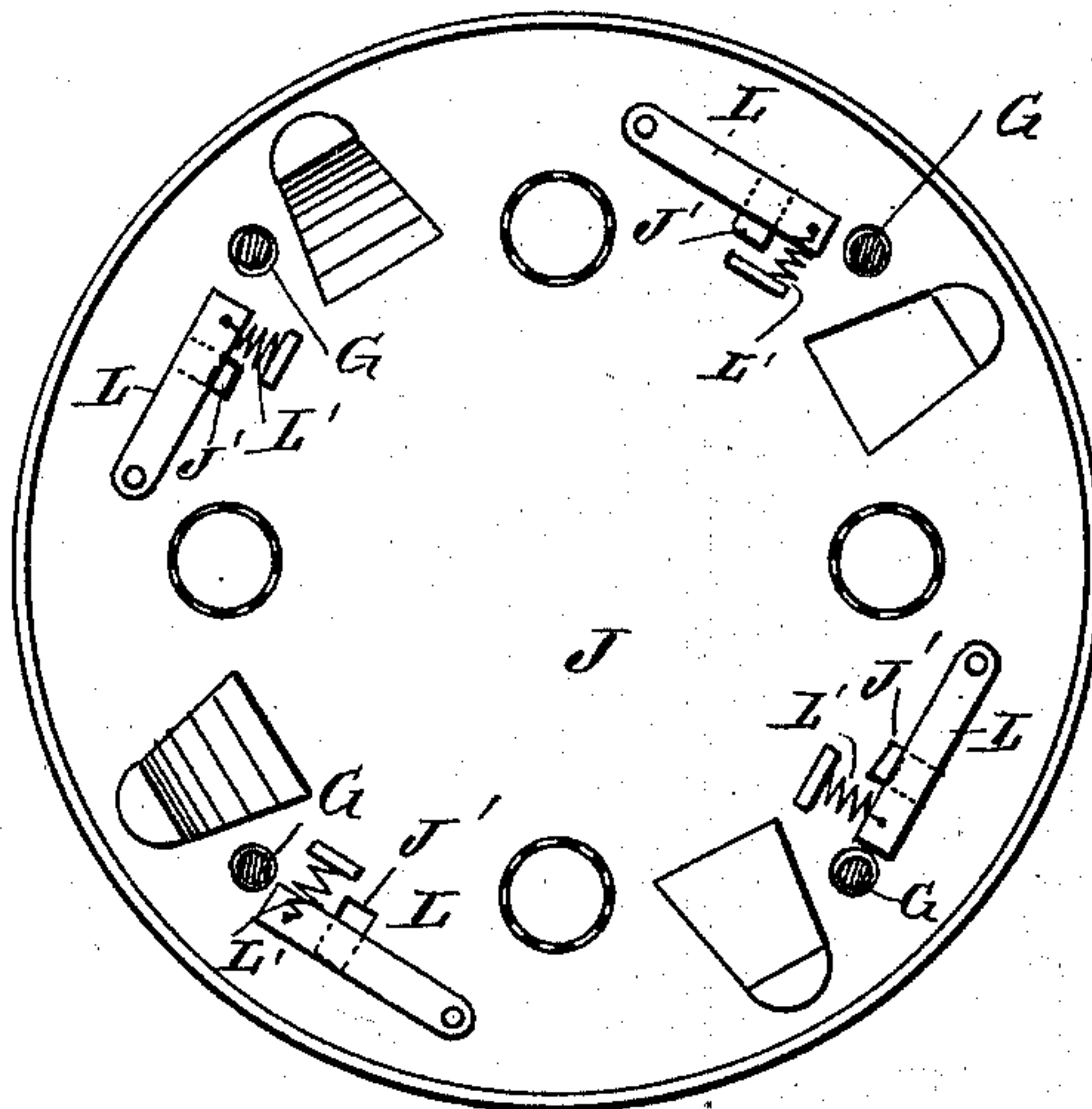
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