

(No Model.)

J. W. ZIMMERMAN.
WHEEL GUARD FOR SAWMILL CARRIAGES.

No. 601,194.

Patented Mar. 22, 1898.

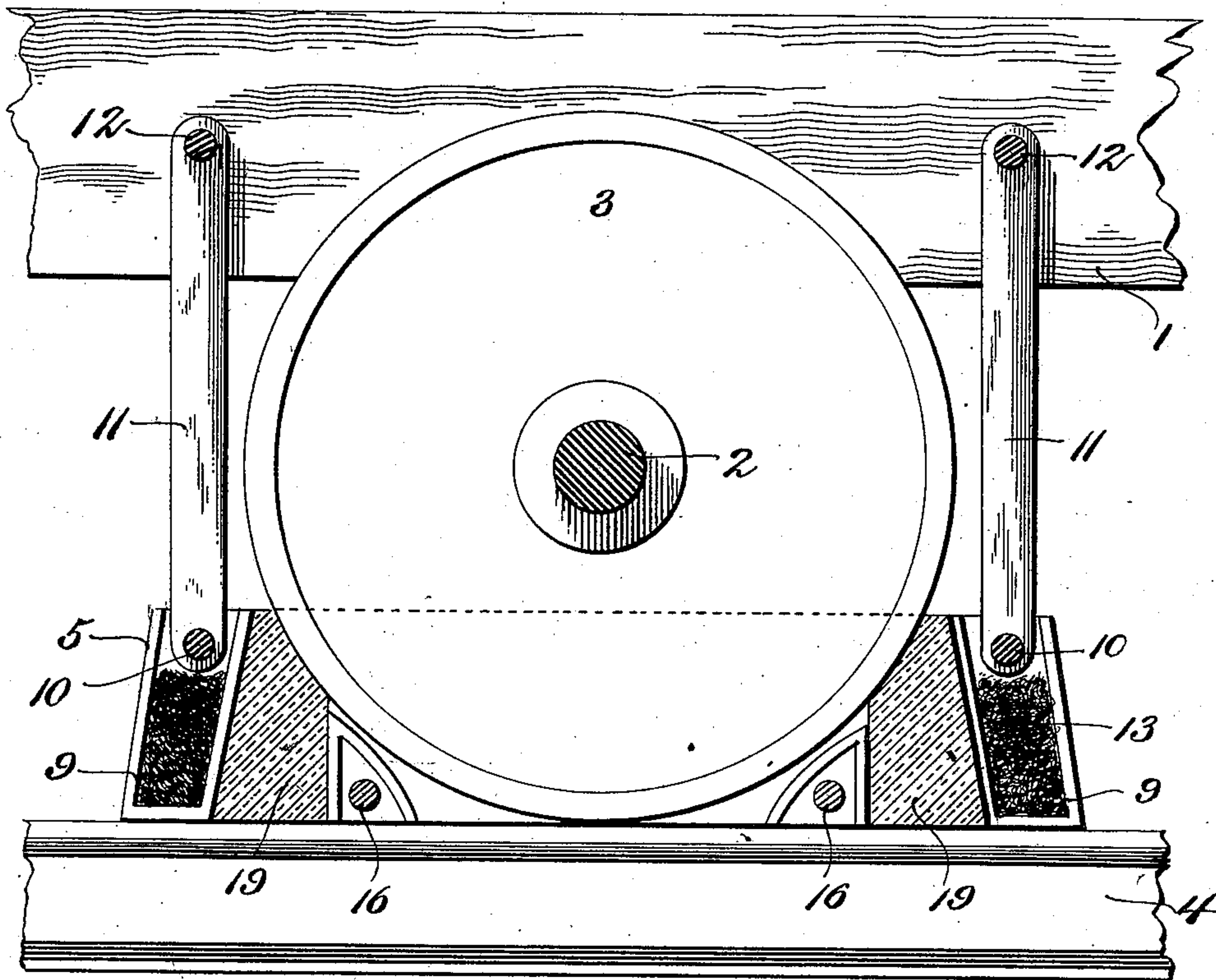


Fig. 1.

