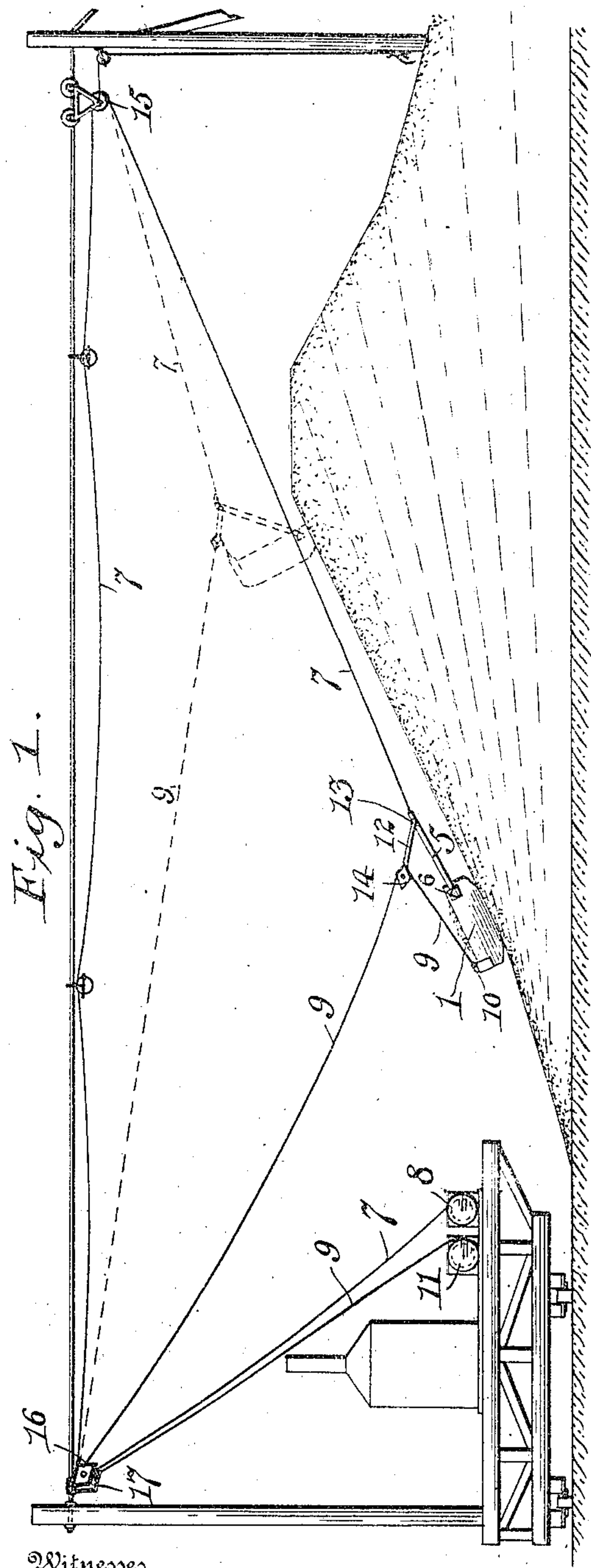


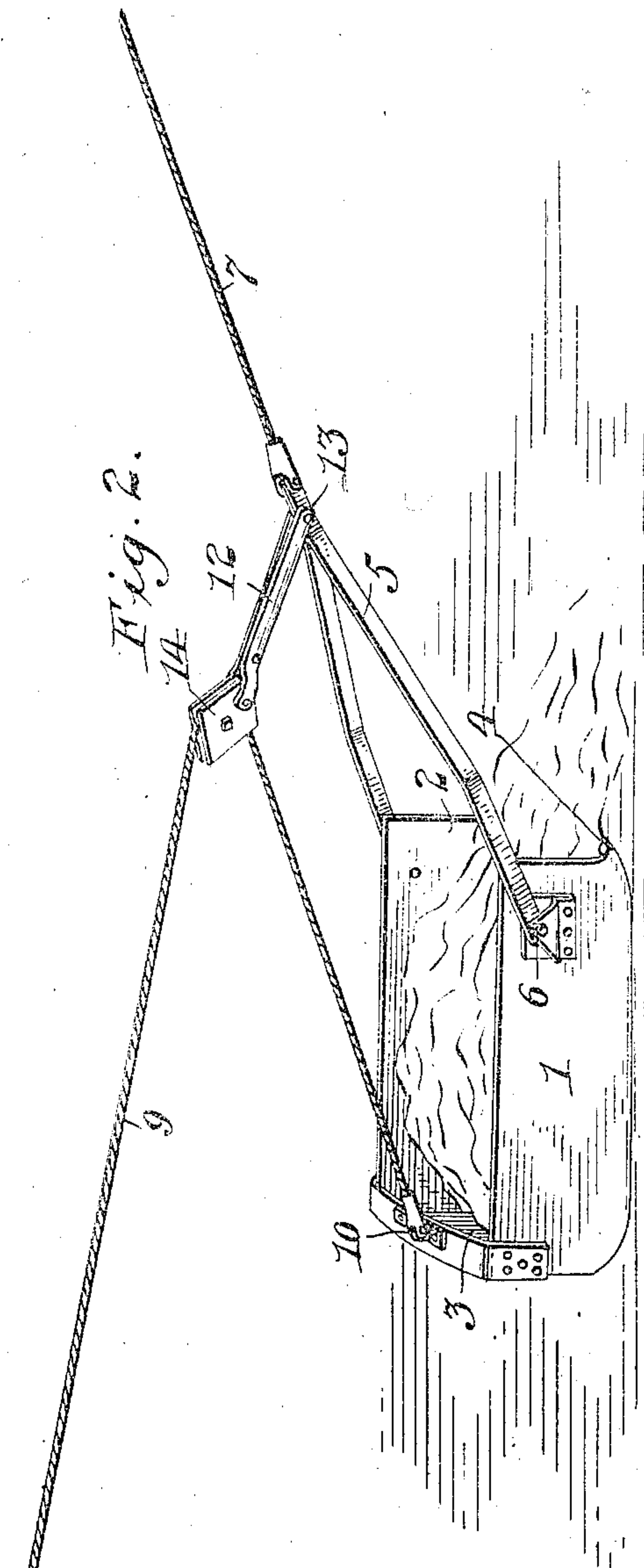
976,163.

