

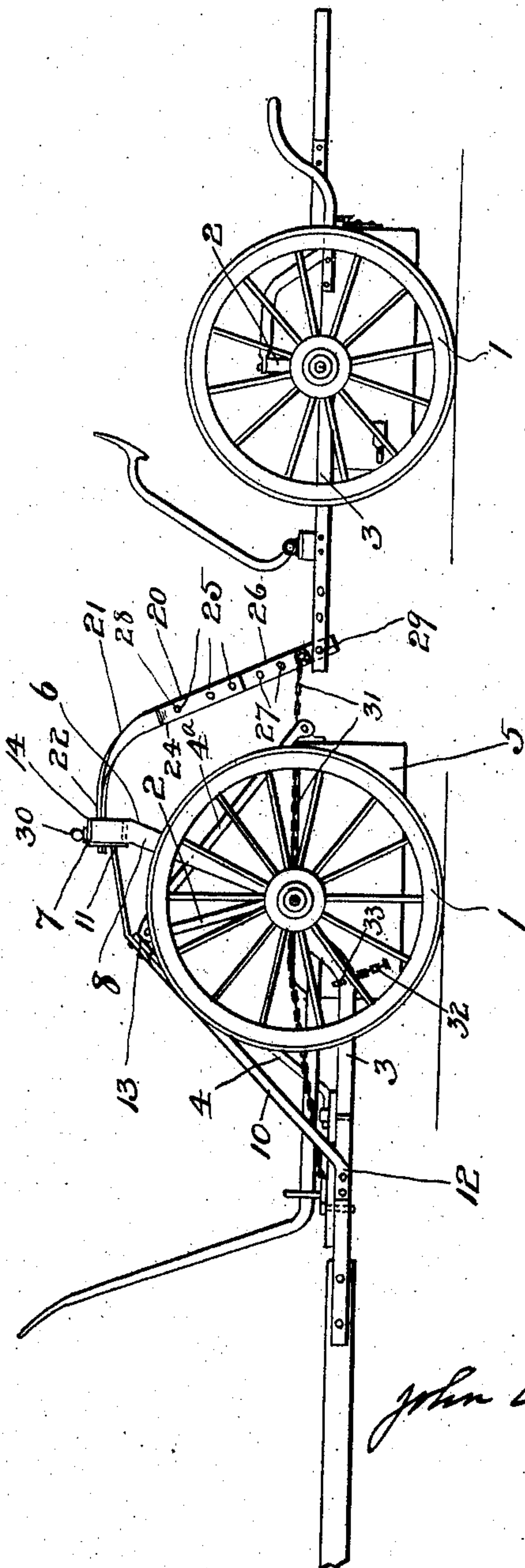
No. 846,652.

PATENTED MAR. 12, 1907.

J. ENGBRETSSEN.
COUPLING FOR SCRAPERS.
APPLICATION FILED SEPT. 22, 1905.

2 SHEETS—SHEET 1.

Fig. 1.



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Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

