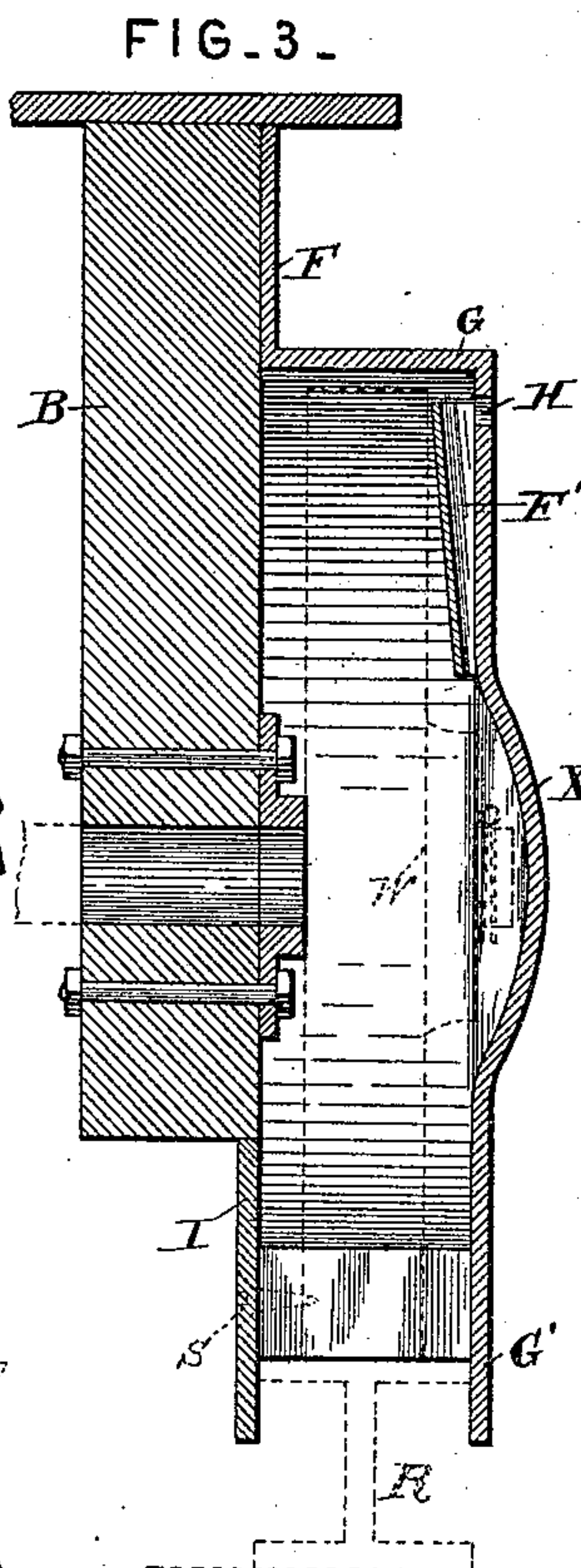
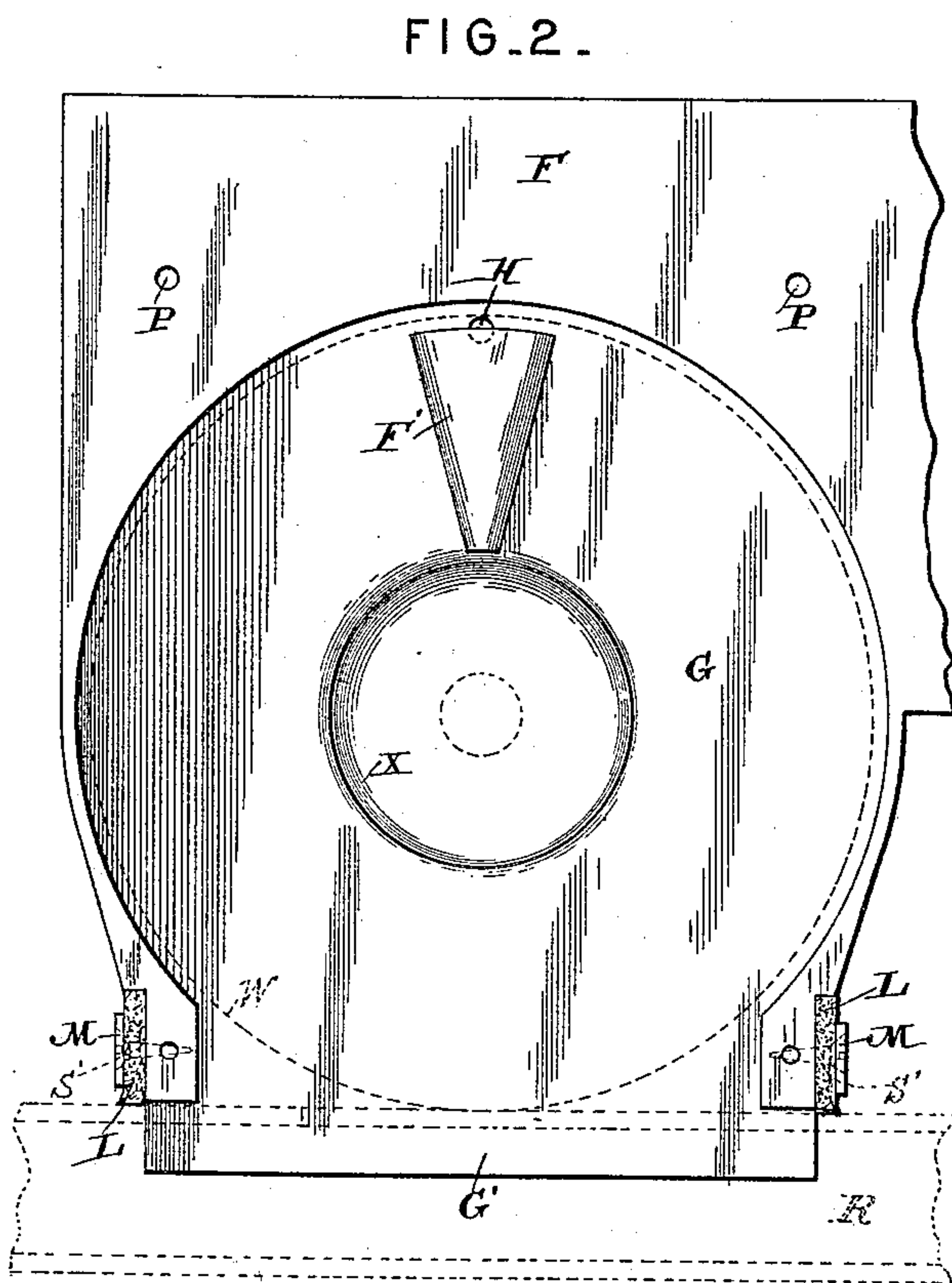
