

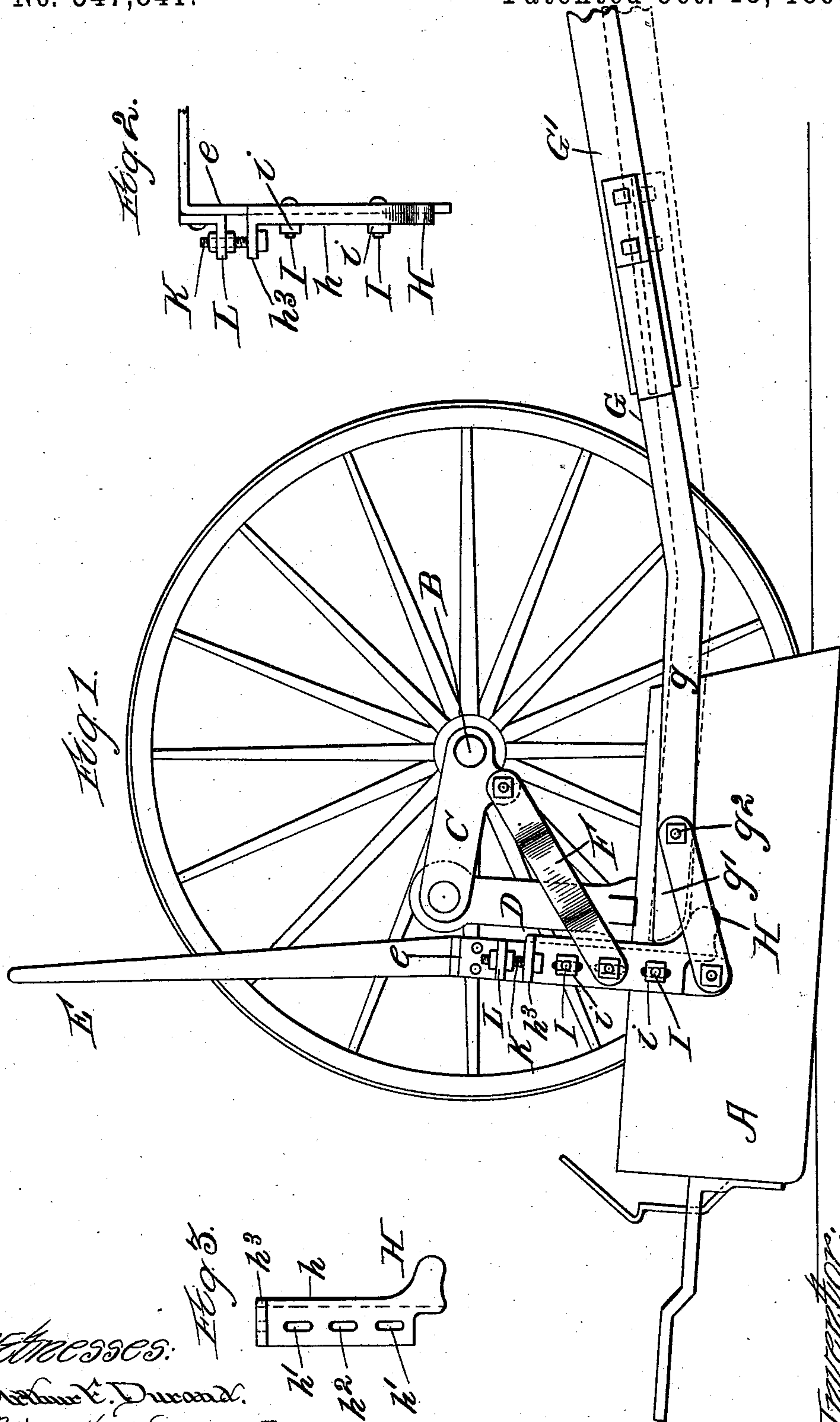
(No Model.)

2 Sheets—Sheet 1.

M. G. BUNNELL.
WHEELED DUMPING SCRAPER.

No. 547,841.

Patented Oct. 15, 1895.



Witnesses:
Oscar E. Durand.
Reta M. Wagner

Inventor:
Morton S. Bunnell.
by Charles S. Page, Atty.