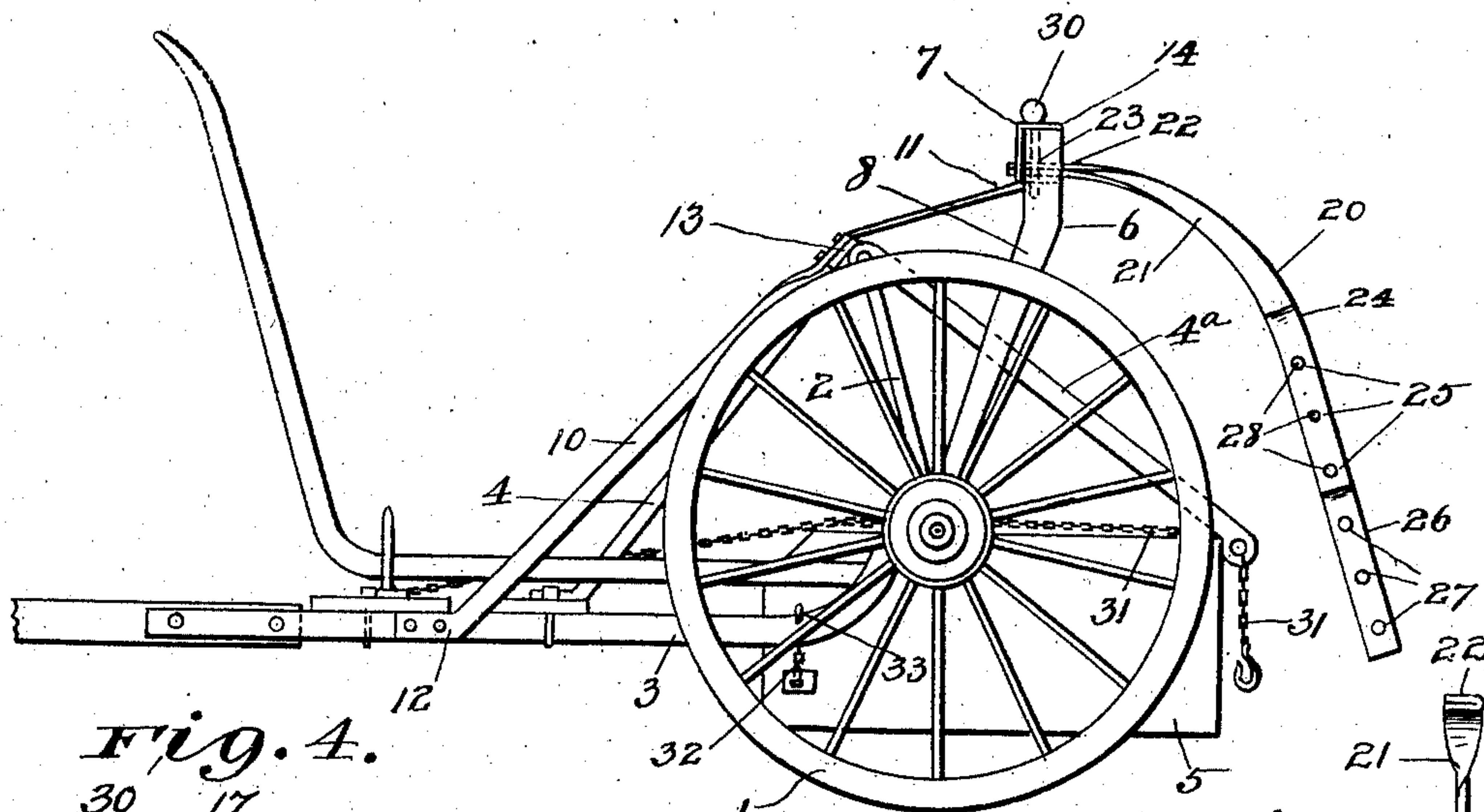


Fig. 4.

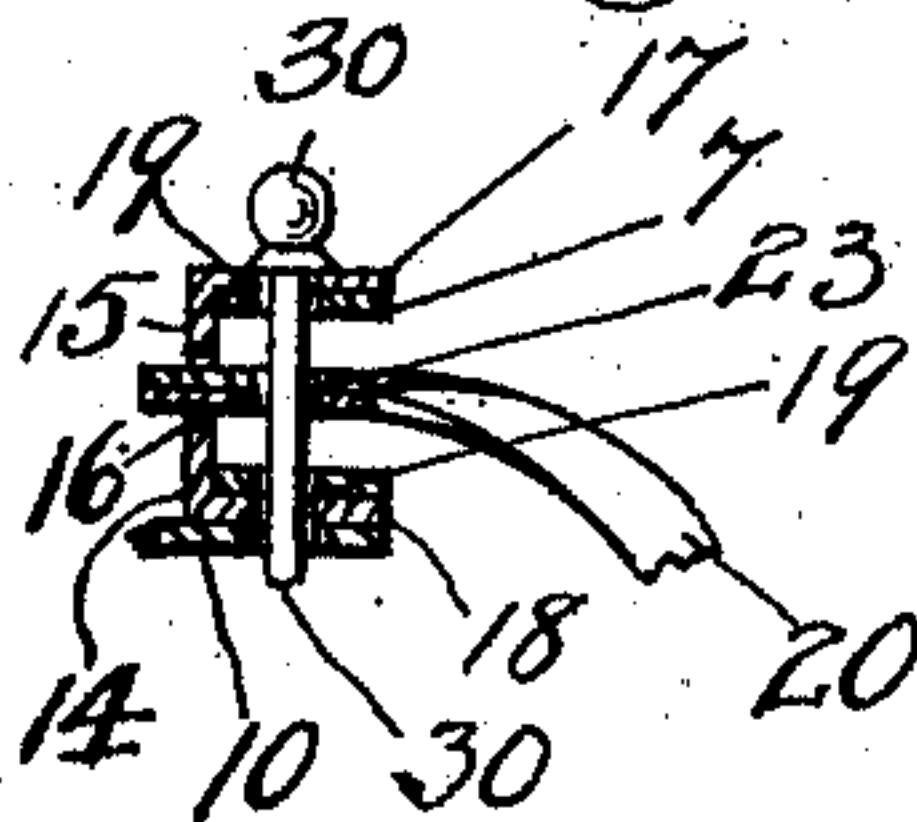


Fig. 5.