2 SHEETS-SHEET 1.



Witnesses

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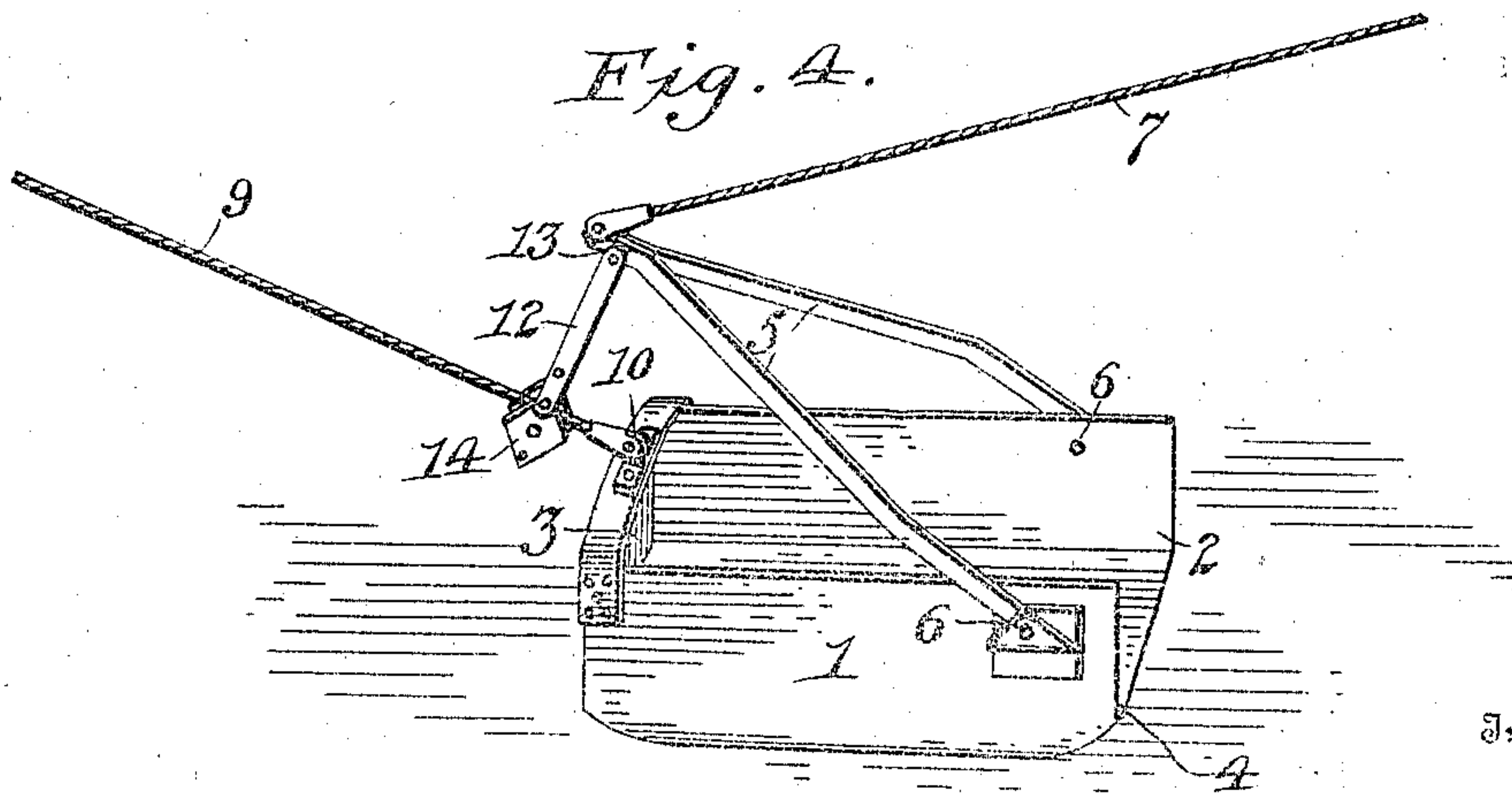
