C. F. HENN & D. FARQUHAR.

SCRAPER FOR ROAD ROLLERS.

APPLICATION FILED FEB. 18, 1908.

905,073. Patented Nov. 24, 1908.

Fig. 1.

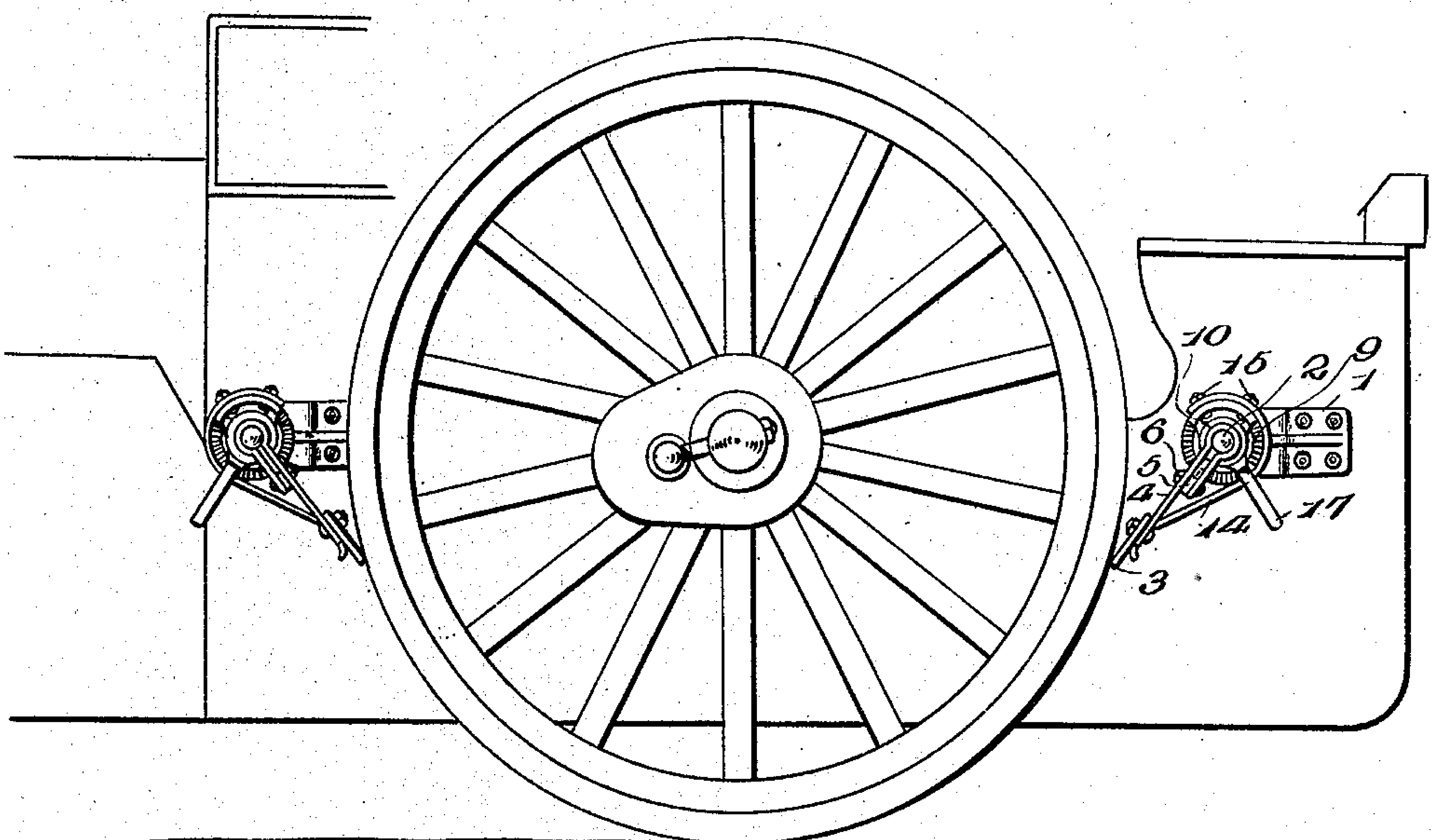


Fig. 2.

