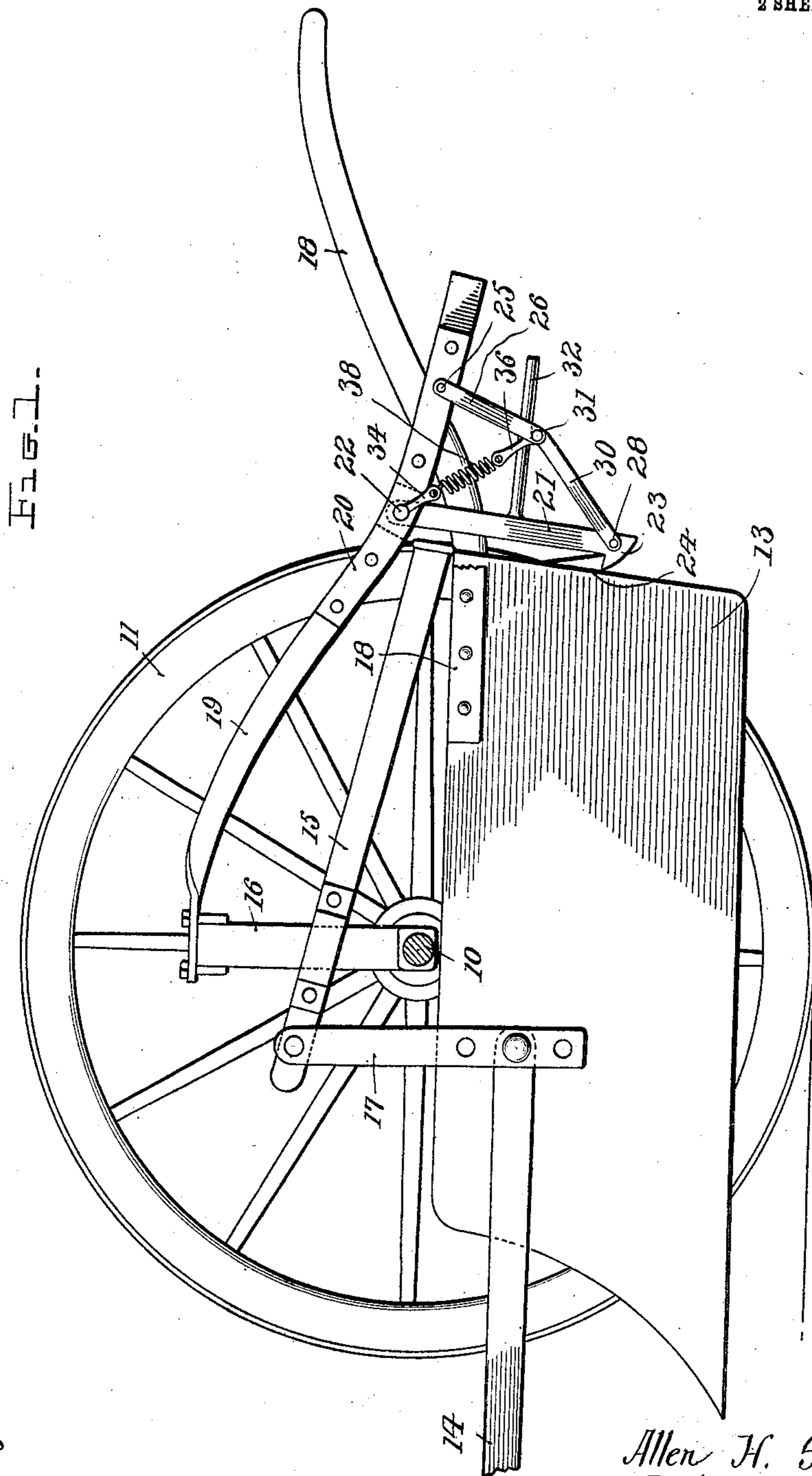


914,610.

2 SHEETS—SHEET 1.



Wm. H. Murray.  
C. N. Woodward.