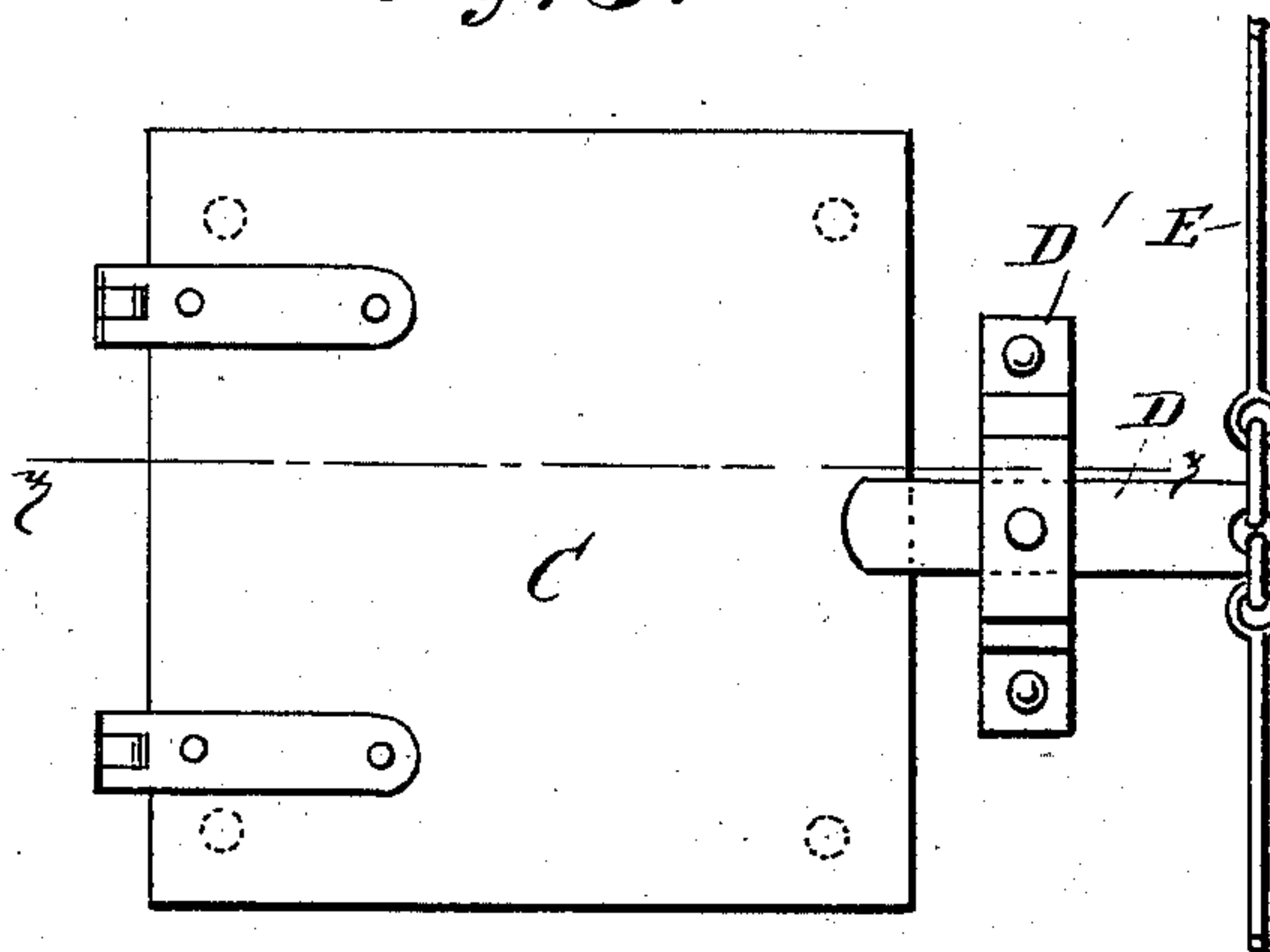
*Fig: 3.*