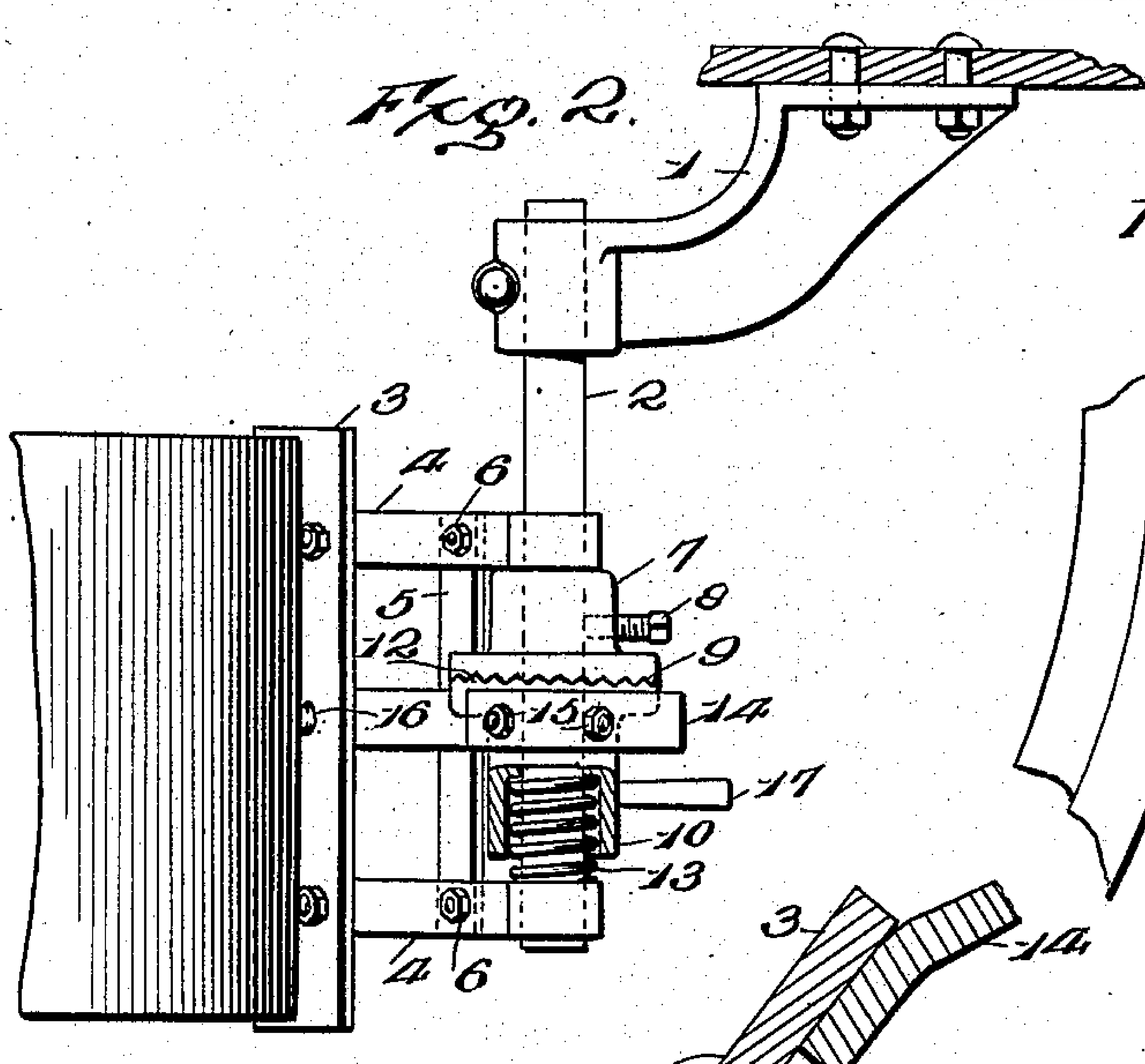


Fig. 3.