Allen H. Smith and  
Luther L. Smith

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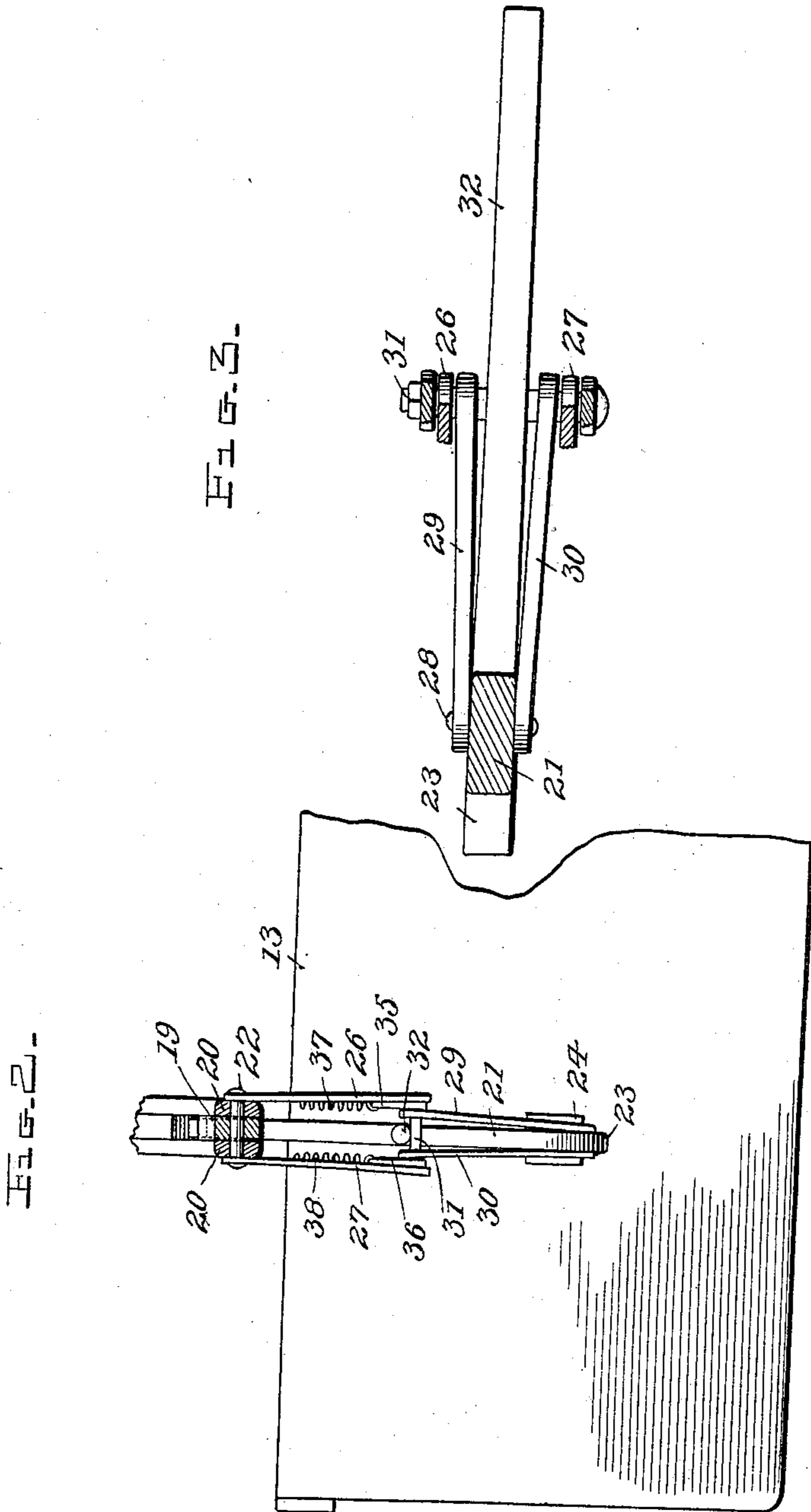
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914,610.

A. H. & L. L. SMITH.  
WHEELED SCRAPER.  
APPLICATION FILED MAY 9, 1908.

Patented Mar. 9, 1909.  
2 SHEETS—SHEET 2.



Witnesses  
H. H. Murray  
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By *Charles Chandler*  
Attorneys

# UNITED STATES PATENT OFFICE.

ALLEN H. SMITH AND LUTHER L. SMITH, OF HERMAN, NEBRASKA.

## WHEELED SCRAPER.

No. 914,610.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed May 9, 1908. Serial No. 431,934.

*To all whom it may concern:*

Be it known that we, ALLEN H. SMITH and LUTHER L. SMITH, citizens of the United States, residing at Herman, in the county of Washington, State of Nebraska, have invented certain new and useful Improvements in Wheeled Scrapers; 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.

This invention relates to wheeled scrapers, and has for one of its objects to produce a simply constructed attachment for supporting the rear portion of the "pan" while in carrying position, and arranged to be tripped when the pan is to be refilled.

Another object of the invention is to produce a simply constructed supporting attachment which will automatically engage a catch on the pan and not engage the body of the pan when the latter is being disposed in its carrying position.

With these and other objects in view the invention consists in certain novel features of construction as hereafter shown and described and then specifically pointed out in the claims, and in the drawings illustrating the preferred embodiment of the invention, Figure 1 is a side elevation of a conventional wheeled scraper with the improvement applied. Fig. 2 is a rear elevation of the same. Fig. 3 is a top plan view.