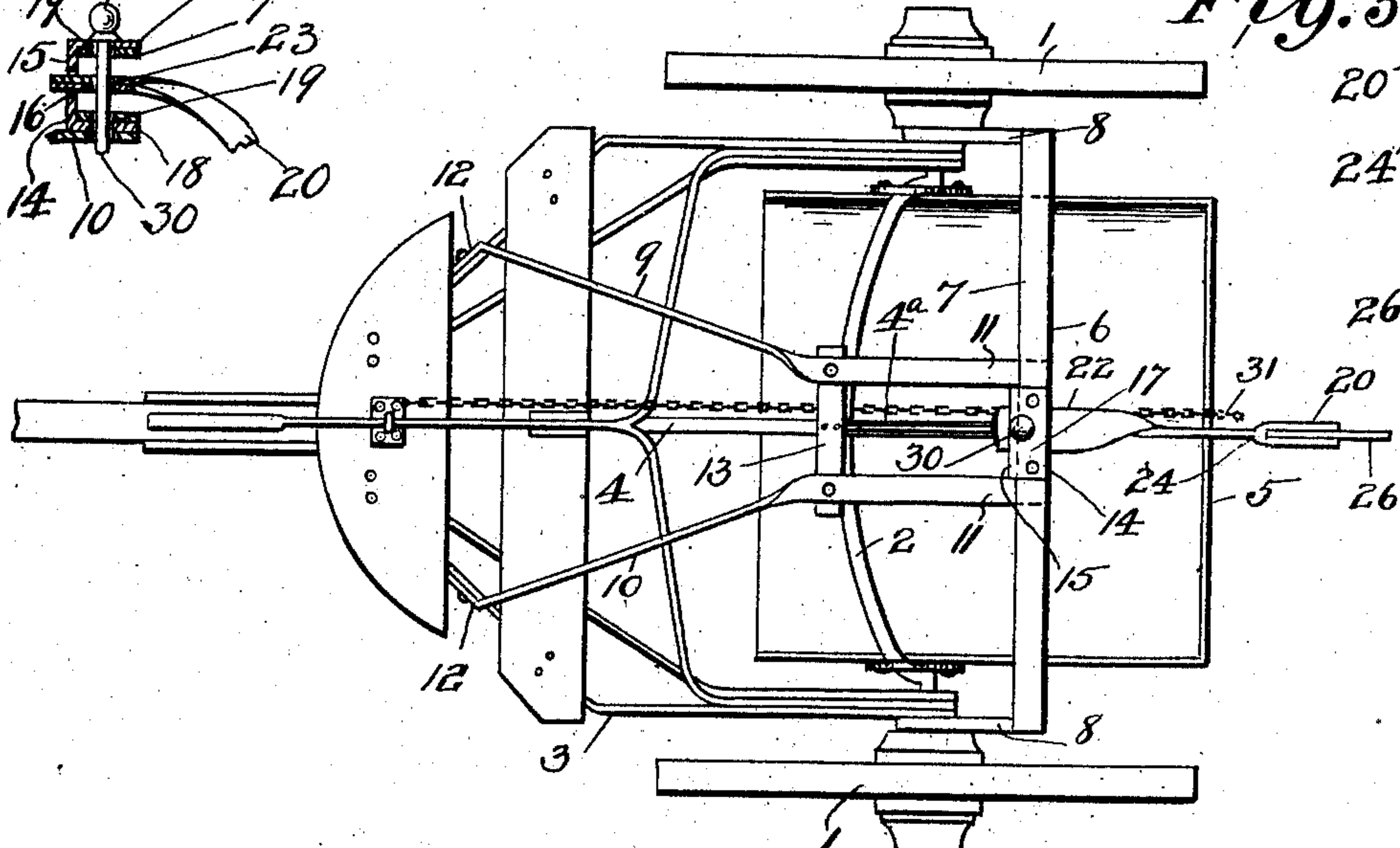
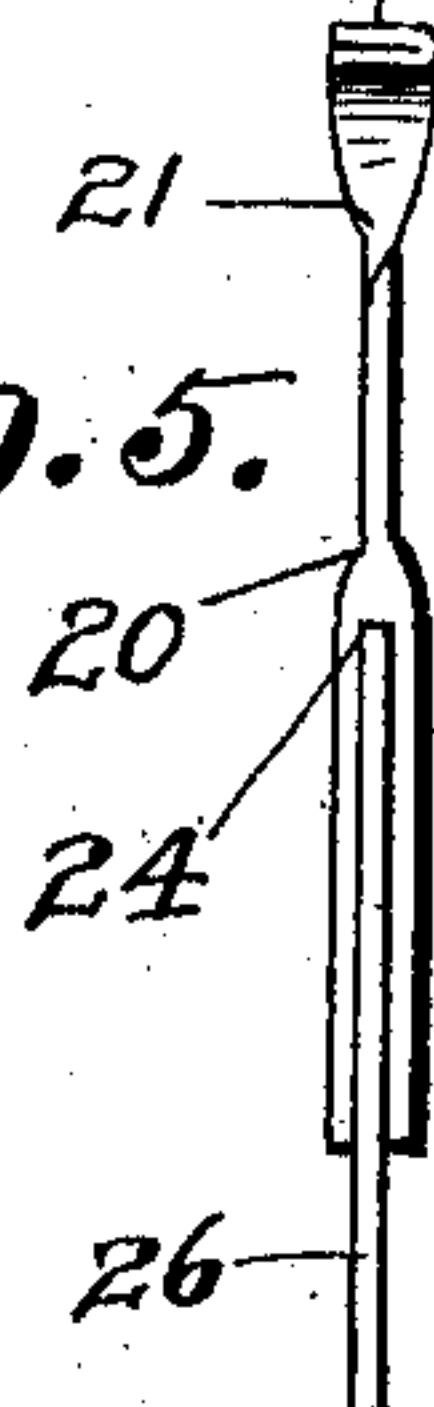


