

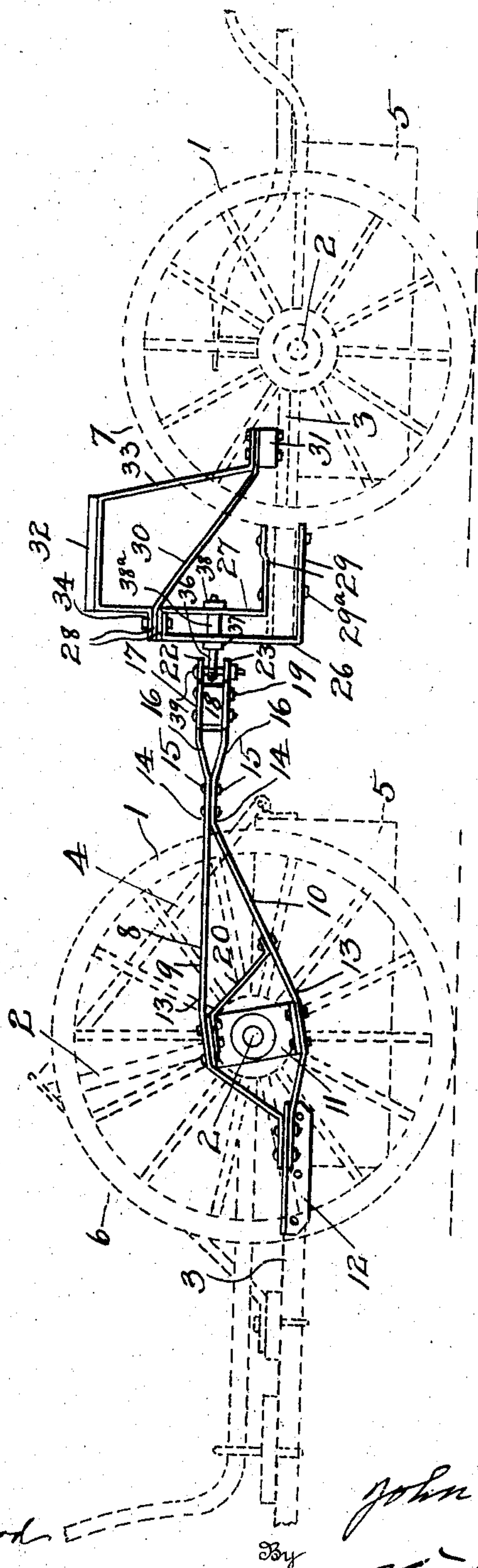
No. 846,653.

PATENTED MAR. 12, 1907.

J. ENGBRETSSEN.  
COUPLING FOR SCRAPERS.  
APPLICATION FILED MAR. 10, 1906.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses  
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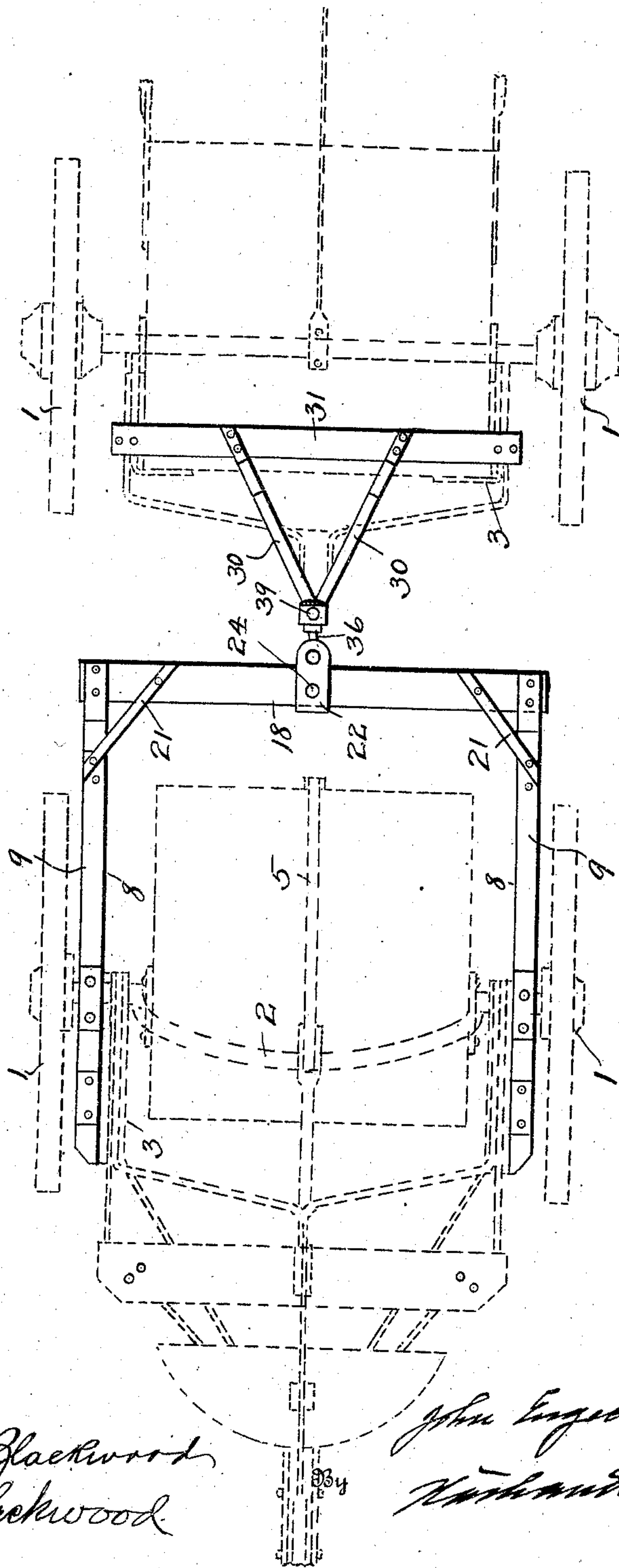
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3 SHEETS—SHEET 2.