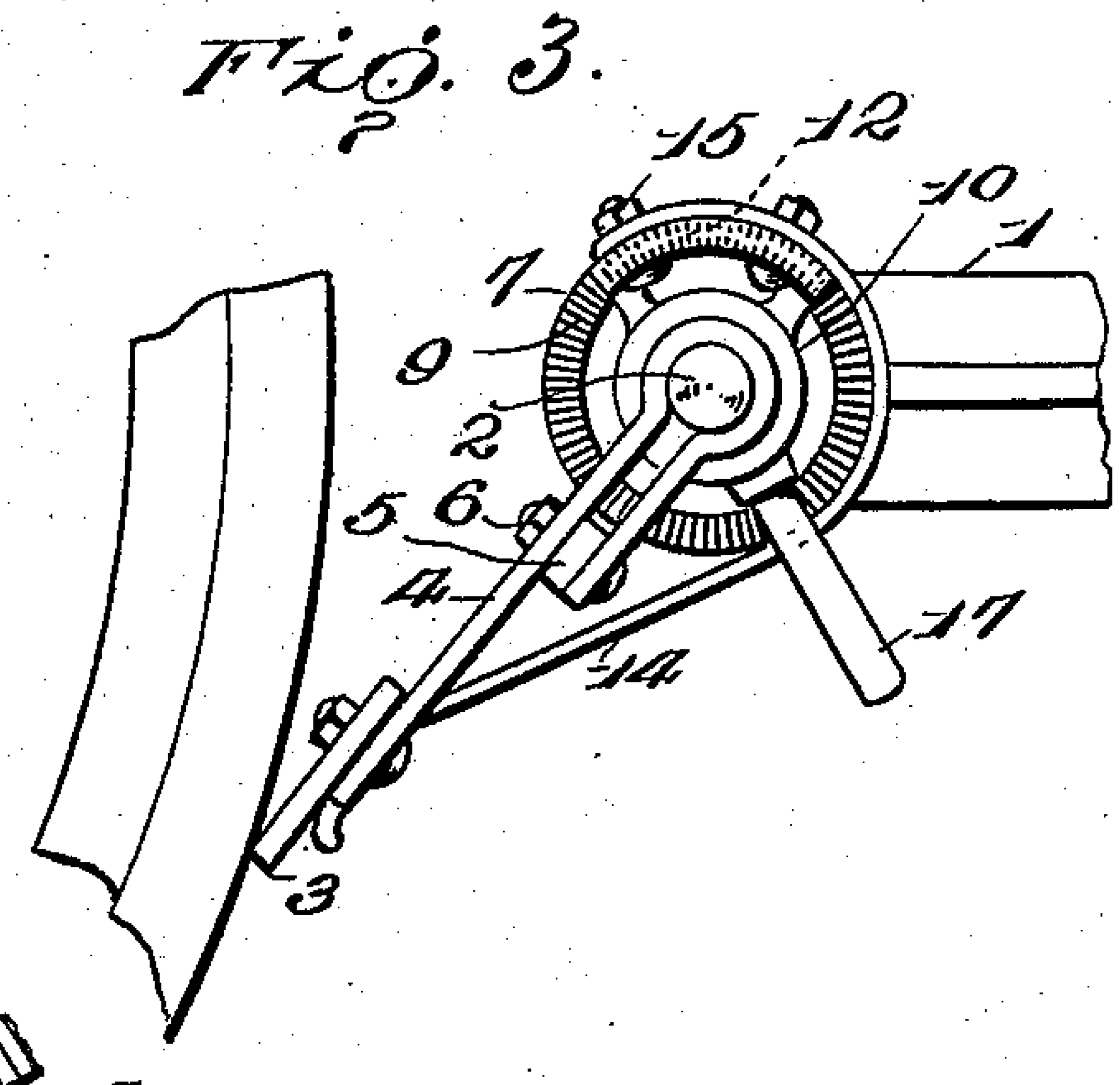
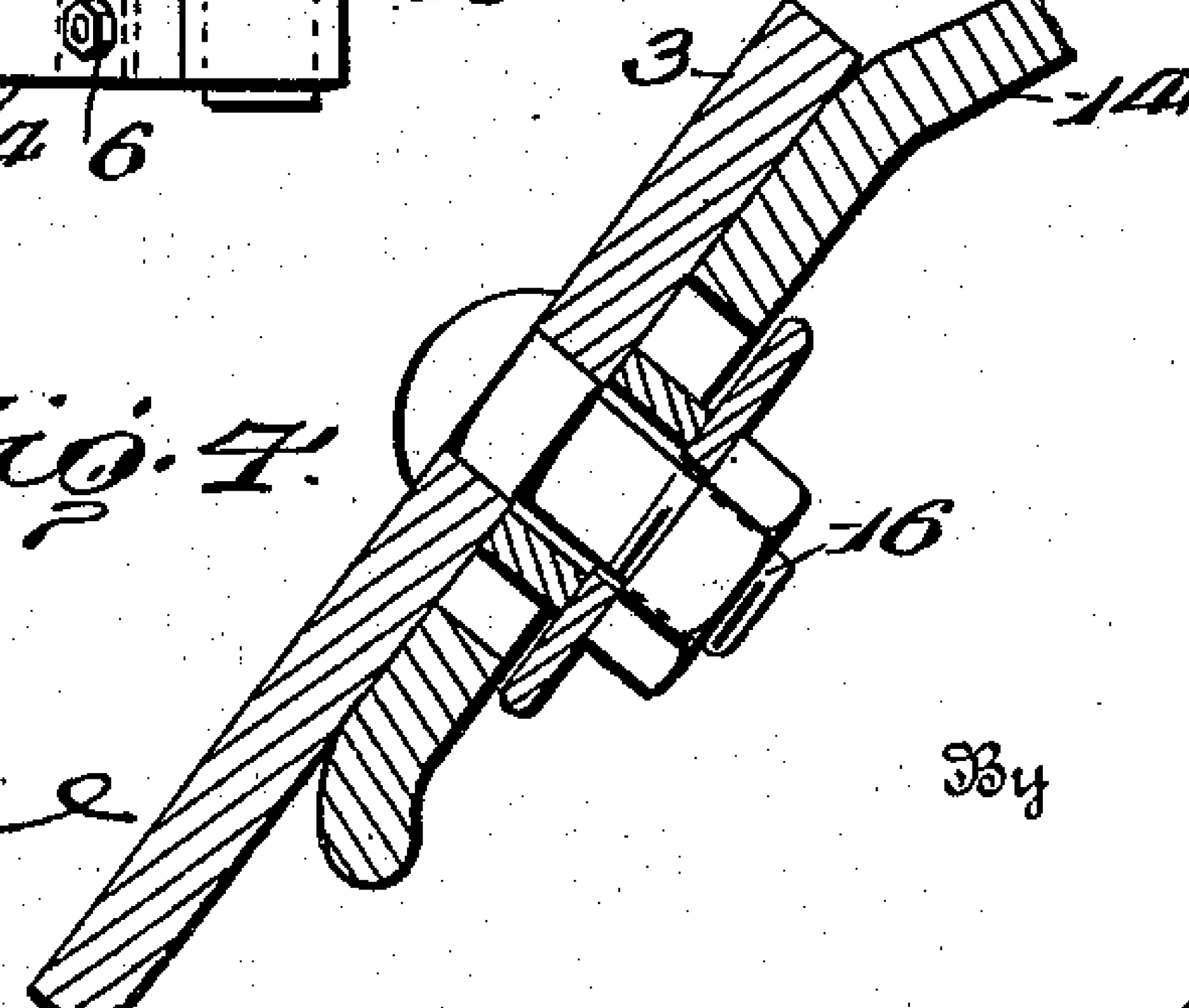