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN ENGBRETSSEN, OF SAN DIEGO, CALIFORNIA.

COUPLING FOR SCRAPERS.

No. 846,652.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed September 22, 1905. Serial No. 279,686.

To all whom it may concern:

Be it known that I, JOHN ENGBRETSSEN, a citizen of the United States, residing at San Diego, in the county of San Diego, State of California, have invented certain new and useful Improvements in Couplings for Scrapers; and I do 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 pertains to make and use the same.

My invention relates to an improvement in couplings for wheeled scrapers for use more especially in grading, excavating cellars, &c., and has for its object the provision of means whereby two or more wheeled scrapers can be coupled together.

It also has for its object to provide a coupling which will be simple, inexpensive, and durable in construction and by the use of which the cost of grading will be greatly reduced.

My invention consists in the construction, combination, and arrangement of the several features, as more fully hereinafter described and claimed.

On a short haul the contractor uses only the front scraper. On a long haul he couples on the rear scraper and moves along with it, giving him the chance to move the dirt without an additional number of teams. It is always the case in grading that the contractor on short haul will have more teams than he can manage, and some of them will have to wait before they can be loaded. On a long haul he will not have teams enough, and therefore he cannot remove as large a quantity of dirt as he could with my method of doing said work, and therefore it will be seen that one team with my method of coupling the scrapers together will do the same amount of work as two teams would do under the old method of moving earth.

Referring to the drawings, Figure 1 is a side view showing two wheeled scrapers with coupling applied thereto; Figs. 2 and 3, side and top plan views, respectively, of the front scraper and coupling; Fig. 4, a sectional view of the upper part of the coupling-bar and the bracket on which it is pivoted; Fig. 5, a rear elevation of the coupling bar and link.

In the drawings, in which similar numerals of reference denote like parts throughout the several views, 1 represents the wheels of the scrapers; 2, the arched axles; 3, frames

mounted on said axles; 4 4^a, brace-rods for said frames.

5 are the bowls of the scrapers.

6 is an upwardly-extending frame comprising a horizontal top 7 and vertical sides 8, said sides being mounted on the arched axle of the front scraper. The frame 6 is held rigidly in place by means of downwardly-extending braces 9 and 10, one end 11 of each of said braces secured to the top of the frame 6 and the opposite ends 12 of each of said braces secured to the frame 3 of the front scraper, 13 being a cross-piece connecting said braces near their upper ends and secured to the rod 4. A bracket 14 is bolted or otherwise secured to the frame 6 at the center thereof and comprises a vertical portion 15, having an aperture 16 therein, and rearwardly-extending horizontal portions 17 and 18, each provided with a hole 19.

The coupling-bar 20 comprises a curved member 21, bent over laterally upon itself at the upper end and forming a horizontal portion, as shown at 22, and provided with an eye 23 therethrough, and the lower end of said bar being turned into a vertical plane and forked, as shown at 24, and provided with a series of holes 25.

