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PATENTED MAR. 3, 1908.

O. E. PENWELL.  
SCRAPER AND GRADER.  
APPLICATION FILED NOV. 18, 1907.

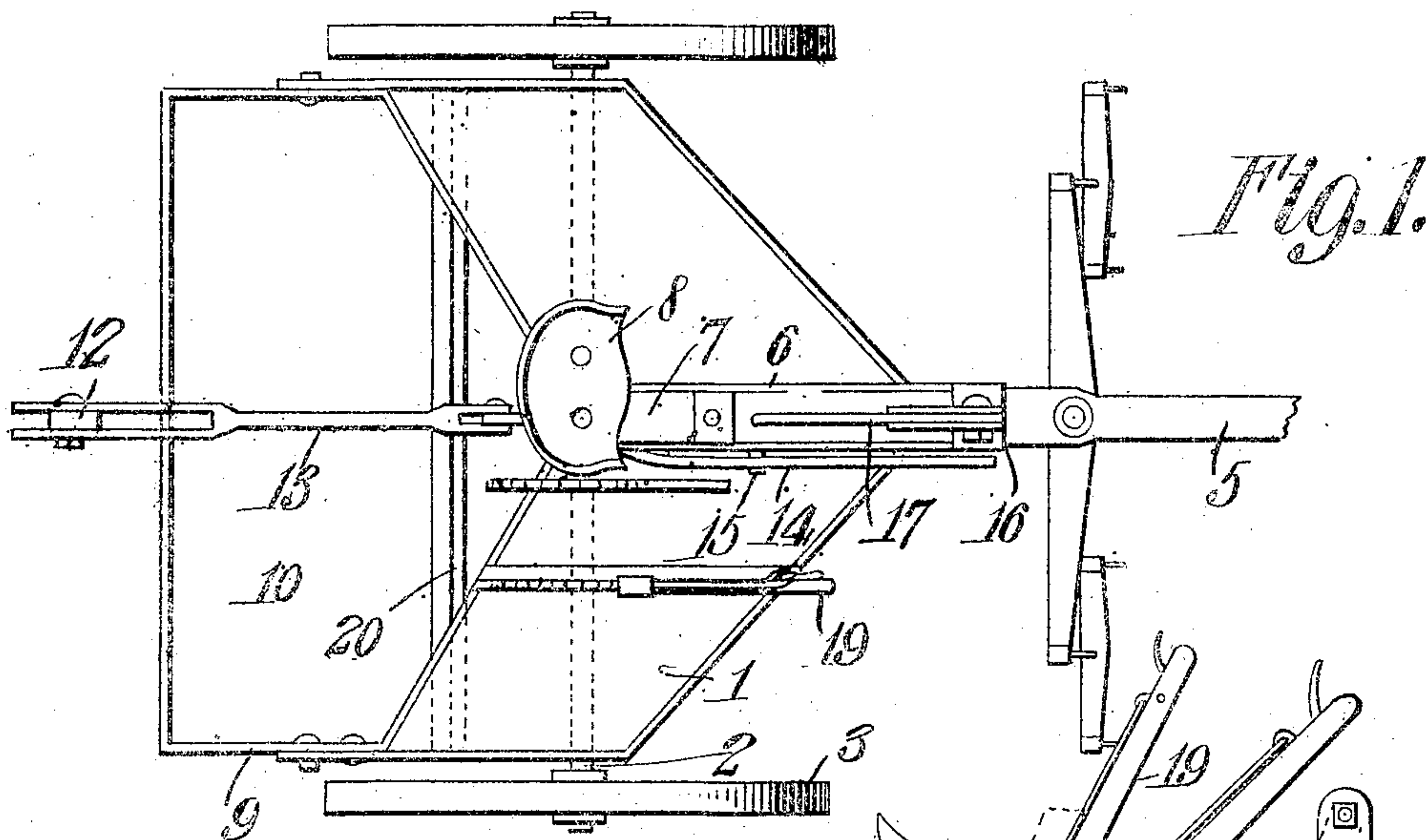