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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SCRAPER FOR ROAD-ROLLERS.

No. 905,073. Specification of Letters Patent. Patented Nov. 24, 1908.

Application filed February 18, 1908. Serial No. 416,528.

To all whom it may concern:

Be it known that we, CHARLES F. HENN and DAVID FARQUHAR, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Scrapers for Road-Rollers; and we 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.

The primary object of this invention is to provide a simple and highly efficient scraper for removing mud, dirt, gravel, etc., from the periphery of a wheel or roll of a road-roller. And further objects are to secure a uniform pressure of the scraper against the roll; to enable this pressure to be readily increased or lessened; and to enable the blade to be held out of contact with the roll without having to be removed from the machine.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of a portion of a road-roller showing our improved scrapers applied to one of the rolls. Fig. 2 is an enlarged view, with a portion of the wheel broken away. Fig. 3 is an enlarged edge view. Fig. 4 is a central sectional view through a portion of the plate spring.

Referring to the drawings, 1 designates a bracket which is bolted or otherwise rigidly secured to some portion of the roller frame, and in practice as it is preferable to employ two scrapers to each roll, one bracket is located in advance of the wheel and the other in rear thereof. It is only necessary, however, to describe the construction of one scraper, as the parts are duplicated forward and to the rear of the roll. Each bracket supports a short shaft 2 which projects outwardly across the periphery of the roll.

3 designates the scraper-blade which is shown as bolted to two arms 4, which are connected by a brace 5, these arms, together with the brace, forming a frame which is journaled on shaft 2. The manner in which the frame is journaled is immaterial, but preferably it is by bending each of the plates 4 back upon itself so as to form a loop-eye, the upper end of each arm being held by a nutted bolt 6. On shaft 2, adjacent to the inner arm 4 of the blade-supporting frame, is a collar 7 which is secured to the shaft by a set screw 8, or other suitable means, such collar preventing outward endwise movement of the frame. This collar 7 has a serrated face 9.