Fig. 2.



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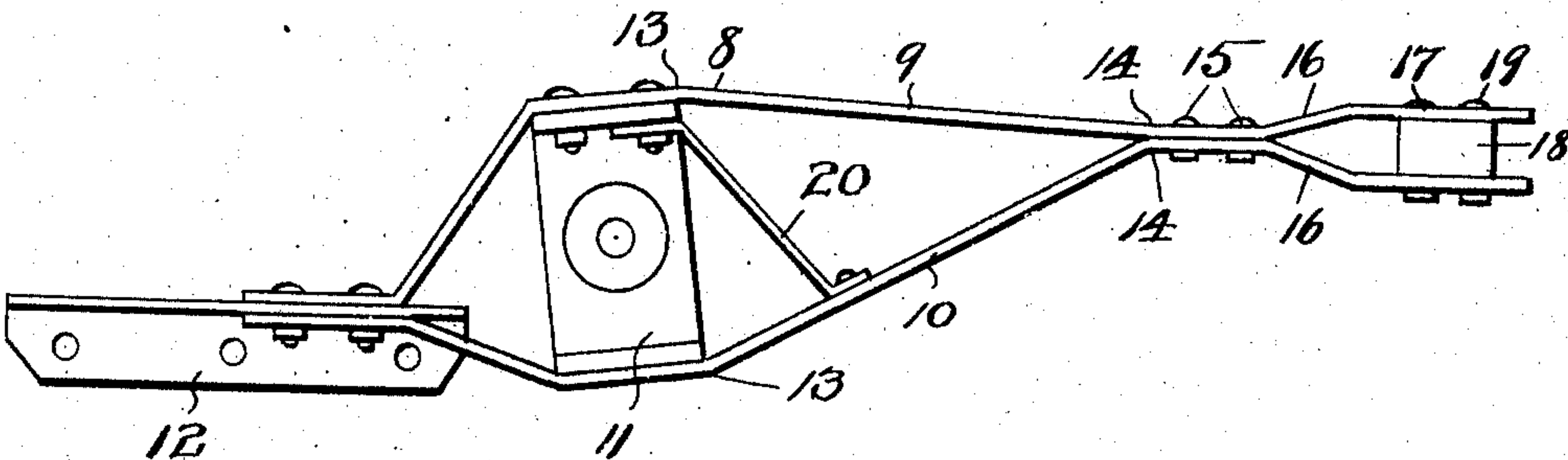
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