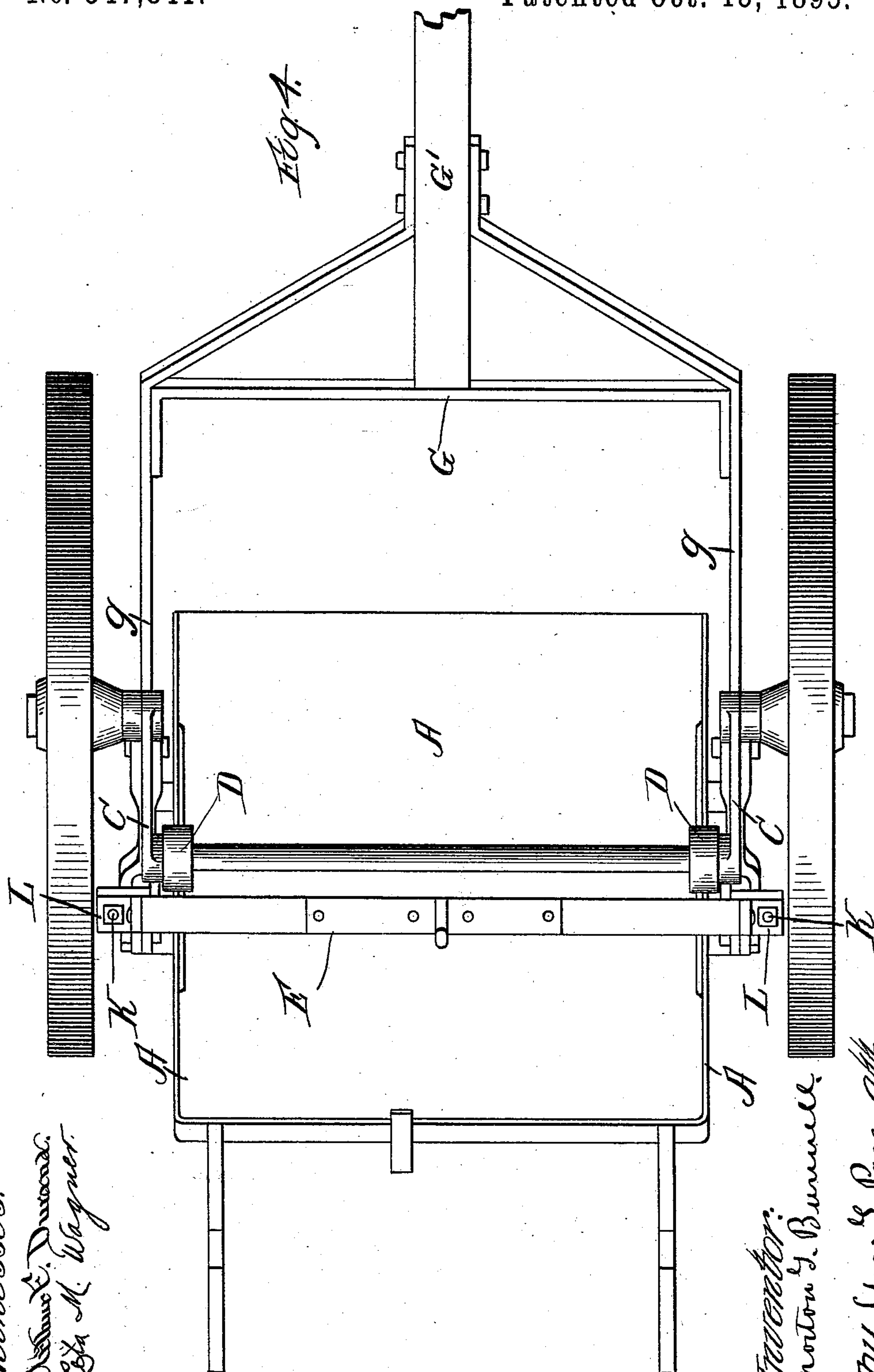
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Witnesses:

Oliver E. Durood.
Rosa M. Wagner.

Traverser:

Morton G. Burnell.

By Wm. S. Page. Atty.

UNITED STATES PATENT OFFICE.

MORTON G. BUNNELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO FREDERICK C. AUSTIN, OF SAME PLACE.

WHEELED DUMPING-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 547,841, dated October 15, 1895.

Application filed March 11, 1895. Serial No. 541,251. (No model.)

To all whom it may concern:

Be it known that I, MORTON G. BUNNELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Wheeled Dumping-Scrapers, of which the following is a specification.

My invention relates to a construction of wheeled dumping-scrappers involving a crank-movement and a swinging yoke or bail for raising and lowering the bowl, and a draft attachment comprising draft-arms which are pivoted to opposite sides of the bowl and extended back from their pivotal connections therewith, these rear extensions of the draft-arms being engaged by the arms of the yoke or bail when the scraper-bowl is in working position, whereby the latter will be temporarily held down to its work.

The object of my invention is to insure the proper pitch of the bowl when the same is brought into working position, regardless of the height of the team and consequent elevation of the pole and draft attachment, and to such end I provide the arms of the yoke or bail with adjustable cams or abutments which engage the rear extensions of the draft-arms when the scraper-bowl is in working position, and which can be adjusted with reference to the positions which said draft-arms will occupy when the pole is maintained in a raised condition by the team.

In the accompanying drawings, Figure 1 represents in side elevation a wheeled scraper embodying my invention, it being understood that a side elevation of the opposite side of the machine would simply be a duplicate of said figure. Fig. 2 is an edge view of one of the cam-plates and includes the adjusting-screw. Fig. 3 is a face view of the cam-plate. Fig. 4 is a top plan view of the machine.