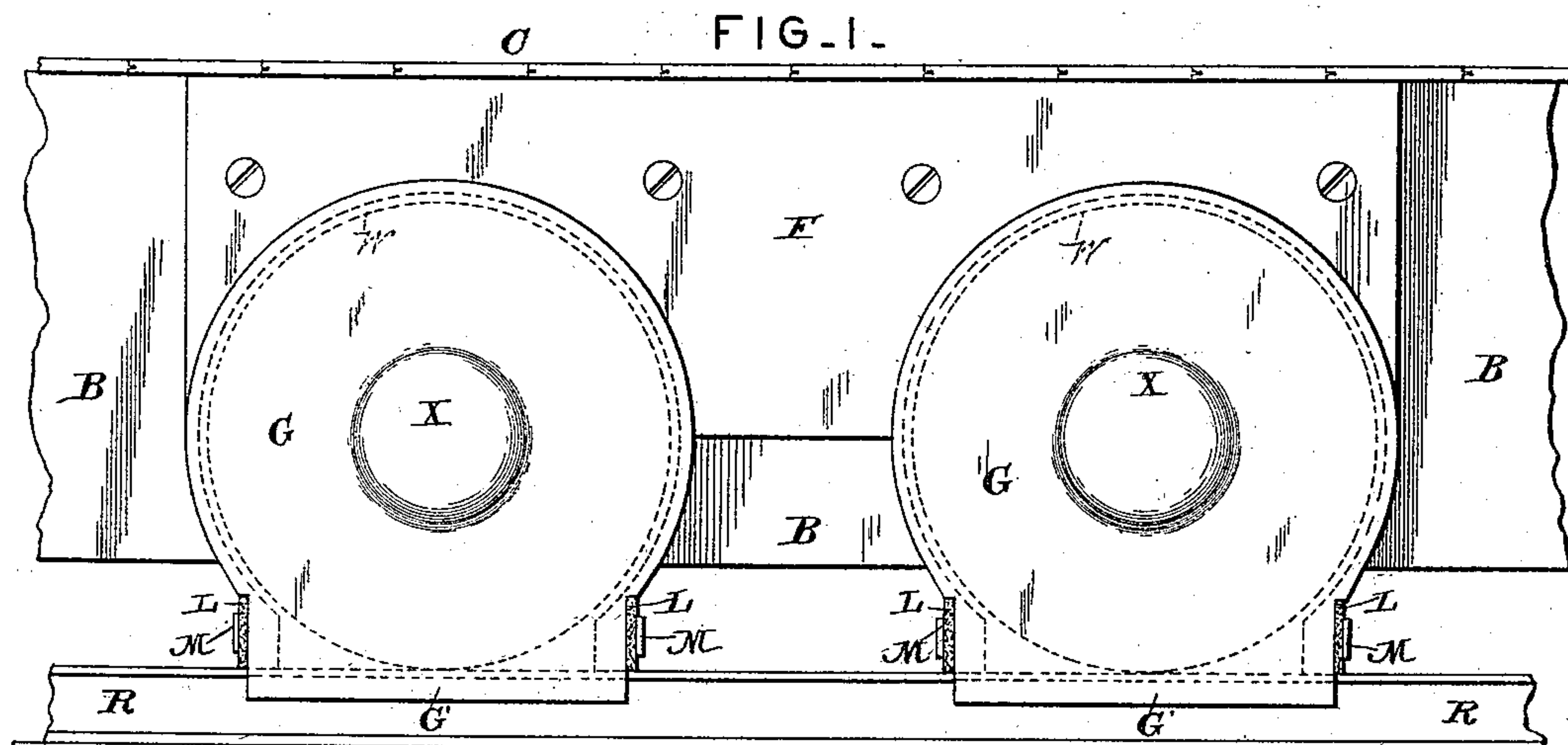