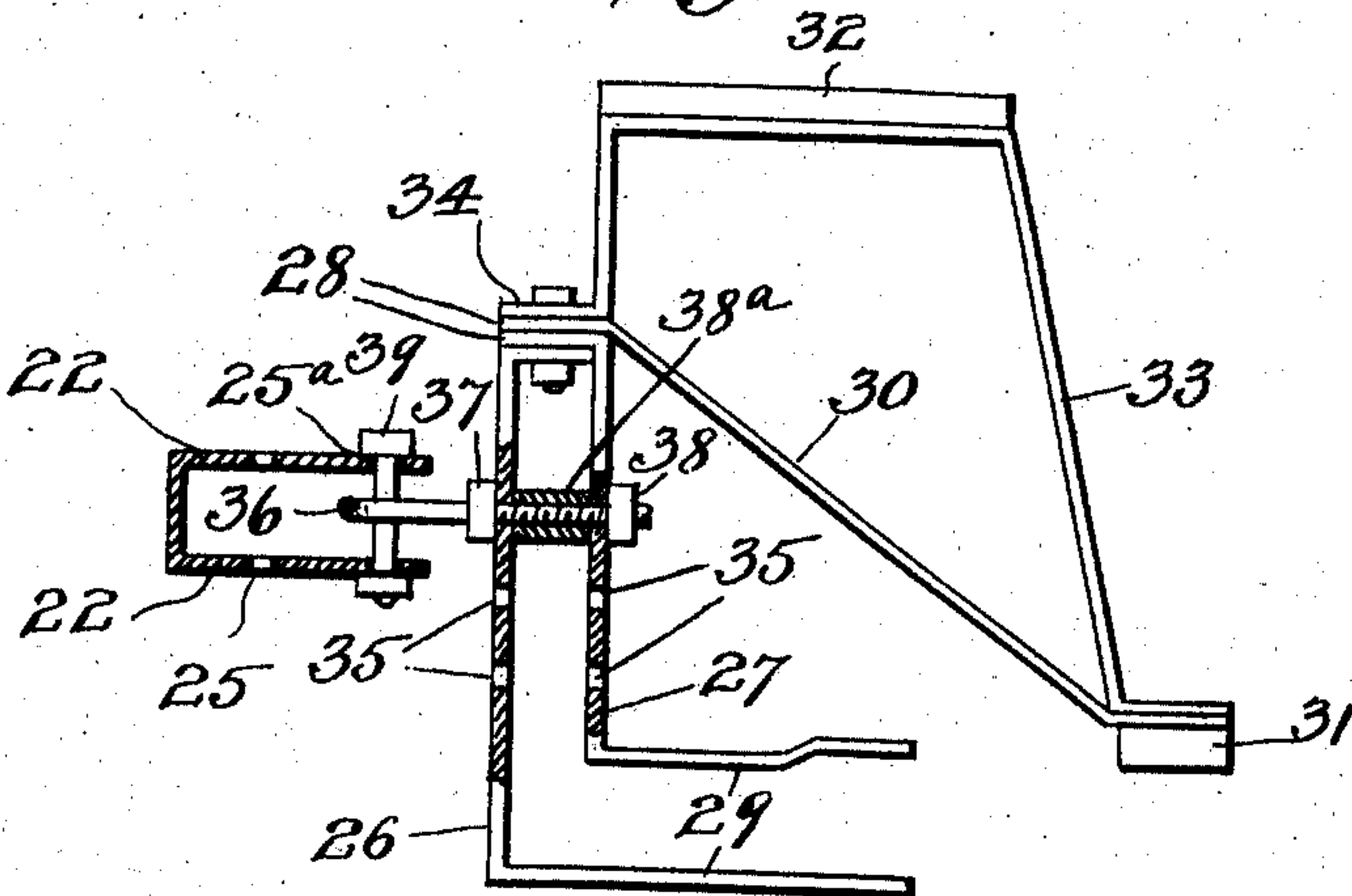
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3 SHEETS—SHEET 3.

