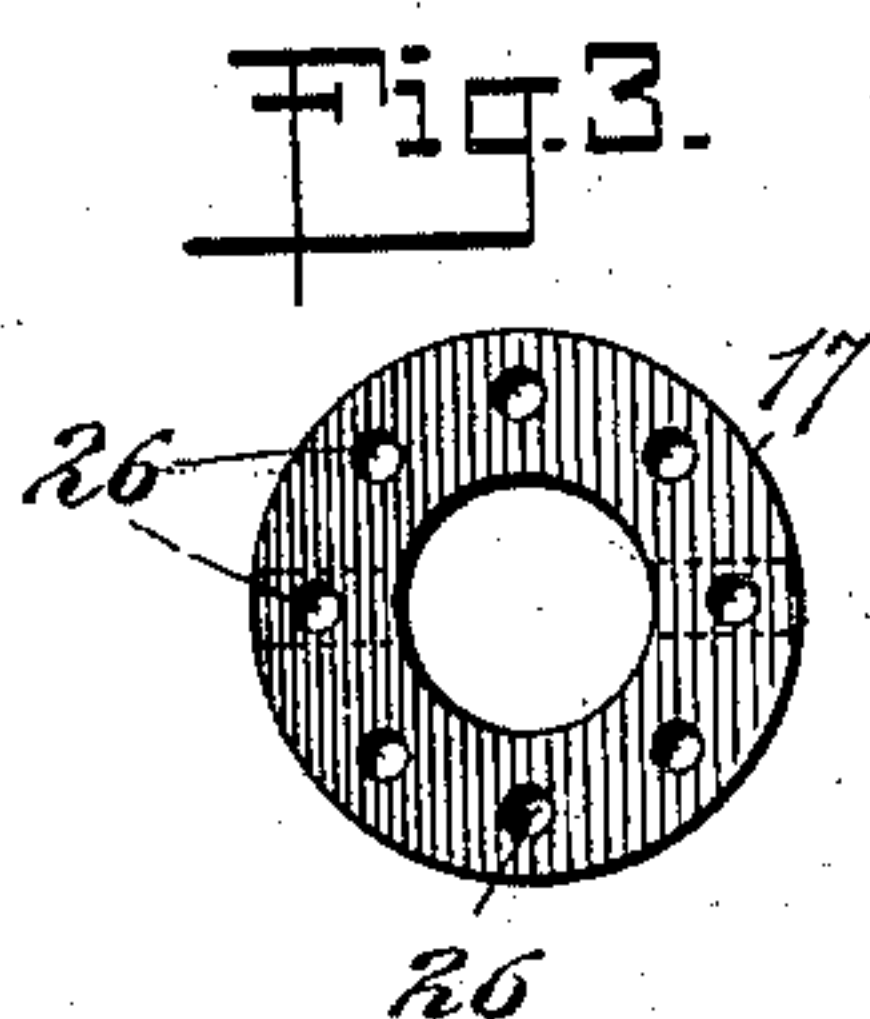
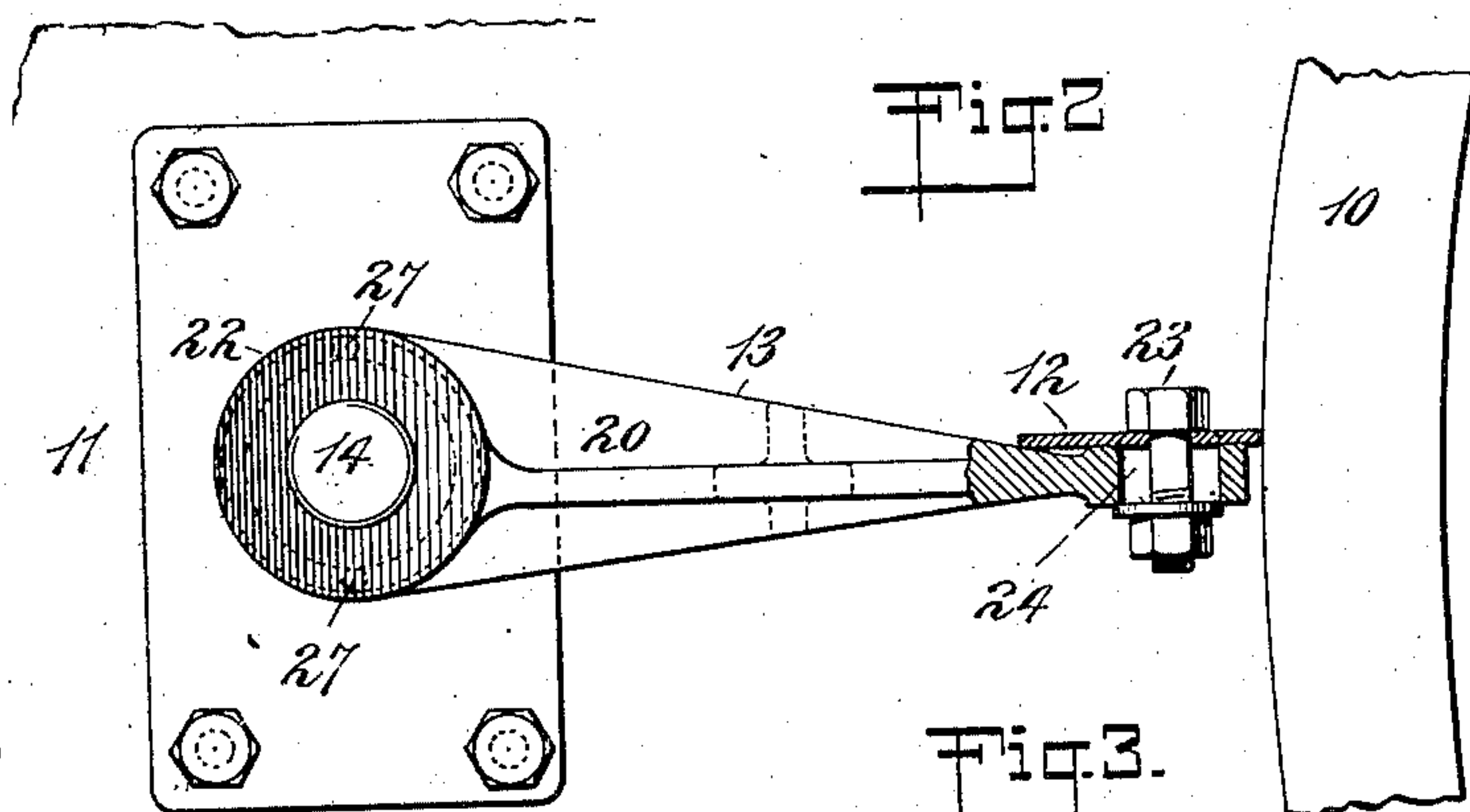