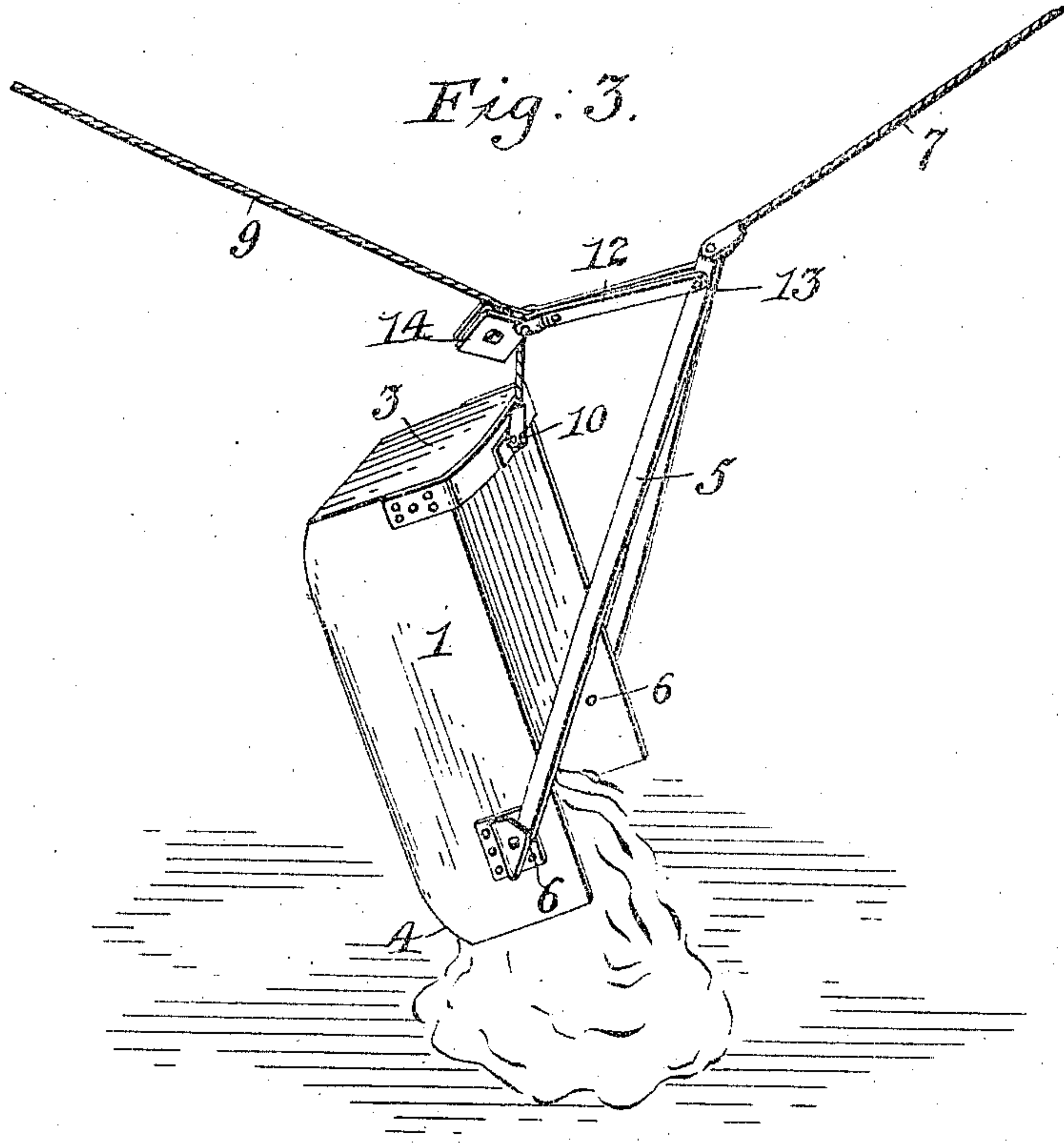
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H. L. GLAZE.
SCRAPER BUCKET.
APPLICATION FILED MAR. 13, 1909.