The improved device may be attached to any of the ordinary forms of wheeled scrapers, but for the purpose of illustration is shown applied to a conventional apparatus of this class, and in the drawings the axle is represented at 10, the carrying wheels at 11, the pan or scraper at 13, the draft appliance at 14, the pan being coupled to the axle by a bar 15 and bracket 16, the bracket swinging upon the axle 10 and the forward end of the bar 15 coupled to the pan by standards 17. The pan 13 is provided with rearwardly extending handles 18 of the usual form. The bracket 16 is extended above the bar 15 and to its upper end is rigidly attached a tilting member 19 provided with a vertical slot or socket slightly in the rear of the rear end of the pan 13, this socket being formed preferably by dividing the member 19 and spacing its adjacent ends and coupling sheet plates 20 to the sides at the divided portion, thereby providing a socket in

which the upper end of a latch bar 21 is pivoted at 22, the lower end of the latch bar being barbed at 23 and adapted to engage beneath an inclined catch 24 upon the rear end of the pan 13. By this means the latch bar couples the pan to the mechanism of the scraper, as shown.

Pivoted at 25 to the member 19 are spaced links 26—27, and coupled at 28 to the latch bar 24 adjacent to its barbed portion are two links 29—30, the inner ends of the links being coupled swingingly by a pivot bolt 31. The links 26—27 are spaced apart and the links 29—30 are also spaced apart correspondingly, and projecting rearwardly from the latch bar 21 intermediate its ends is an integral arm 32 which passes between the links 26—27 and rests normally upon the bolt 31 when the latch bar is in operative position and holding the pan 13 in its carrying position. Connected to the pin 22 are links 33, and likewise coupled to the pin 31 are similar links 35—36, the links 33—35 being connected by a spring 37, while the links 34—36 are coupled by a similar spring 38, the two springs thus exerting their force to maintain the spaced links 26—27 and 29—30 in their closed position, and exerting their force to maintain the latch bar in engagement with the scraper pan.

The spaced links 26—27 and 29—30 form a "toggle joint" arrangement and the springs 37—38 exert their force to maintain this toggle joint in position, and it will be obvious that a very strong leverage pressure is imparted to the latch bar 21 and that a comparatively slight force of the spring is required to maintain the latch bar in locked relation relative to the scraper pan.

The operating arm 32 of the latch bar 21 extends between the links 26—27 and rests upon the bolt 31, and is held in that position by the action of the spring, so that the latch bar is effectually prevented from moving forwardly beyond a certain point, consequently no danger exists of the barb 23 of the latch bar coming in contact with the body of the scraper. Another advantage of this arrangement is that the operating arm 32 is firmly held from lateral movement no matter how much the scraper may be thrown about when moving over rough roads or against obstructions. The latch bar will thus be effectually prevented from lateral movement when in operation.

By employing two sets of spaced links and

two separate independent springs, the holding power of the springs and of the links is doubled and the efficiency of the device materially increased, and in event of the breakage of one of the springs the device would continue to be operative, as will be obvious.

When the load has been received in the pan 13, and it is desired to dispose the latter in its load carrying position to enable the load to be transported, the rear end of the pan is depressed, and the forward end elevated, or the pan disposed in horizontal position, which action will cause the catch 24 to be engaged by the barb 23 and thus effectually prevent the return of the pan to its inclined operative position, but it will be held in a horizontal position so that the load may be transported from place to place. When the pan is to be filled it is only necessary for the operator to elevate the projection 32 and thus release the barb 23 from the catch 24, when the pan may be readily tilted by the arm 18 and disposed in refilling position as will be obvious.

The parts will be made preferably of steel, and of sufficient strength to withstand the pressure to which they will be subjected, the operating extension 32 being disposed between the spaced links 26—27, cannot be displaced no matter how much the machine may be thrown about or moved laterally by coming in contact with stones or other obstructions when in use.

The device is simple in construction, can be readily applied to all of the various makes of scrapers and operates effectually for the purposes described.

What is claimed, is:—

1. In a wheeled scraper, the combination of a swinging scraper pan having a catch lug at the rear end, a tilting lever, a catch arm pivoted to said tilting member, and adapted to engage the catch lug, links pivoted to said tilting member, links pivoted at one end to said catch arm and at their other ends to the free ends of said first mentioned links, a spring connected to said links and operating to maintain said catch arm yieldably engaged with said catch lug, and an operating arm projecting from said catch arm.

2. In a wheeled scraper, the combination of a swinging scraper pan having a catch lug at the rear end, a tilting lever, a catch arm pivoted to said tilting member and adapted to engage the catch lug, links spaced apart and pivoted to said tilting member, links spaced apart and pivoted at one end to said catch arm at opposite sides thereof and at their other ends to the free ends of said first mentioned links, a spring connected to said links and operating to maintain said catch arm yieldably engaged with said catch lug, and an operating arm projecting from said catch arm and extending between said links and bearing upon the pivot element which unites the contiguous ends of the links.

In testimony whereof, we affix our signatures in presence of two witnesses.

ALLEN H. SMITH.  
LUTHER L. SMITH.

Witnesses:

CLAUS J. KRUSE,  
Mrs. E. P. HANSON.