26 is a link provided with a series of holes 27, two or more of which are adapted to register with two or more of the holes 25 of the coupling-bar 20 and secured by means of bolts 28 thereto, the said links being secured to the front end of the frame 3 of the rear scraper by means of a bolt 29, secured in any of the holes 29^a in said frame.

The upper end of the coupling-bar 20 projects a short distance through the aperture 16 of the bracket 14 and is pivoted to said bracket and frame 6 in such a manner that it can move freely without interfering with the frame 6 or the bowl of the scraper by means of a pin 30, which is passed through the holes 19 and the eye 23 of the bar.

By adjusting the link 26 in the fork 24 the length of the coupling-bar may be changed to accommodate scrapers of different heights, and by adjusting the lower end of the link on the frame 3 the distance between the scrapers may be varied.

To relieve and supplement the strain on the coupling-bar, a chain 31 may be employed, one end attached to the front or leading scraper and then after passing rearwardly

over the bowl of the scraper and the other end attached to the other scraper.

Small lengths of chain 32 are attached to the opposite sides of the bowls at one end and the opposite end provided with a hook 33 to hook over the frame 3 of the scraper for the purpose of preventing the bowl from tipping when loading; but after loading they are designed to be detached from the frame 3.

The frame for the attachment of the coupling-bar on the front scraper does not interfere in any way with the operation of the scraper, and when the coupling-bar is detached the front and rear scrapers can be used separately.

Although I have shown the coupling-bar applied to a wheeled scraper, it may be used equally as well on other forms of scrapers without wheels.

I do not desire to be understood as limiting myself to the specific details of construction and arrangement as herein described and illustrated, as it is manifest that variations and modifications may be made in the features of construction and arrangement on the adaptation of the device to various conditions of use without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variations and modifications as properly fall within the scope of my invention and the terms of the following claims.

What I claim is—

1. A coupling for scrapers comprising a bar having an eye at one end and forked at the opposite end and means for attaching said bar to the scrapers, substantially as described.

2. A coupling for scrapers comprising a curved bar having an eye at one end and its opposite end provided with an adjustable link and means for attaching said bar to the scrapers, substantially as described.

3. A coupling for scrapers comprising a curved bar having an eye at one end and forked at its opposite end and provided with an adjustable link and means for attaching said bar to the scrapers, substantially as described.

4. A coupling for scrapers comprising a bar made in two parts one of said parts adjustable on the other for the purpose of adjusting the length of said bar and means for attaching said bar to the scrapers, substantially as described.

5. A coupling for scrapers comprising a frame designed to be attached to a scraper, a bar pivoted to said frame at one end and its opposite end designed to be attached to a

scraper at the rear of the first-named scraper, substantially as described.

6. A coupling for scrapers comprising a frame designed to be attached to a scraper, braces for said frame, a bracket attached to said frame having holes, a pin, a bar pivoted to said frame at one end by said pin, substantially as described.

7. A coupling for scrapers comprising a frame designed to be attached to a scraper, a bar pivoted to said frame at one end and its opposite end designed to be adjusted lengthwise, substantially as described.

8. A coupling for scrapers comprising a frame designed to be attached to a scraper, and provided with a bracket, a bar provided with an eye, and a pin for pivoting said bar to said bracket, substantially as described.

9. A coupling for scrapers comprising a frame designed to be mounted on the axle of a scraper, braces connecting said frame with the frame of a scraper, a bracket mounted on said first-named frame and provided with upper and lower horizontal portions, having holes therein, a bar having an eye at one end, and a pin designed to engage the holes in the bracket and the eye in the bar and thereby pivot the bar to said bracket, and the opposite end of said bar provided with means for adjusting its length, substantially as described.

10. A coupling for scrapers comprising a bar turned laterally upon itself at the upper end and provided with an eye, and forked at its lower end and provided with an adjustable link and means for attaching said bar to the scrapers, substantially as described.

11. A coupling for scrapers comprising a bar the upper portion of which is in a horizontal plane and the lower portion in a vertical plane and adjustable lengthwise and means for attaching said bar to the scrapers, substantially as described.

12. A coupling for scrapers comprising a bar having its lower end adjustable as to length and means for supplementing the strain on said bar, substantially as described.

13. A coupling for scrapers comprising a bar having its lower end adjustable as to length and a chain for supplementing said bar, substantially as described.

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

JOHN ENGBRETSSEN.

Witnesses:

A. HAINES,
H. DALE.