976,163.

Patented Nov. 22, 1910.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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SCRAPER-BUCKET.

976,163.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed March 13, 1909. Serial No. 483,135.

To all whom it may concern:

Be it known that I, HERBERT L. GLAZE, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Scraper-Buckets, of which the following is a specification.

This invention relates to improvements in scraping buckets and particularly to that class of buckets which is capable of automatic control in the scraping and dumping operations.

The bucket forming the subject of the present invention is particularly designed to slide upon the ground or upon mounds or dykes of the material to be operated upon, so as to scoop up such material and carry it to any point where it is desired to deposit it. It is the object of the invention to so construct such a scraping bucket that it can be made to scrape or to dump at any point within the range of its movement.

With these and other objects in view, the invention consists in certain novel constructions, combinations and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawing, forming a part of this specification:—Figure 1 is a side elevation of the improved dumping scraper bucket, illustrating the means of producing the scraping operation and the dumping operation through the agency of head and tail lines or cables. Fig. 2 is an enlarged perspective view of the scraper bucket as in position for scraping material from the ground. Fig. 3 is a similar perspective view but showing the bucket in the act of dumping its contents at a given point. Fig. 4 is also a similar perspective view, but showing the bucket when it is being drawn back to its initial position by the tail line so as to be in readiness for the next scraping operation.

The scraper of this invention is adapted for having a sliding action upon the ground or the material to be moved and is thus capable of scooping up or scraping such material and conveying it to any desired point where it can be dumped, relayed, packed or otherwise arranged as desired, at will.

In the drawings 1 indicates the scraper

bucket proper, which is open at its front end as at 2 and closed at its rear end as at 3. The front open edge of the bucket is suitably shaped to permit of the bucket being pulled forward over the ground and yet to enable it to collect or scrape the material that is to be operated upon. To this end, the forward scraping edge of the bucket is bent inwardly a little, as shown at 4.

5 indicates a bail which is pivoted at 6 near the front end of the bucket for pulling the bucket forward when scraping. A head line or cable 7 is connected with the bail and extends to any suitable source of power, as for instance a power driven winding drum as at 8.

In order to effect the dumping of the bucket and also to retract or draw back the bucket in readiness for the next scraping operation, a tail line or cable 9 is pivotally secured to the closed end 3 of the bucket, as at 10. This tail line is also extended, in practice to a power drum as 11. The cooperation of the head and tail lines 7 and 9, in producing the various actions of the bucket 1, is secured by the use of an intermediate connecting member or bar 12. The member 12 is pivoted at 13 to the bail 5 at one of its ends, while the other end of said bar or member carries a pulley 14 through which the tail line 9 is passed. The member 12 is made of such a length that when the tail line is drawn tight, the swinging end of the bail 5 will be brought quite close to the rear closed end of the bucket 1, as shown in Figs. 3 and 4.