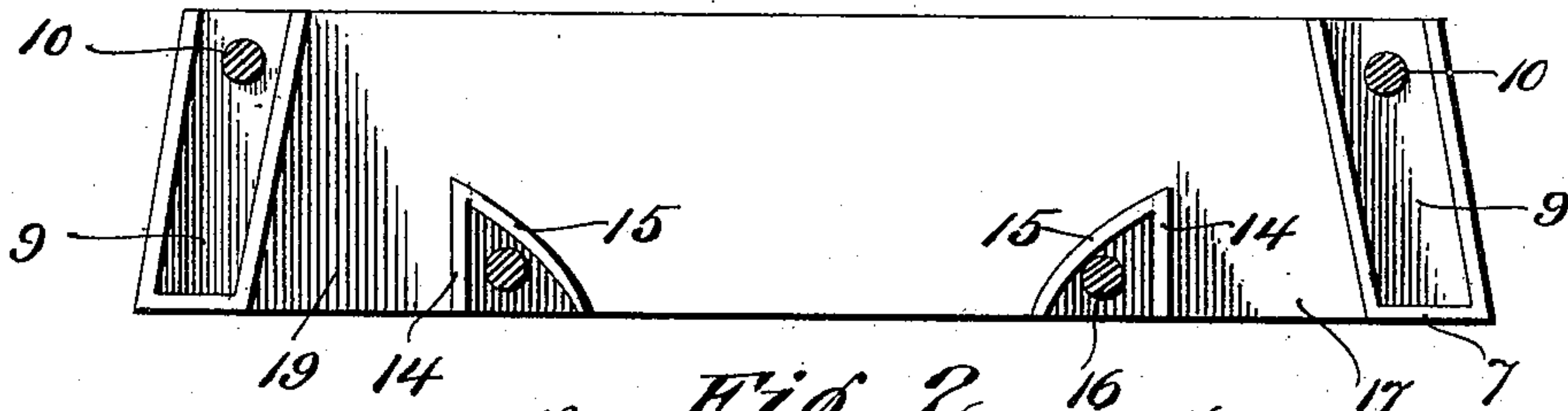


Fig. 2.

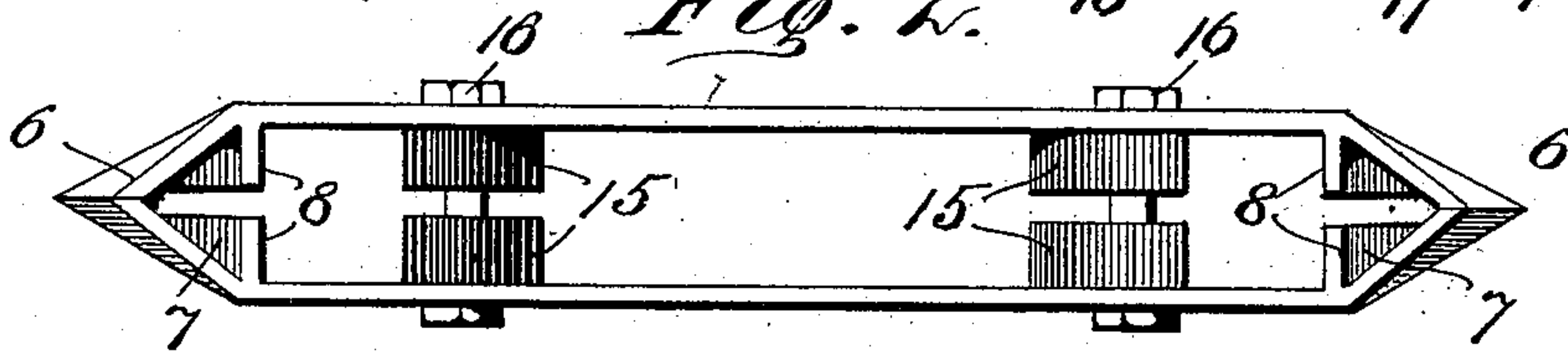


Fig. 3.

Witnesses:

C. F. Duwall
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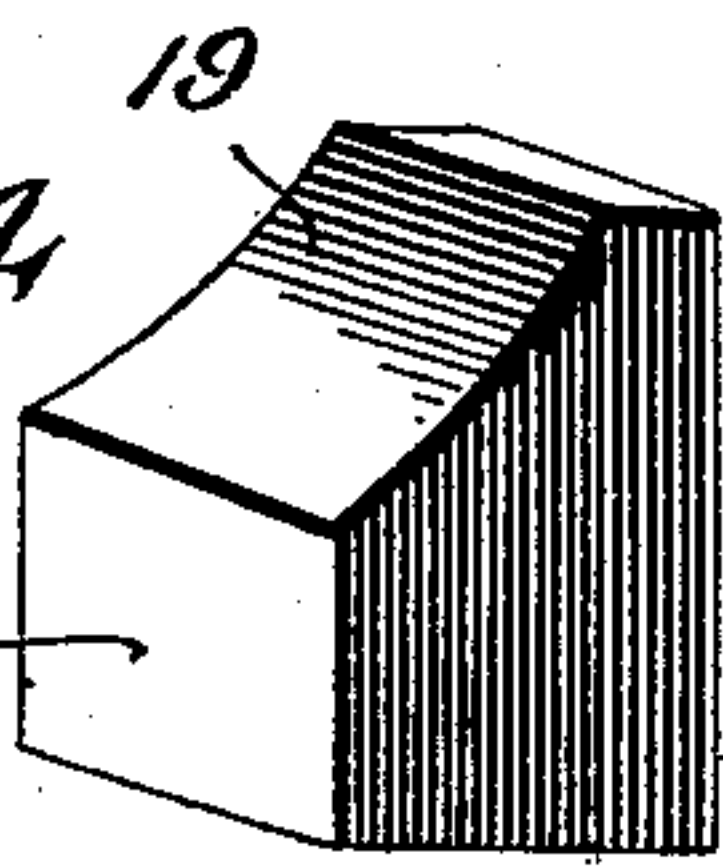


Fig. 4.

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WHEEL-GUARD FOR SAWMILL-CARRIAGES.

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Application filed December 29, 1897. Serial No. 664,285. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WILLARD ZIMMERMAN, a citizen of the United States, residing at Zimmerman, in the parish of Rapides and State of Louisiana, have invented certain new and useful Improvements in Wheel-Guards for Sawmill-Carriages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to sawmill appliances, and more especially to such as are adapted to serve as guards for wheels of the sawmill-carriage.

It is well known that it is especially desirable, and in fact almost a necessity, that the carriage-track, especially that rail thereof next to the saw, be kept clean and free from offal—such as sawdust, bark, and trash—that is constantly falling on it, by reason of the fact that such offal causes the carriage to jump and jolt, working roughly and unsteadily, whereas in order to be perfectly practical it should run smoothly. Heretofore devices designed to overcome this objection have been patented, but for the most part they have been in the form of a hood or covering inclosing the major portion of the wheel and resting slightly on the track. By experience I have found that the offal referred to collects within the hood and chokes the same, thus causing the wheel to oftentimes slide instead of roll, whereby the wheel becomes worn flat at intervals and ruined. Again, on account of their rigid relation to the rail such guards are not adapted to that style of carriage that offsets from the saw, as is the case in our modern band-mill carriages.

The objects, therefore, of my invention are primarily to obviate the difficulties and objections hereinbefore enumerated and to construct a guard that is capable of lubricating in an automatic manner the surface of the track as well as the wheel inclosed by the guard and the bearing-surface of the latter, against which the face of the wheel contacts.

Various other objects and advantages of the invention will hereinafter appear, and

the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 illustrates a sectional view of the lower portion of a sawmill-carriage the wheel of which is provided with my improved guard, the same being also illustrated in longitudinal section. Fig. 2 is a detail in longitudinal section of the guard. Fig. 3 is a plan view of the guard, and Fig. 4 is a detail of one of the wear-blocks.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the lower portion or frame of an ordinary sawmill-carriage, which is provided with journals 2 and wheel 3, the latter being mounted upon a track-rail 4, this being deemed sufficient to illustrate the application of my invention.

The wheel-guard preferably consists of two cast-metal sections 5, reduced at their front and rear ends and inclined to form or approximate plough-points 6. Each section adjacent to its front end is provided with a bottom rib 7 and an upwardly-disposed rib 8, said ribs combining with the end walls to form oil-reservoirs 9. Bolts 10 may be passed through the side walls of each reservoir 9 for the purpose of binding the two sections of the guard together. If desired, these bolts may be loosely connected to the lower extremities of suspension-links 11, the upper ends of which are by bolts 12 connected to the framework 1 of the carriage in front and in rear of the wheel 3. The presence of these links is not at all essential to a successful operation of the device, but may be preferred by some, and hence employed.

In each of the oil-reservoirs 9 I may insert a body of packing 13, so that the oil will filter through the same gradually and escape either through holes formed in the bottom of the oil-reservoirs or between the crevices formed by the bringing of the two guard-sections 5 together.