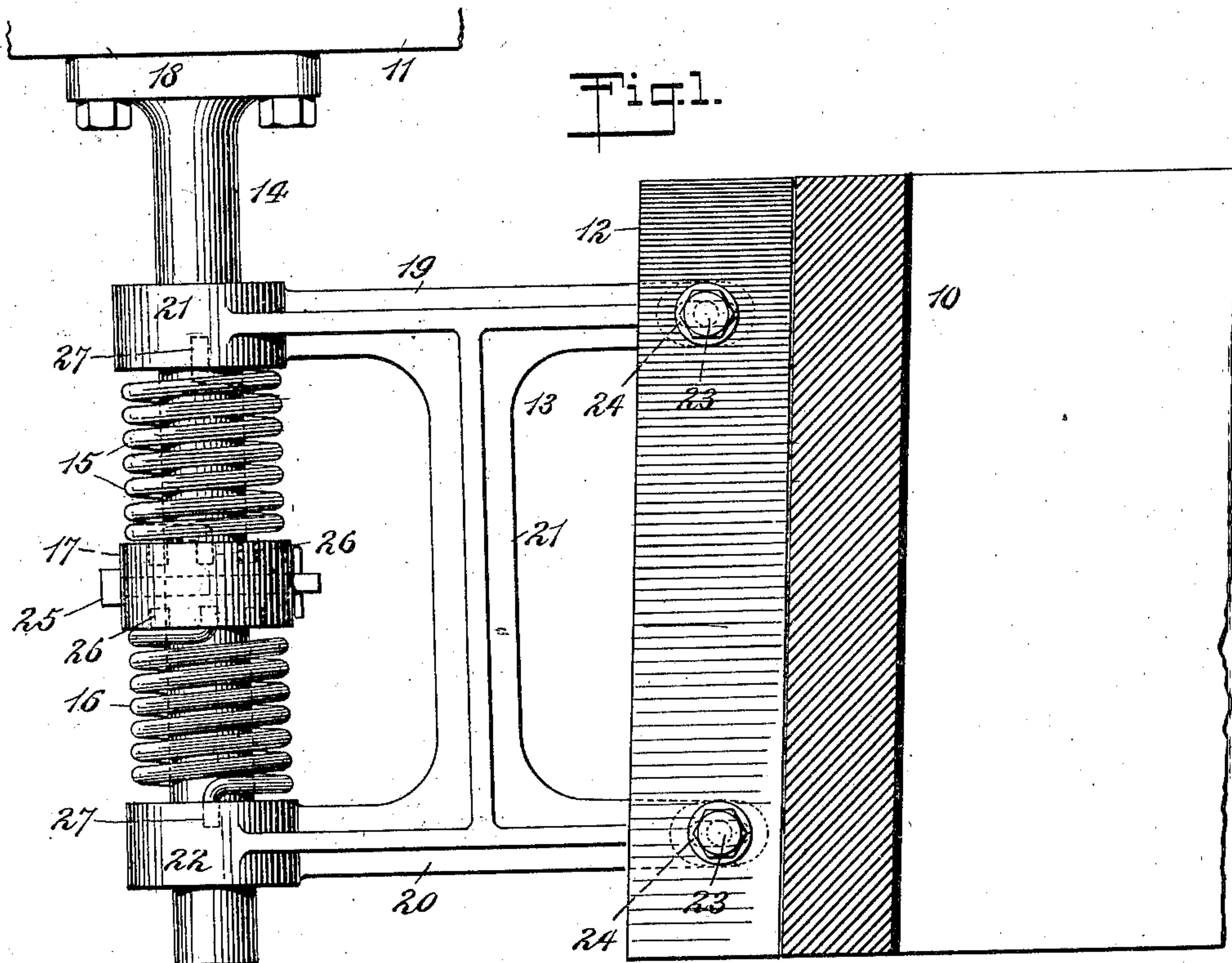