The action of the bucket in accomplishing its purposes, is best secured when the head and tail lines are passed through pulleys that are quite widely separated, as illustrated in Fig. 1 of the drawing, where the head line 7 is shown as passing around a pulley 15 and thence backwardly toward a point to the rear of the hoisting drum 8 where it passes over another pulley 16 and thence downwardly to the said drum 8. The tail line 9, on the other hand, extends from the bucket in the opposite direction and is passed around a pulley 17 and thence to the winding drum 11. The pulleys 15 and 17 may be arranged at various distances from each other, from time to time, as found most suitable for the work in hand, but their particular manner of mounting forms no part

of the present invention and they may be supported in any desired manner.

The action of the bucket can be readily understood by an examination of the drawing. 5 With the bucket 1 in its initial position, say near the actuating drums of the head and tail lines, the drum 8 is caused to pull upon the head lines 7, the drum 11 at the same time, being permitted to run free so as to 10 allow of plenty of slack in the tail line 9. The parts will immediately assume the position shown in full lines in Fig. 1 and also as shown in Fig. 2 and a continued pulling upon the head line 7 will cause the bucket 15 to scrape up the material that is to be moved, and after the bucket is full, it will continue to slide until the point for dumping is reached. The drum 11 is next operated to exert a pull upon the tail line 9, which will 20 draw the rear end of the bucket toward the pulley 14 and thus lift it so as to permit the contents of the bucket to slide out at the forward end, as clearly illustrated in Fig. 3 of the drawing. In this operation a sufficient pull is maintained upon both the head and tail lines to slightly lift the whole 25 bucket and to raise it sufficiently to enable it to clear itself of the load. When the bucket is empty, the head line 7 is allowed to run slack and the drum 11 is caused to wind in the tail line 9 and thus return the bucket to a proper position for scraping a new load, the parts assuming the position shown in Fig. 4 of the drawing. The operations just 35 described are repeated as often as desired and as shown in dotted lines in Fig. 1, the scraped material can be deposited at any point along the line of movement of the bucket so that, the said material can be piled 40 up, packed and arranged in mounds or dykes or in any other desired manner at the will of the operator of the mechanism.

It will be seen that the bail 5 is made of a good length and preferably long enough to 45 reach slightly beyond the rear end of the bucket when the tail line is pulled upon, as illustrated in Figs. 3 and 4. On the other hand the intermediate member or bar 12 is made comparatively short and preferably 50 somewhat shorter than the length of the bucket, so as to insure the drawing of the rear end of the bucket quite close to the swinging end of the bail 5 when the bucket is being dumped. I wish it understood, 55 however, that I can vary the proportions of the parts or employ mechanical equivalents thereof without departing in the least from the spirit of the invention.

Having now described my invention what

I claim as new and desire to secure by Letters Patent, is:—

1. A scraper bucket comprising a scraper, a head line connected to one end thereof, a tail line connected to the other end thereof, a movable member interposed between the 65 two lines, and having a pivotal connection with one of said lines and engaging the other line so as to run thereon, whereby the said running end of the movable member, may move close to the scraper to effect the 70 dumping thereof and may move away therefrom to permit of the scraping operation.

2. A scraper bucket comprising a scraper open at one end, a head line connected with the open end of said scraper, a tail line con- 75 nected with the closed end of the scraper, and a connecting bar having a pivotal connection with the head line and a traveling engagement with the tail line to secure co-operating movements in the said lines for 80 operating the bucket.

3. A scraper bucket comprising a scraper open at one end, a bail connected with the open end of the scraper, a head line connected with the bail, a tail line connected 85 with the closed end of the scraper, and a pivoted bar member carried by the bail and movably engaging the tail line for maintaining given relations between the said head and tail lines. 90

4. A bucket scraper comprising a bucket proper open at one end and at the top, a pulling bail pivoted to the open end of the said bucket and connected with a head or 95 pulling line, a tail line connected with the closed end of the bucket, and a movable member carried by the bail and engaging the tail line, the said member being shorter than the bucket, so as to effect the dumping of the bucket when both lines are pulled 100 upon simultaneously.

5. A scraper bucket comprising a scraper open at one end and slightly rounded upon the bottom, a bail pivoted to the open end 105 of the scraper and connected with a head line, a tail line connected with the closed end of the scraper, a movable member pivoted to the swinging end of the bail and a pulley carried by said member and engaging said 110 tail line, the said member being short enough to effect the dumping of the bucket when both lines are pulled upon simultaneously.

In testimony whereof, I have hereunto set my hand, in presence of two witnesses.

HERBERT L. GLAZE.

Witnesses:

CASELL SEVERANCE,
EVELYN H. LEWIS.