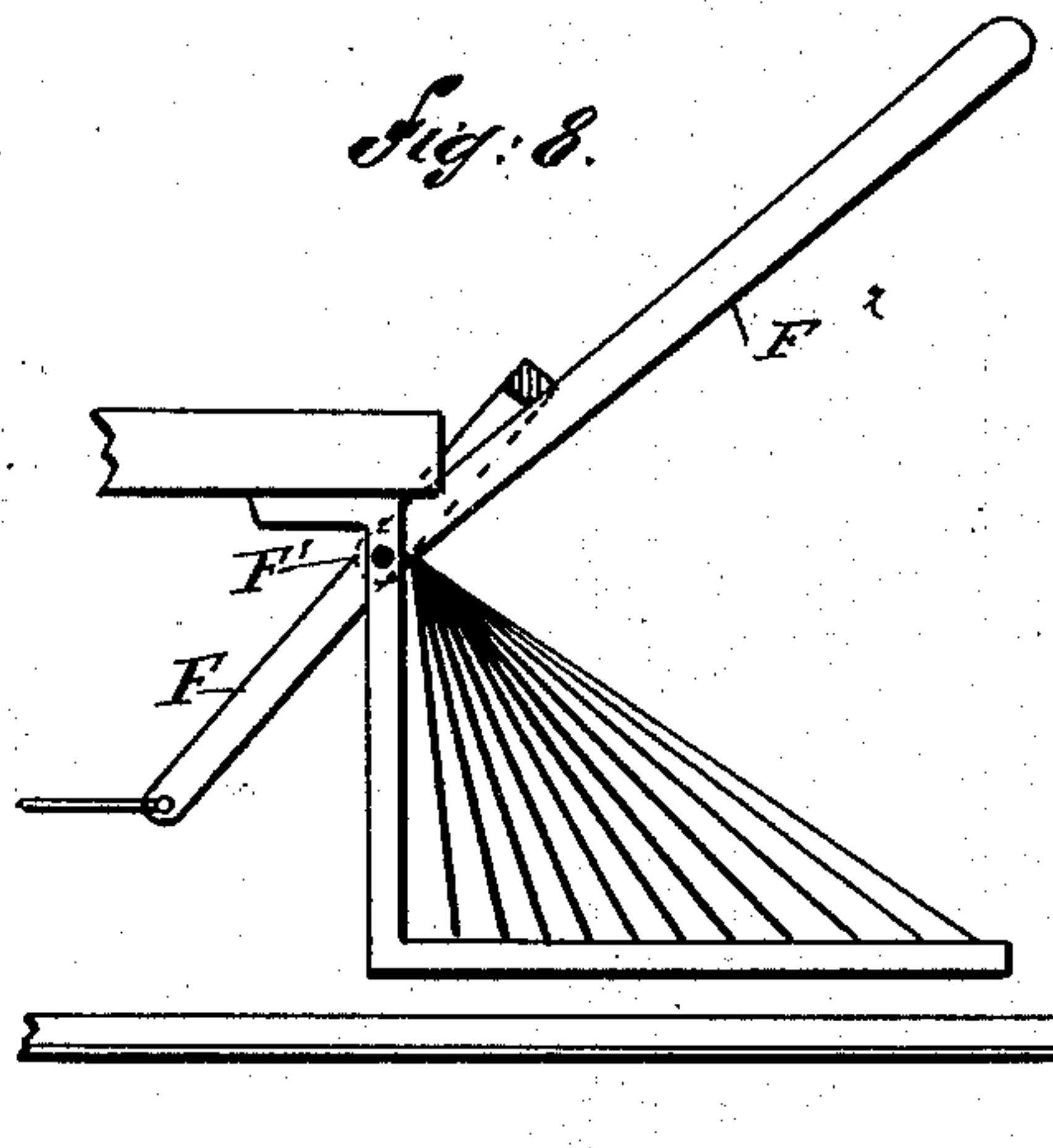
*Fig: 4.*



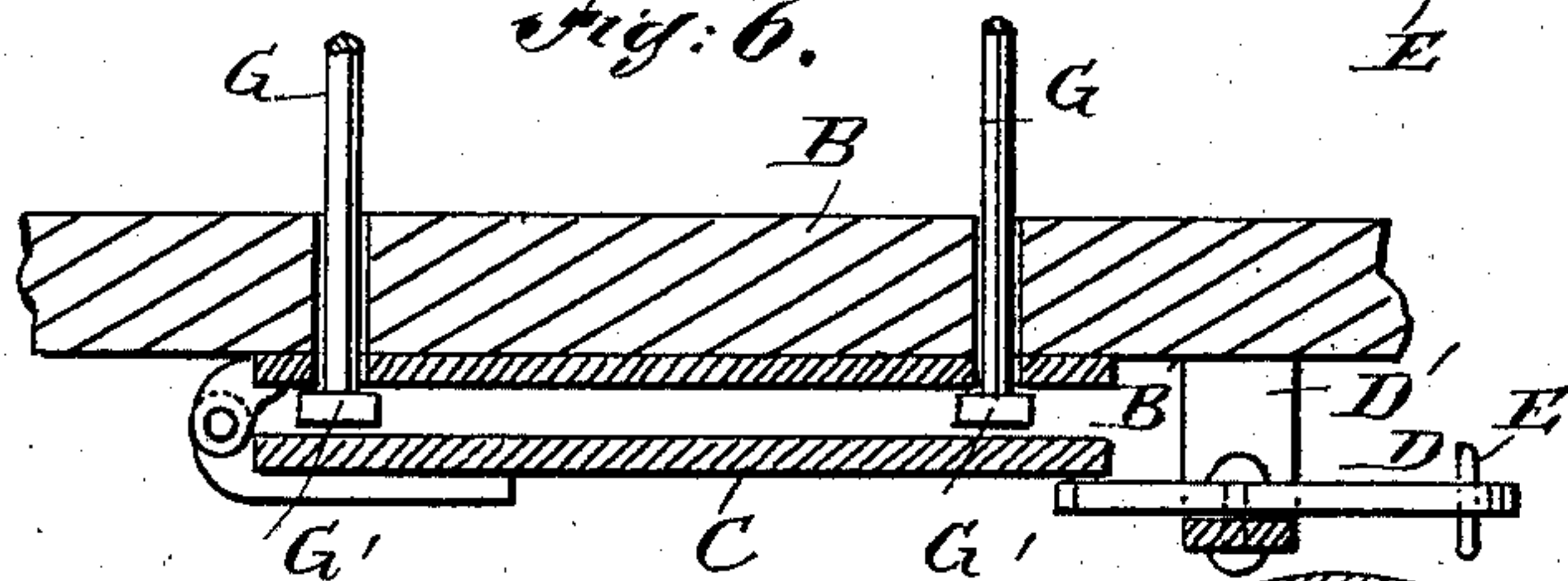
*Fig: 5.*



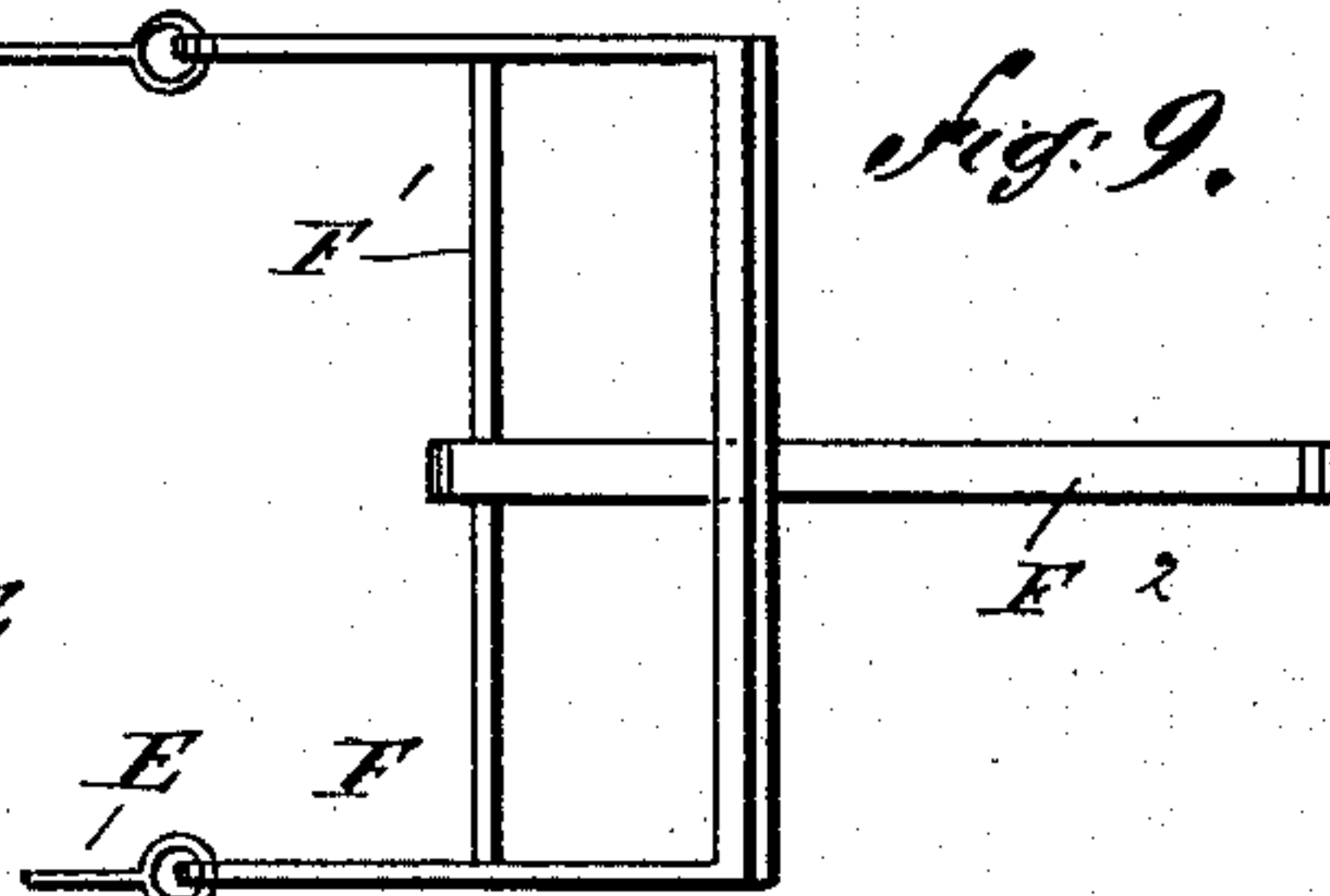
*Fig: 8.*



*Fig: 6.*



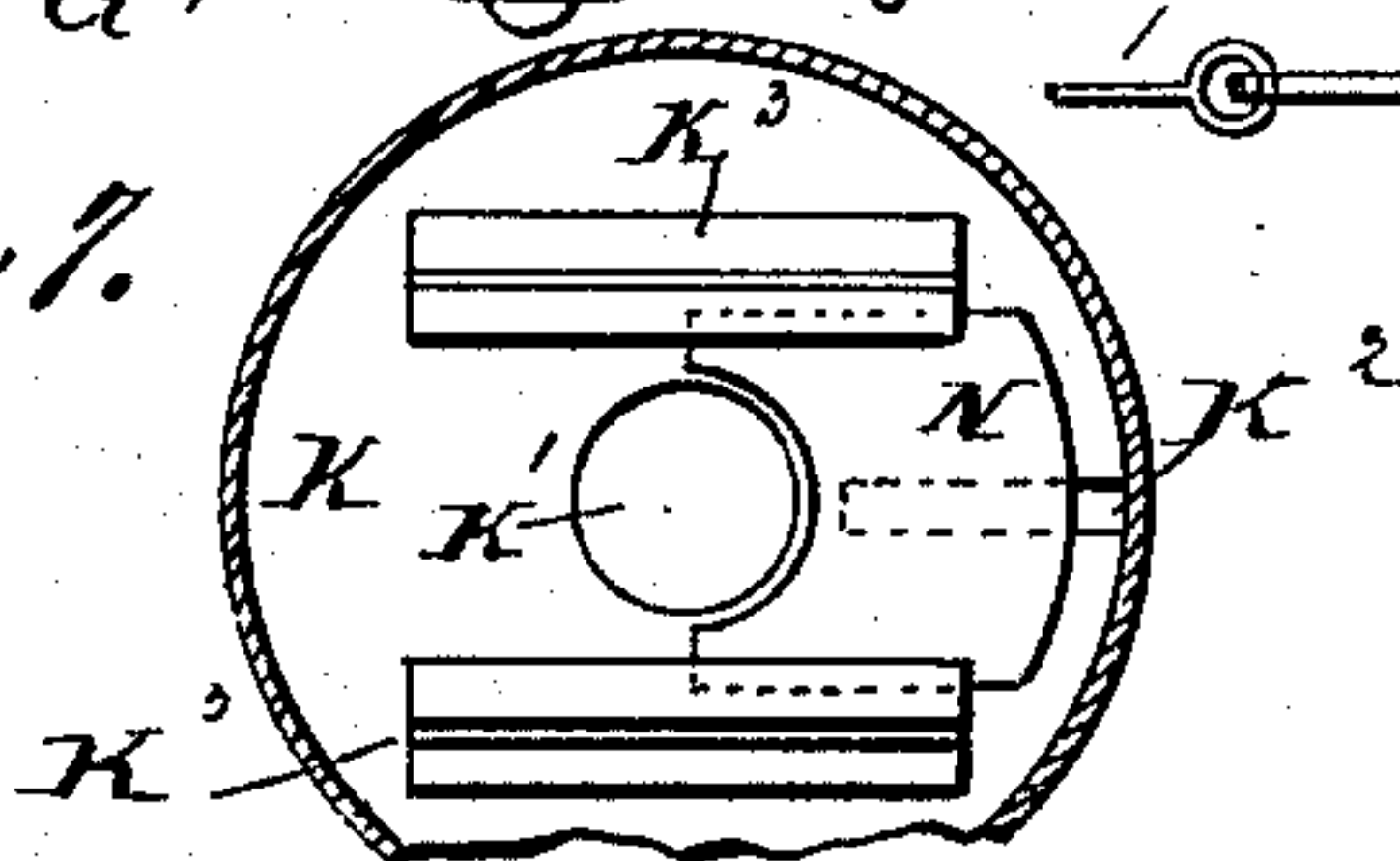
*Fig: 9.*



WITNESSES:

*Chas. Nida*  
*C. Sedgwick*

*Fig: 7.*



INVENTOR:

*G. F. Seaver*

BY

*Munn & Co*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

GEORGE FREEMAN SEAVER, OF DOVER, NEW HAMPSHIRE.

## SAFETY ATTACHMENT FOR CAR-HEATERS AND CAR-LAMPS.

SPECIFICATION forming part of Letters Patent No. 388,590, dated August 28, 1888.