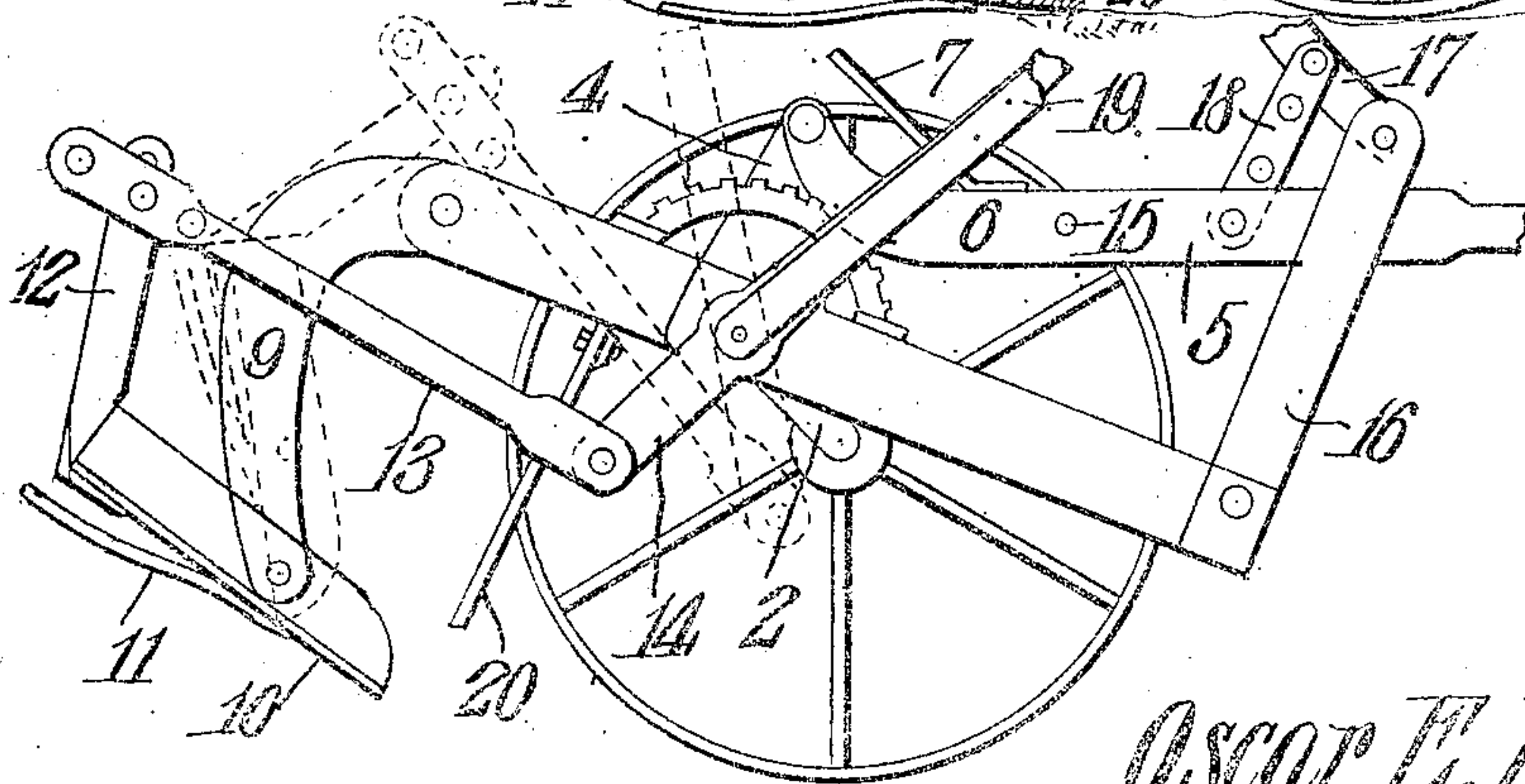
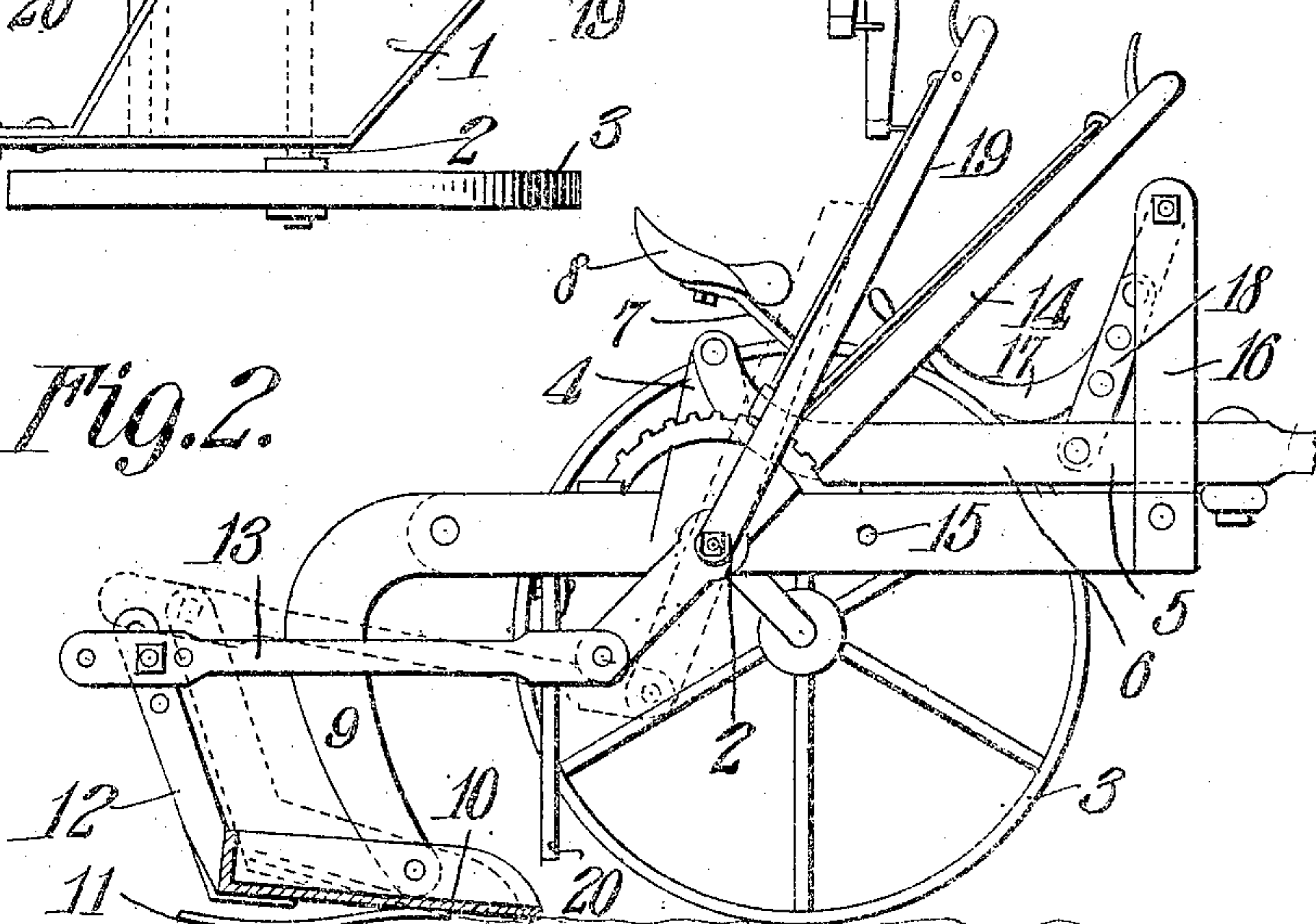