Between the oil-reservoirs and at some little distance therefrom each guard-section is provided with a short vertical internal rib 14, each being connected at its upper end to a similar inclined rib 15. Binding-bolts 16

may be employed for connecting the guard-sections 5 together between the ribs 14 and 15.

The inner wall 8 of the reservoirs combine with the ribs 14 to form intermediate pockets 17, the inner walls of which are, as before mentioned, short as compared to the depth of the guard as a whole. In each of these pockets is seated a wear-block 18, (see Figs. 1 and 4,) and the same is preferably formed of glass and of such shape as to fit the pockets 17. The upper inner corners of the wear-block are curved or recessed upon the arc of a circle agreeing with that of the wheel 3.

The guard, it will be understood, may either be formed in sections, as described, or in any other manner and of any desired material and so also may the shape of the wear-block be varied, and they may be constructed of any material calculated to reduce friction and resist wear. I may also terminate the guards immediately beyond the wear-blocks, thus omitting the oil-reservoir.

The guard, constructed as described, may be permitted to rest wholly upon the track 4 or be suspended by the links 11 merely in light contact therewith, and when in position is designed to inclose the lower third, more or less, of the wheel, as illustrated in Fig. 1. When in such position, the face of the wheel will be in contact with one or both of the glass wear-blocks 19, and it will be obvious that the revolutions of the wheel will cause the guard to move in the direction of the movement of the carriage. The plow-points 6, which is the shape preferably given to the ends of the guard, serve to divide and discharge to either side of the track the offal falling upon the rail. The lubricating-oil discharged in the manner heretofore described upon the rail is taken up by the wheel and distributed over the curved faces of the wear-block, thus decreasing friction and wear of the wheel, wear-blocks, guard, and rail, and as a result the carriage moves over the rails evenly and smoothly.

It will of course be understood that I do not confine my invention to the exact shape of the guard herein shown—that is to say, it may be shaped at its sides so as to conform to the web of the wheel. This could of course be done where the guard is formed of the two castings bolted together. The guard may, however, be formed in a single casting or piece of stock, in which case it would be shaped as I have shown in the drawings. It will, furthermore, be understood that the wear-blocks and oil-reservoirs may be omitted, together with the suspension-links, the face of the wheels running against the inner wall of the guard, which latter wall would be faced with suitable metal for the purpose.

The guard, it will be understood, although primarily intended for the wheels of sawmill-

carriages, may be applied to any kind of wheel, more especially car-wheels.

Having described my invention, what I claim is—

1. The combination with a sawmill-carriage, its wheel and the rail for supporting the same, of a guard inclosing the lower portion of the wheel, oil-reservoirs formed at the ends of the guard and adapted to deliver oil to the track, and wear-blocks located between the reservoirs and wheel and having their inner faces curved to agree with the wheel.

2. The combination with a sawmill-carriage, its wheel and the rail for supporting the same, of a guard terminating in plow ends and inclosing the lower portion of the wheel, of wear-blocks located in the guard at opposite sides of the wheel and concaved to agree with the face of the wheel.

3. The combination with a sawmill-carriage and its wheel and track, of a guard inclosing the lower portion of the wheel and having its ends provided with internal oil-reservoirs and externally shaped to form plow-points, and wear-blocks located in the guard in front and in rear of the wheel and having their inner faces concaved to agree with the wheel.

4. The combination with a sawmill-carriage, its wheel and the track, of a wheel-guard inclosing the lower portion of the wheel, links connected to the guard and to the carriage, and wear-blocks having concaved faces to agree with the wheel and located in the guard in front and in rear of said wheel.

5. The combination with a sawmill-carriage, its wheel and the track, of a guard inclosing the lower portion of the wheel and provided at opposite sides of the same with pockets, and wear-blocks fitting the pockets and concaved at their inner sides to agree with the wheel.

6. The sawmill-guard, the same consisting of the opposite halves or sections 5 reduced at their ends at 6, and having the corresponding horizontal ribs 7, inclined ribs 8, the vertical ribs 14 shorter than the ribs 8, in combination with the wear-blocks 19 fitting between the ribs 8 and 14, the bolts 10 and the bolts 16, substantially as and for the purpose specified.

7. The combination of a wheel, with a track for the same, and a guard resting on the track, inclosing the lower portion of the wheel and having a wear-face against which the wheel operates for moving the guard.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH WILLARD ZIMMERMAN.

Witnesses:

J. M. EDWARDS,
J. C. BLACKMAN.