Application filed April 13, 1887. Serial No. 234,596. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE FREEMAN SEAVER, of Dover, in the county of Strafford and State of New Hampshire, have invented a new and Improved Safety Attachment for Car-Heaters and Car-Lamps, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved safety attachment for car-heaters and car-lamps to prevent the cars from being set on fire by the burning fuel in the heater or lamps when the car meets with an accident or when the locomotive runs against an obstacle in its path.

The invention consists in the construction and arrangement of various parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate the corresponding parts in all figures.

Figure 1 is a longitudinal sectional elevation of part of a car provided with my improvement, partly in section. Fig. 2 is a sectional elevation of part of the hood or casing fastened to the car-heater base. Fig. 3 is an enlarged sectional plan view of my improvement on the line *x x* of Fig. 1. Fig. 4 is an enlarged inverted sectional plan view of the same on the line *y y* of Fig. 1. Fig. 5 is an enlarged under side view of the hinged bottom and its connections. Fig. 6 is a central elevation of the same on the line *z z* of Fig. 5. Fig. 7 is an inverted sectional plan view of the upper part of the car-heater. Fig. 8 is a side elevation of the device attached to the cow-catcher of the locomotive and connections which operate the hinged platform supporting the hood or casing of the car-heater, and Fig. 9 is a plan view of the same.