10 designates a second collar loose on shaft 2 and having a serrated face 12 which is normally held in positive engagement with the serrations of collar 7 by a coil-spring 13 encircling shaft 2 and preferably located within a counterbored recess within collar 10 and bearing at its outer end against the eye of the outer arm 4. A plate spring 14 is rigidly secured at its upper end, preferably by bolts 15, to collar 10, while its lower end is slidably held to the scraper-blade by a nutted bolt 16 passed through a slot in the end of the spring. The tension of this plate spring serves to hold the scraper blade securely against the face of the roll under a uniform pressure. When, however, it is desired to increase or lessen the tension of the plate spring, the operator grasps a short handle 17 projecting from the loose collar and moves the latter laterally, longitudinally of the shaft, as against the tension of spring 13, so as to disengage the interlocking faces of the two collars, and thereupon turns such collar axially in the proper direction, and when the desired tension has been secured, the collar will be immediately returned into locking relation to the fixed collar by the endwise pressure of spring 13. It will be observed that this latter spring, by pressing outwardly on the outer arm of the blade-supporting frame, will hold the inner arm tight against the fixed collar 7. Hence deflection of the blade on a line parallel to shaft 2 is impossible.

When the rolls are equipped with picks, the scrapers may be readily held out of way by simply turning the blade-supporting frame on shaft 2, when the loose collar is disengaged from the fixed collar, such frame being retained in the position to which it is moved by the reëngagement between the collars.

The advantages of our invention will be apparent. It will be seen that we have provided a highly-efficient and inexpensive form of scraper by which we are enabled to maintain a uniform pressure against the surface of a roll, and at the same time the tension of the spring pressure may be readily increased or lessened, and likewise the scraper

can, when desired, be held bodily out of engagement with the roll.

We claim as our invention:—

1. A scraper comprising a fixedly-supported shaft, a scraper blade, a support therefor journaled on said shaft, a plate spring slidably secured to the scraper blade, a collar loosely-fitted on said shaft and to which said spring is secured, and means for adjustably holding said collar.

2. A scraper comprising a fixedly-supported shaft, a scraper blade, a support therefor journaled on said shaft, a fixed collar on said shaft, a plate-spring acting on the scraper blade, a collar loosely fitted on said shaft and to which said plate spring is secured, and means for holding said loose collar against said fixed collar.

3. A scraper comprising a fixedly-supported shaft, a scraper blade, a support therefor journaled on said shaft, a fixed collar on said shaft having a serrated face, a plate spring acting on said scraper blade, a second collar loose on said shaft and to which said spring is secured, said loose collar having a serrated face for engaging the corresponding face of the fixed collar, and means for normally holding the loose collar in engagement with the fixed collar.

4. A scraper comprising a fixedly-supported shaft, a scraper blade, a support therefor journaled on said shaft, a fixed collar on said shaft having a serrated face, a plate spring acting on said scraper blade, a second collar loose on said shaft and to which said spring is secured, said loose collar having a serrated face for engaging the corresponding face of the fixed collar, and a spring encircling said shaft and bearing against said loose collar to normally hold it in engagement with the fixed collar.

5. A scraper comprising a fixedly-supported shaft, a scraper blade, a frame for such blade having inner and outer arms journaled on said shaft, two collars located between said arms, one being fixedly secured to said shaft and the other loose thereon, a plate spring acting on said blade and secured to said loose collar, and a spring on said shaft bearing against one of said arms and serving to normally hold the loose collar in frictional engagement with the fixed collar.

6. A scraper comprising a fixedly-supported shaft, a scraper blade, a frame for such blade having inner and outer arms journaled on said shaft, two collars located between said arms, one being fixedly secured to said shaft and the other loose thereon, said collars having coöperating serrated faces, a plate spring acting on said blade and secured to said loose collar, and a spring on said shaft bearing against one of said arms and serving to normally hold the serrated face of the loose collar in engagement with the serrated face of the fixed collar.

7. A scraper comprising a fixedly-supported shaft, a scraper blade, a frame therefor journaled on said shaft, two collars, one being fixed to said shaft and the other loose thereon, a coil spring on said shaft normally holding said loose collar against said fixed collar, an operating handle for said loose collar, a plate spring secured to said latter collar and having a slot at its outer end, and a bolt passed through said slot for slidably securing said plate spring to said blade.

8. A scraper comprising a fixed shaft, a scraper blade, a support therefor journaled on said shaft, a plate spring engaging said blade, a collar loose on said shaft and to which said plate spring is secured, a fixed collar on said shaft, and a spring for normally holding the loose collar against said fixed collar, said loose collar having a handle by which the collars may be disengaged and the loose collar adjusted axially relative to the fixed collar.

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

CHARLES F. HENN.
DAVID FARQUHAR.

Witnesses:
M. J. Todd,
W. F. Schamon.