No. 705,123.

Patented July 22, 1902.

W. C. OASTLER.
SCRAPER OR CLEANER FOR WHEELS.
(Application filed May 12, 1902.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM CHURCHILL OASTLER, OF NEW YORK, N. Y.

SCRAPER OR CLEANER FOR WHEELS.

SPECIFICATION forming part of Letters Patent No. 705,123, dated July 22, 1902.

Application filed May 12, 1902. Serial No. 106,917. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CHURCHILL OASTLER, a subject of the King of Great Britain, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Scrapers or Cleaners for Wheels, of which the following is a specification.

The invention relates to improvements in scrapers or cleaners for wheels—such, for illustration, as the wheels of steam road-rollers and the like; and said invention consists in the novel features and combinations of parts hereinafter described, and particularly pointed out in the claims.

The object of my invention is to produce a scraper-blade which may turn upwardly or downwardly when met by an irresistible obstruction carried by the wheel and which is yieldingly held with sufficient firmness to clean the wheel of such usual matter as may cling to the same.

The invention and satisfactory means for carrying the same into effect will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of a scraper-blade constructed in accordance with and embodying my invention, the same being shown in its relation to the periphery of a wheel of a road-roller, a portion only of said wheel being illustrated and being shown in section. Fig. 2 is a side elevation, partly in section, of same; and Fig. 3 is a detached side elevation of a collar forming one feature of the structure.

In the drawings, 10 designates a portion of a usual wheel; 11, the line of the side frame of a road-roller; 12, the scraper-blade proper; 13, a frame supporting the same, and 14 a bracket-rod upon which said frame 13 is pivotally mounted and around which are the oppositely-coiled springs 15 16, connected at one end to a fixed collar 17 on said rod and at their other end to said frame 13.

The rod 14 is simply a plain straight horizontal cylindrical rod having at its inner end a flange or bracket 18 of suitable character to conveniently enable the securing of the said rod to the side frame 11 or other support.

The frame 13 is preferably in the form of

an integral casting comprising the side arms 19 20, connected by a transverse bar 21 and carrying at their outer ends the blade 12, while at their inner ends said arms are formed with the hubs 21 22, loosely fitting upon the rod 14. The upper surfaces of the outer ends of the arms 19 20 are flat, and upon these surfaces is placed the blade 12, which is held in place by means of bolts 23, the latter passing through apertures in said blade and elongated slots 24 in said arms. The presence of the slots 24 enables the blade 12 as its edge becomes worn away to be adjusted toward the wheel 10, and the manner shown of securing the blade 12 enables it after its outer edge has become so worn that it cannot further be adjusted toward the wheel 10 to be reversed, so that its inner edge may become its outer edge and be presented to the wheel, the full usefulness of the blade being thus secured.