On the bottom B of the car A is fastened an iron plate, B', to which is hinged a platform, C, held in place by a catch, D, pivoted to the keeper D', secured to the under side of the car-bottom B. To the outer end of the catch D are secured chains or links E, which extend to the front end of the locomotive, and are connected at its forward end to a U-shaped lever, F, fulcrumed on the rod F', secured to the cow-

catcher of the locomotive. The U-shaped lever F is provided with an arm, F<sup>2</sup>, which extends at an angle of about forty-five degrees to the front a short distance beyond the cow-catcher, so that when an obstruction is in the path of the locomotive the lever-arm F<sup>2</sup> is moved inward when the locomotive strikes said obstruction, so that the lever F exerts a pull on the chain E, whereby the catch D is swung from under the platform C, which is thus released and swings down. The lever F is made U-shaped, so that two rods, E, can be connected with said lever, one running to each side of the cars, as the latter are each provided with two platforms—one at each end and on opposite sides.

In the plate B' and in the bottom B of the car A are a number of apertures, through which pass the rods G, provided at their lower ends with heads G', resting on the top of said hinged platform C. The upper ends of said rods G support a hood or casing, H, which is closed at its upper end and is adapted to fit over the car-heater K, provided with the usual base, J, having legs resting on the car-bottom B. One of the rods G is provided with a horizontal extension, G<sup>2</sup>, having an eye at its outer end, through which passes a guide-rod, G<sup>3</sup>, fastened to the car-wall and serving to guide said rods G in their up-and-down motion.

On the lower end of the hood or casing H are secured a number of spring-catches, I, adapted to pass through apertures J' in the base J when the hood passes downward and incloses the car-heater K. Below the apertures J' in the base J are pivoted to said base a number of arms, L, adapted to engage the spring-catches I, so as to lock the hood or casing H in position on the base J. The arms L are held in front by springs L', secured by one end to said arms and by their other ends to a pin or lug projecting downward from the base J.

The car-heater is provided with the usual stove-pipe, K', passing upward through the top H' of the cover or hood H, and then through the roof of the car in the usual manner. In the top plate of the heater K is formed a longitudinal slot, K<sup>2</sup>, adapted to be closed by a slide, N, held in the guides K<sup>3</sup>, secured to the inside of the top of the car-heater. The slide N serves to close the opening of the



chimney K' in case of an accident. Said slide N is operated on the downward movement of the hood or casing H by a wedge, O, secured to the inside of the top H' of said hood, and which, passing through the slot K<sup>2</sup> in the top of the heater K, pushes the said slide N inward over the chimney-opening of the heater.

The car heater K is provided with a series of pipes, P, extending on the outside of the car-heater K and opening into the top of said heater, and in the lower ends of said pipes P are held balls P', filled with a fire-extinguishing fluid, said balls rolling into the fire box when the car is upset. For these pipes P and balls P', I filed a separate application for United States Patent on March 5, 1887, having Serial No. 229,787.

To the top H' of the hood or casing H is secured one end of a rope, Q, which passes over a pulley, Q', secured to the roof of the car A. Said rope then extends horizontally and is provided with spring-pins R, passing through an eye, S, held in a slotted arm, T, secured to the roof of the car, so that the said eye S is supported by said pins R. The eye S supports a hood, U, which is closed on top and open at the bottom, and is guided on rods U', provided at their lower ends with heads U<sup>2</sup>, supporting the base of the lamp V, which base is adapted to slide on said rods U'. The hood U is held above the lamp, so as not to obstruct the rays of light, and is adapted to inclose said lamp in case of accident, resting with its lower end on the base of said lamp V. The lower end of the hood or casing U is provided with spring-catches U<sup>3</sup>, which, when the hood U slides downward, pass over the edge of the base of the lamp V, thus securely holding said hood to said base. All the lamps in the car A are supplied with similar devices, which are connected with and operated by said rope Q.