The general construction, arrangement, and operation of the machine shown in said drawings corresponds with the construction, arrangement, and operation of the machine shown and described in my application, Serial No. 505,324, for Letters Patent of the United States, the point of difference between said two machines being the provision in the machine embodied in the present application of means for determining the working posi-

tion or pitch of the scraper-bowl with reference to the height of the team and consequent position of the pole and draft attachment. Briefly referring to the general construction of this machine, the scraper-bowl A is suspended from the axle B by a crank-movement arranged for raising and lowering said scraper-bowl, and to such end the axle is cranked, so as to provide it with the end crank-arms or crank portions C, from which the bowl is hung by standards D, secured to the sides of the bowl. The yoke or bail E for operating the crank-movement has its arms pivoted to the sides of the bowl, and said arms are connected with the crank-arms C of the axle by links F.

The draft attachment G is secured to the pole G' and has rearwardly-extending arms or bars g, which are pivoted to the sides of the bowl, formed or provided with rear-end portions which are extended back of the points at which said arms are pivoted, so as to provide the rear extensions g'. Each arm of the yoke or bail carries a cam or eccentric H, which engages under one of the rear extensions g' of the draft attachment when the pole is raised by the team and the scraper-bowl is lowered into working position, as in Fig. 1, it being understood that when the scraper-bowl is lowered the yoke or bail will swing upwardly and forwardly, so that when the scraper-bowl reaches said working position the bail will be in or substantially in the position shown. The cam, in conjunction with the extension g' of the draft-arm, serves to hold the scoop down to its work so long as necessary, and it also serves as a means for tilting up the forward end of the scoop when it is desired to break ground and lift the loaded scoop to a carrying position, it being understood that while the scoop is lowered by raising and throwing forward the bail a reverse movement on the part of the bail serves to raise the scoop from the ground. The cams H are adjustably secured upon the arms of the bail, it being observed that said arms constitute raising and lowering levers, which for convenience of operation are connected together, so as to form a yoke or bail arranged to straddle the bowl. As a simple and durable arrangement, each cam H is pro-

vided upon or formed with a plate h , having slots h' for threaded bolts I, which are secured in the yoke-arms and arranged to project through the slots in the cam-plate. Nuts i are fitted upon said bolts, so that when it is desired to rigidly secure the cam upon the yoke-arm said nuts can be tightened up against the cam-plate. The cam-plate is also provided with a slot h^2 for the pivot by which link F is connected with the yoke-arm, such arrangement being made so as to permit the requisite latitude adjustment on the part of the cam-plate. The cam-plate is provided at its upper end with a bearing h^3 for an adjusting-screw K, which latter also works in a bearing L, secured upon the yoke-arm. By turning said screw the cam-plate can be adjusted so as to raise or lower the cam-plate and cam thereon, according to the direction in which the adjusting-screw is turned. The foregoing matters, shown in Fig. 1 at one side of the machine, are of course in duplicate at the opposite side thereof, as will be readily understood without further illustration. The height of the team employed for drawing the machine determines the height to which the pole is maintained during service, and the height of the pole determines the degree of inclination on the part of the rear extension g' of the draft-arm g . By adjusting the cam relatively to the position of draft-extension g' , the requisite working pitch or angle of the bowl when lowered can be determined and maintained. Thus should the height of the team so raise the pole as to cause the draft-extension g' to depress the cam to an extent to throw the scraper-bowl out of proper working pitch, the cam can be lowered to suit the occasion, and conversely the cam can be raised in position upon the bail when the position of the draft-arm extension requires such adjustment.

What I claim as my invention is—

1. A wheeled scraper comprising the scraper-bowl, a draft attachment pivoted to the

scraper-bowl and extended back of its pivotal connections with the same, raising and lowering levers pivoted to the sides of the scraper-bowl, and cams arranged for engaging the rear extension of the draft-attachment when the scraper-bowl is in working position and adjustably secured to said levers so that the proper working pitch of the scraper-bowl can be secured by adjusting the cam with reference to the position which the draft-attachment is caused to assume during service, substantially as set forth.

2. In a wheeled scraper, the bowl suspended from the axle by the crank-movement, the draft-attachment pivoted to the bowl and having an extension in rear of its pivotal connection with the same, and a raising and lowering lever provided with an adjustable cam for engaging the said extension of the draft device when the bowl is in working position, substantially as described.

3. In a wheeled scraper, the bowl suspended from the axle by a crank movement, the draft-attachment pivoted to the bowl and having a rear extension g' , raising and lowering levers pivoted to the bowl, and plates H provided with cams and adjustably held upon the raising and lowering levers, substantially as described.

4. In a wheeled scraper, the bowl suspended from the axle by a crank movement, the draft device pivoted to sides of the bowl and having rear extensions g' , raising and lowering levers pivotally connected with the bowl, plates h provided with cams for the purpose set forth and adjustably held upon the raising and lowering levers, and adjusting screws K applied for adjusting the plates, substantially as described.

MORTON G. BUNNELL.

Witnesses:

ARTHUR F. DURAND,
RETA M. WAGNER.