Upon the rod 14, intermediate the hubs 21 22 of the frame 13, is detachably secured the collar 17 by means of a pin 25, extending through said collar and rod, and said collar is provided in its opposite sides with the series of apertures 26 to receive the inner or adjoining ends of the coiled springs 15 16, whose outer ends enter apertures 27 in the aforesaid hubs 21 22. The collar 17 is fixed upon the rod 14 by a removable pin 25 as a matter of convenience and because upon the removal of the pin the collar may be turned upon the rod 14 for winding or unwinding either of the springs 15 16 when it is necessary to do so, either for adjusting the tension of the springs with respect to each other for equalizing their force or for other purpose. The series of apertures 26 are provided in the opposite sides of the collar 17 for conveniently receiving the ends of the springs 15 16 and permitting of the independent adjustment of the springs to a greater or less tension, the series of apertures 26 assuring the presence of apertures in proper position to receive the ends of the springs under all conditions.

The springs 15 16 are under tension and, being reversely coiled, oppose each other, one spring tending to turn the frame 13 and blade 12 in one direction, as downward, and the other spring exerting its force to turn said frame and blade in the opposite direction, or

upward. The springs 15 16 should, as nearly as possible, be equalized as to their tensions.

When the parts comprising the scraper-blade structure are in their operative relation to each other, the frame 13 and blade 12 are maintained in a horizontal position by means of the opposing springs 15 16, which yielding hold said frame and allow the same to turn on the rod 14 under proper conditions. The springs 15 16 cannot slip around the rod 14, because they are held at their inner ends by the collar 17, which is fixed on the shaft by the pin 25. When, however, it may be desired that the scraper-blade structure shall hang vertically downward from the rod 14 in an inoperative position, the pin 25 will be withdrawn, and thereupon the frame, blade, collar, and springs may turn freely upon the rod 14. The diameter of the rod 14 should be such as to enable the winding of the springs 15 16; otherwise the frame 13 would, in effect, be rigidly instead of yieldingly held.

The presence of the two opposing springs 15 16 enables the blade 12 to act whether the road-roller is moving forward or backward. During the forward travel of the wheel the blade 12 and frame 13 may yield upwardly upon an irresistible obstruction on the wheel striking said blade, the spring 16 then being wound more tightly by reason of its connection with the hub 22 of said frame, and during the reverse travel of said wheel the blade 12 and frame 13 may yield downwardly upon such obstruction striking the blade, the spring 15 then being wound, owing to its connection with the hub 21 of said frame. The blade 12 may thus yield to such obstructions on the wheel as might otherwise break it, whether the wheel is moving forward or backward.

The parts composing the scraper-blade structure are, as will be seen, without complication, and the structure as a whole is efficient and durable.

In some instances the springs need not be under an initial tension—as, for instance, where they are of sufficient normal strength to support the frame 13 and to yield only when obstructions are carried against the edge of the blade 12.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The scraper for wheels comprising the frame having and carrying at its outer end the scraper-blade, and the bracket-rod supporting said frame and upon which the same is adapted to turn, combined with the opposing springs connected with and maintaining

said frame and blade in operative position, and means for connecting said springs at one end to said rod; substantially as set forth.

2. The scraper for wheels comprising the frame having and carrying at its outer end the scraper-blade and provided at its inner end with the hubs 21, 22, and the bracket-rod passing through said hubs and upon which said frame is adapted to turn, combined with the collar on said rod, and the reversely-coiled springs connected at one end to said frame and at the other end to said collar; substantially as set forth.

3. The scraper for wheels comprising the frame having and carrying at its outer end the scraper-blade and provided at its inner end with the hubs 21, 22, and the bracket-rod passing through said hubs and upon which said frame is adapted to turn, combined with the collar on said rod, means for detachably securing said collar, and the reversely-coiled springs on said rod at opposite sides of said collar, said springs at their outer ends being connected with said frame and at their inner ends with said collar; substantially as set forth.

4. The scraper for wheels comprising the frame having and carrying at its outer end the scraper-blade and provided at its inner end with the hubs 21, 22, and the bracket-rod passing through said hubs and upon which said frame is adapted to turn, combined with the collar on said rod and having the series of apertures in its opposite sides, means for detachably securing said collar, and the reversely-coiled independent springs on said rod at opposite sides of said collar, said springs at their outer ends being connected with said frame and at their inner ends held in said apertures; substantially as set forth.

5. The scraper for wheels comprising the frame, the reversible scraper-blade at the outer end thereof, means for detachably securing said blade in position, and the rod supporting said frame and upon which the same is adapted to turn, combined with the opposing springs connected with and maintaining said frame and blade in operative position, and means for connecting said springs at one end to said rod; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 10th day of May, A. D. 1902.

WILLIAM CHURCHILL OASTLER.

Witnesses:

CHAS. C. GILL,
ARTHUR MARION.