(No Model.)

J. W. ZIMMERMAN.  
MILL CARRIAGE WHEEL GUARD.

No. 451,165.

Patented Apr. 28, 1891.



Witnesses

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D. J. Gollamer

By his Attorneys,

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# UNITED STATES PATENT OFFICE.

JOSEPH W. ZIMMERMAN, OF BEAUMONT, TEXAS.

## MILL-CARRIAGE-WHEEL GUARD.

SPECIFICATION forming part of Letters Patent No. 451,165, dated April 23, 1891.

Application filed November 28, 1890. Serial No. 372,955. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH W. ZIMMERMAN, a citizen of the United States, residing at Beaumont, in the county of Jefferson and State of Texas, have invented a new and useful Mill-Carriage-Wheel Guard, of which the following is a specification.

This invention relates to machines for sawing or otherwise working wood, and more especially to the wheels on the carriages of such machines.

The object of the invention is to provide a guard for such wheels to prevent saw-dust and other obstructions from falling on the rails on which the wheels travel. It is well known that such obstructions often do lodge on the rails, and when the wheels pass over them the carriage is thrown slightly out of its proper position, whereby the log or other stock supported on the carriage is undesirably moved relatively to the tool. By my invention the wheels of the carriage are surrounded by a guard, which prevents obstructions falling on the wheels or on the track, and such guard also carries scrapers in front and in rear and on each side of the wheel, whereby the obstructions are scraped off the track.

The details of the invention are hereinafter fully described, and the novel features thereof are set out in the claims.

In the drawings hereto attached, Figure 1 is a side elevation of a saw-mill carriage whose wheels are covered with my improved guard. Fig. 2 is an enlarged inside elevation of one of the guards with the inner flange removed, the wheel being shown in dotted lines as running on the track. Fig. 3 is a central vertical section through Fig. 2 with the inside flange in place.

Referring to the said drawings, the letter C designates the carriage of a saw-mill or other wood-working machine, the wheels W of said carriage moving upon rails R in the ordinary and well-known manner.

I have not illustrated the machine nor the log on the carriage, as these are well understood and do not seem to be of especial importance in the present description.