The operation is as follows: When the catch D on the under side of the bottom B of the car A disengages the platform C, as above described, then the platform C swings downward, thereby permitting the rods G, supporting the hood H, to slide downward, whereby the spring-catches I pass through the apertures J' in the base J, and are locked by the arms L, so that the hood H is securely fastened to the base J, completely inclosing the heater K, so that no burning fuel from the latter can pass into the car. When the hood passes downward, then the wedge O closes the opening of the chimney K'. The downward movement of the hood H also pulls on the rope Q, so that the spring-pin R is drawn out of the eye S, which is thus set free, thereby permitting the hood U to slide downward on the rods U' over the spring-catches U<sup>3</sup>, engaging the base of the lamp V, thus locking the hood U and the lamp V together. The lamp is completely inclosed in said hood U, so that the lamp is prevented from setting fire to the car. In case the platform C is not unlocked by the catch D and the car is completely upset by any cause what-

ever, then the base J of the heater K is inclosed by said hood and the spring-catches I of the hood lock the base J to said hood in the same manner as above described. The lamps V will perform a similar operation, inasmuch as the base of each lamp V slides toward the hood U on the rods U', and the hood and the base of the lamp are locked together by the spring-catches U<sup>3</sup>, so that the lamps cannot set fire to the car, being completely inclosed by said hoods U. In case the car falls on its side, then the balls P' in the pipes extinguish the fire in the heater K in the manner described in my previous application above referred to.

It will be seen that when the hood H is held in the position shown in Fig. 1, then the heater K is entirely uncovered, thus permitting the operator to attend to the heater in the usual manner.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a platform hinged to the under side of the car-bottom and a catch for holding said platform in a horizontal position, of rods supported on said platform and passing through the base of the car-heater, and a hood supported by said rods and adapted to inclose the car-heater, substantially as shown and described.

2. The combination, with a platform hinged to the under side of the car-bottom and a catch for holding said platform in a horizontal position, of rods secured on said platform and passing through the base of the car-heater, a hood supported by said rods and adapted to inclose the car-heater, and catches on the hood for locking said hood to the base of the car-heater, as set forth.

3. The combination, with a platform hinged to the under side of the car-bottom and a pivoted catch engaging said platform to hold it in a horizontal position, of links or chains connected with said pivoted catch, and a lever fulcrumed on the cow-catcher of the locomotive and extending at an angle, said lever being connected with said links or chains connected with said catch, substantially as shown and described.

4. The combination, with a car-heater and the base supporting said car-heater and having apertures, of rods passing through said apertures and a hood secured to said rods and adapted to slide over said car-heater, substantially as shown and described.

5. The combination, with a car-heater and the base supporting said car-heater and having apertures, of rods passing through said apertures and a hood secured to said rods and adapted to slide over said car-heater, and catches for locking said hood to said base, substantially as shown and described.

6. The combination, with a car-heater provided on the inside of its top with guides, a slide held in said guides and adapted to close the chimney-opening, and a base supporting



5 said car-heater, of rods passing through said base, a hood supported by said rods and adapted to fit over said car-heater, and a wedge fastened to the inner side of the top of the hood and adapted to operate said slide in the top of the car-heater, substantially as shown and described.

10 7. The combination, with rods secured to the roof of a car and heads fastened to the lower ends of said rods, of a lamp adapted to slide with its base on said rods, being supported on said heads of the rods, a hood adapted to slide on said rods and fitting over said lamp, and spring-catches secured to said hood and adapted to lock said lamp to said hood, substantially as shown and described.

2 8. The combination of rods secured to the roof of a car, a lamp supported by and fitted to slide on the said rods, and a hood suspended from the top of the car and guided on the said rods when detached from the top of the car, substantially as herein shown and described.

9. The combination, with the platform C,

pivoted to the underside of the car-bottom, and means for holding said platform in position, 25 of the rods G, supported on said platform C, the hood H, supported by said rods G and adapted to fit over the car-heater, the rope Q, connected with the top of said hood H, the spring-pin R, secured to said rope Q, the slot- 30 ted arm T, and the hood U, supported by said pin R and adapted to slide over the lamp V, substantially as shown and described.

10. The combination, with a hood, H, and means for supporting the same, of the lamp V, 35 suspended from the top of the car, the rope Q, connected to the hood, the spring-pin R, secured to the rope, and the hood U, supported by the pin R and adapted to slide over the lamp V and to be locked thereto, substantially 40 as herein shown and described.

GEORGE FREEMAN SEAVER.

Witnesses:

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BENJ. P. WEAVER.