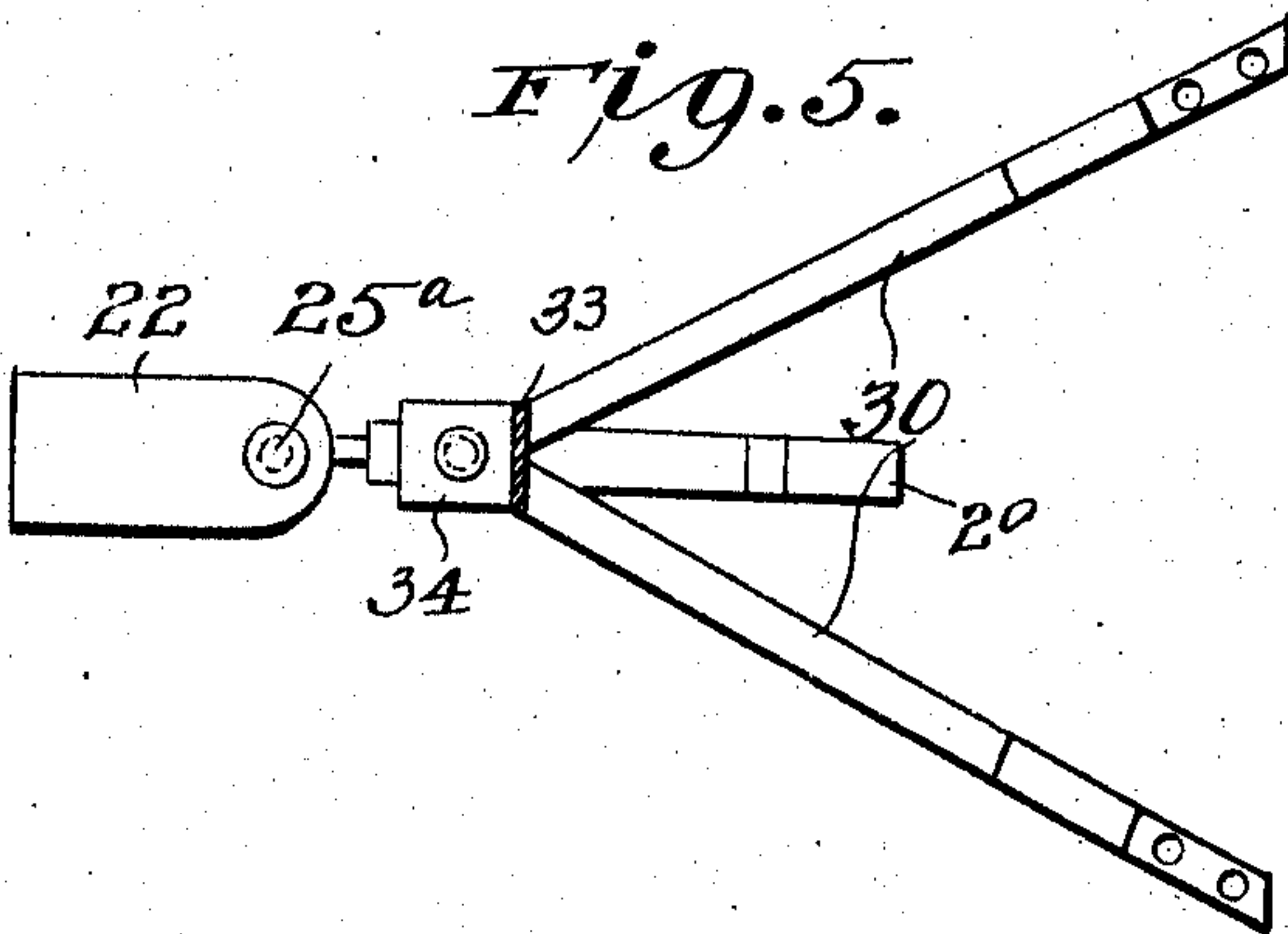
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN ENGBRETSSEN, OF SAN DIEGO, CALIFORNIA.

## COUPLING FOR SCRAPERS.

No. 846,653.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed March 10, 1906. Serial No. 305,334.

*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 improvements 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 may be coupled together.

It also has for its object to provide a coupling which will be simple, inexpensive, strong, 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 a 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. Fig. 2 is a top plan view; Fig. 3, a side view, on an enlarged scale, of that portion of the coupling carried by the front scraper with the seat and standards removed; Figs. 4 and 5, side and top plan views, respectively, on an enlarged scale, of that portion of the coupling carried by the rear scraper, the seat and standards removed in Fig. 5.

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, brace-rods; 5, the bowls of the scrapers.

6 is the front scraper, and 7 the rear scraper. One member of the coupling by which the said scrapers are adapted to be connected together comprises two side frames 8, having upper and lower members 9 and 10, respectively, each of said frames being the duplicate of the other and each provided with a block 11, to which said members are bolted, said block having lateral flanges at top and bottom and mounted on the axle 2 of the front scraper 6, between the hubs of the wheels and the frame 3, said frames being bolted or otherwise secured to brackets 12, which in turn are secured to the sides of the frames 3.