The letter G designates a guard, composed, preferably, of tin or other light cheap metal,

and at the upper end of this guard is a flange F, having perforations P, through which are passed screws, whereby the guard is secured to the carriage. The general contour of the guard is that of a circular box whose diameter is a little greater than that of the flange or widest portion of the wheel W, and whose thickness is also a little greater than that of the wheel. As shown in dotted lines in Fig. 3, the bearings for the shaft of the wheels are inside of the wheels. At the center of the outer face of the guard is a concavo-convex portion X, which passes over the end of the shaft and the outer end of the hub of the wheel. If the shaft be stationary and the wheel turn thereon, this bulge X will give room for a split pin or other locking device for keeping the wheel in place on the shaft.

The beam B on the carriage, to which the flange F of the guard G is screwed, surrounds the shaft and forms a closure for the inner side of the box-shaped guard, so that no inner member of the latter is necessary to completely surround the wheel.

The lower side of the guard G is open, and the wheel of course projects therethrough to bear upon the rail. The outer face of the guard continues, as at G', below the level of the face of the rail and travels against the outer edge of said rail, thereby forming the outer flange. The letter I designates the inner flange, which travels against the inner edge of the rail, and this flange is removably secured to the inner side of the body of the guard by bolts or screws S. As both the inner and outer flanges project below the face of the rail, the wheel is prevented from sliding off the rail, and hence no flange is absolutely necessary on the wheel, and none has been shown. However, it will be understood that my improved guard can be applied to carriage-wheels having flanged or other shaped treads, and which are now in general use. At each end of the opening in the bottom of the guard is a small strip L, preferably of leather, which travels upon the face of the rail in front and in rear of the wheel, and wipes all the saw-dust and other obstructions therefrom before the wheel can pass over them. A metallic washer M is applied outside the wiper L, and a screw S' passes



through both these pieces and into the guard. By this means the wiper may be adjusted from time to time, so as to cause it to travel closely on the rail and to do its work properly.

The letter F' designates a funnel-shaped receptacle situated on the inside of the guard G above the axle, and H is a hole through the guard above the upper end of this funnel.

When the wheel revolves upon a stationary shaft, as is sometimes the case, the split pin shown in dotted lines in Fig. 3, or some equivalent retainer, is passed through the axle outside the shaft to hold the wheel in place. The funnel F' may be filled with waste, and oil may be fed through the hole H, which oil will saturate the waste and drip onto the shaft to lubricate the same. The advantage of this construction is that the oil-cup is protected from sawdust, and the oil is kept in a sufficiently clean and fluent condition to allow it to percolate through the waste and drip onto the axle.

What is claimed as new is—

1. The herein-described guard for the wheels of wood-working-machine carriages, the same comprising a box-shaped casing covering the outer face and the edges of the wheel and detachably secured to the carriage, and wiping-strips secured to said casing in front and in rear of the wheel and bearing upon the rail, as set forth.

2. The herein-described guard for the wheels of wood-working-machine carriages, the same comprising a box-shaped casing covering the outer face and edges of the wheel and detachably secured to the carriage, said casing having a depending integral flange in contact with the outer edge of the rail, and an inner flange detachably secured to the casing and in contact with the inner edge of the rail, as set forth.

3. The herein-described guard for the wheels of wood-working-machine carriages, the same comprising a box-shaped casing cov-

ering the outer face and the edges of the wheel and detachably secured to the carriage, said casing having a depending integral flange in contact with the outer edge of the rail, an inner flange detachably secured to the casing and in contact with the inner edge of the rail, and wiping-strips secured to said casing in front and in rear of the wheel and bearing upon said rail, as set forth.

4. In a wood-working-machine carriage, the combination, with the shaft passing through the side beam of the carriage, the wheel on the outer end thereof, and a track upon which said wheel travels, of a box-shaped guard having a perforated flange at its upper end, screws passing therethrough into the beam and holding the guard detachably in position to cover the outer face and the edges of the wheel, a bulge at the center of the guard over the end of the shaft, an outer flange integral with the guard and an inner flange secured thereto, said flanges traveling against the edges of the rail, wiping-strips at each end of the guard, washers outside the same, and screws passing through said washers and strips and into the guard, said strips bearing upon the face of the rail in front and in rear of the wheel, substantially as hereinbefore set forth.

5. In a machine-carriage, the combination, with the carriage proper, a shaft therein, and a wheel journaled on said shaft, of a guard surrounding the wheel and having a hole through its body above the shaft, and a funnel-shaped receptacle inside the guard below said hole, as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOSEPH W. ZIMMERMAN.

Witnesses:

EDWIN M. CURRY,  
JOHN CORCORAN.