The upper and lower members 9 and 10 of the frames 8 slant inward, as shown at 13, and meet and are bolted together at point 14 by means of bolts 15. They are then bent outward, as at 16, and form a fork 17, and 18 is a bar which is secured in the forks 17 by means of bolts 19 or by any other manner. A brace 20 connects the lower member 10 of the frame 8 with the upper end of the block 11, and corner-braces 21 connect the upper members 9 with the bar 18. A U-shaped bracket having upper and lower arms 22 and 23, respectively, is placed over the bar 18 at approximately its center and secured thereon by means of a bolt 24, said bracket being provided with a hole 25 in each of its arms 22 and 23. The other member of the coupling, which is adapted to be secured to the frame of the rear scraper 7, comprises brackets 26 and 27, each having top and bottom lateral flanges 28 and 29, respectively, the bottom flange 29 of the bracket 26 being bolted to the frame of the scraper by bolts 29<sup>a</sup> and the bracket 27 having its top flange 28 seated and secured on the top of the flange of bracket 26, and its bottom flange is bolted to the frame of the scraper. A forked brace connects with the top flanges of both of the brackets 26 and 27 at one end and at its opposite end is connected to a cross-bar 31, mounted on the frame 3 of the scraper. A seat 32 is mounted on standards 33, having flanges 34 secured on the top of the forked brace 30 and on the top of the bar 31. The brackets 26 and 27 are each provided with a series of holes 35, which are in alignment with each other, and 36 is a screw-eyebolt which is inserted in the holes 35 of the brackets 26 and 27, and 37 and 38 are nuts for retaining



said screw-eyebolt in place, 38<sup>a</sup> being a sleeve mounted on the eyebolt between brackets 26 and 27 for the purpose of spacing them apart the proper distance. It will be  
 5 seen that by having the series of holes in the brackets the screw-eyebolt can be adjusted to compensate for scrapers of different height.

39 is a coupling-pin for connecting the two members of the coupling, which is passed  
 10 through a hole 25 in each of the arms 22 and 23 and through the eyebolt 36. 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  
 15 wheels.

I do not desire to be understood as limiting myself to the specific details of construction and arrangement as herein described and illustrated, and it is manifest that variations  
 20 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 improve-  
 25 ments. 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—

30 1. A coupling for scrapers, comprising a pair of frames secured to a scraper, a bar connecting said frames, and means on said bar for connecting it with another scraper, substantially as described.

35 2. A coupling for scrapers comprising a pair of frames mounted on the axle of a scraper and connected together by means of a bar, brackets on another scraper, and means for connecting said bar with said  
 40 bracket, substantially as described.

3. A coupling for scrapers comprising a frame connected to a scraper and provided with a bracket, a bracket on another scraper, and means for connecting said frame and  
 45 bracket, substantially as described.

4. A coupling for scrapers comprising a pair of frames having upper and lower members connected together and forked at their ends, a bar seated on said forked ends, a  
 50 bracket mounted on said bar, brackets provided with an eyebolt and a pin for connect-

ing the bracket on said bar with the eyebolt, substantially as described.

5. A coupling for scrapers comprising frames designed to be mounted on a scraper, 55 means for connecting said frames, brackets designed to be mounted on a second scraper, and means for connecting said frames and brackets by which said scrapers are coupled together, substantially as described. 60

6. A coupling for connecting two or more scrapers together comprising frames provided with blocks which are mounted on the axle at each side of one of the scrapers, a bar connecting said frames, and a coupling 65 mounted on the other scraper designed to be connected with the bar of the first-named scraper, substantially as described.

7. A coupling for connecting two or more scrapers together comprising frames provided with blocks which are mounted on the axle at each side of one of the scrapers, a bar connecting said frames, a bracket mounted on said bar, brackets mounted on the other scraper, provided with a vertically-adjust- 75 able eyebolt, and a pin for connecting the bracket on said bar with the eyebolt, substantially as described.

8. A coupling for connecting two or more scrapers together comprising frames mount- 80 ed on the axle at each side of one of the scrapers, a bar connecting said frames, a bracket mounted on said bar, brackets mounted on the other scraper each provided with a series of holes, a coupling member designed to be adjusted vertically by being inserted into said holes, and means for pivotally connecting the bracket on the bar of the first-named scraper with the coupling member of the last-named scraper, substantially 90 as described.

9. In a coupling for scrapers, a frame on one scraper, a bracket on the other scraper and means for connecting said frame and bracket, substantially as described. 95

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

JOHN ENGBRETSSEN.

Witnesses:

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 J. CLYDE HIZAR.