Fig. 2.



Witnesses

*E. J. Penwell*  
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Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## SCRAPER AND GRADER.

No. 881,027.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed November 16, 1907. Serial No. 402,515.

*To all whom it may concern:*

Be it known that I, OSCAR E. PENWELL, a citizen of the United States, residing at Mountain Home, in the county of Elmore and State of Idaho, have invented a new and useful Scraper and Grader, of which the following is a specification.

This invention has relation to scrapers and graders and it consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide an implement of the character indicated which is adapted to be used for scraping, carrying and dumping earth in road or other similar construction.

The implement consists primarily of a wheel mounted platform to which is pivotally attached a scoop and lever means is provided for tilting the scoop. The platform is pivotally attached to a tongue and means is provided for swinging the platform with relation to the tongue.

In the accompanying drawing, Figure 1 is a top plan view of the scraper and grader. Fig. 2 is a side elevation of the same, the heavy lines indicating one position of the scoop and the dotted lines indicating another position thereof, and Fig. 3 is a side elevation of the grader with parts removed, the heavy lines indicating one position of the scoop and the dotted lines indicating another position thereof.

The scraper and grader consists of the platform 1 which is mounted upon the arch axle 2 upon which are journaled the ground wheels 3. A vertically disposed lug 4 is mounted upon the middle of the platform 1 and the rear end of the tongue 5 is provided with the side plates 6 which are upwardly curved at their rear extremities and pivotally attached to the lug 4. The seat post 7 is mounted upon the rear portion of the tongue 5 and supports the seat 8. The frame 1 is provided at its ends with the depending brackets 9 between which the ends of scoop 10 are pivoted, said scoop is provided upon its bottom with the resilient strips 11 which when the scoop is in horizontal position are adapted to engage the surface around and serve as wear plates, the rear edge of the scoop 10 is provided with lug 12 to which the rear end of the link 13 is pivotally and adjustably attached, the forward end of the link 13 is pivotally con-

nected with the working end of the lever 14 which is fulcrumed upon the axle 2 and which is limited in its forward swinging movement by the pin 15 mounted upon the rear portion of the tongue 5. The uprights 16 are attached to the forward edge of the platform 1 and lie upon the opposite sides of the tongue 5. The lever 17 is fulcrumed between the upper ends of the uprights 16 and is pivotally and adjustably attached at an intermediate point to the upper ends of the links 18 which in turn are pivotally connected at their lower end to the tongue 5.

When the free end of the lever 17 is swung down the pivotal connections between the links 18 and the tongue 5, the links 18 and the lever 17, and the lever 17 and the uprights 16 are in alinement so that a locking means is provided for holding the platform 1 in parallel relation to the tongue 5, when the platform 1 is held in such relation to the tongue 5 and the lever 14 is swung into its forward position the scoop 10 will be horizontal or substantially so; then by swinging the lever 14 to the rear the scoop 10 is tilted upon its pivotal connections with the brackets 9 so that its forward edge will be depressed when the said scoop may be used as a scraper for the purpose of accumulating loose earth thereon. When the lever 14 is in its forward position and the free end of the lever 17 is swung up the forward edge of the platform 1 will be depressed with relation to the tongue 5 and the rear edge of the said platform will be correspondingly elevated. By this movement the material upon the scoop will be deposited along the surface of the ground as the implement travels over the same. When the free end of the lever 17 is swung up as above described and the lever 14 is swung to the rear the scoop 10 will be still further turned upon its pivotal connections with the brackets 9 and will assume substantially a vertical position when the contents of the said scoop will be precipitated in a pile upon the surface of the ground. The platform 1 is substantially V-shaped in plan, as illustrated in Fig. 1, and the scoop 10 is pivotally mounted at the outer extremities of the V which lie at the sides of the said platform, consequently, there is sufficient space at the rear edge of the platform for the said scoop to tilt or turn without interference.

The lever 19 is fixed to the intermediate portion of the axle 2 and when the same is



swung the said axle is turned so that the frame 1 and the parts mounted thereon are raised or lowered with relation to the surface of the ground. Thus it is possible to elevate  
5 the scoop 10 sufficiently above the surface of the ground to avoid possible obstructions. The board 20 depends from the platform 1 and is adapted to close the forward end of the scoop 10 when the same is swung up so  
10 that the dirt carried by the scoop cannot fall or jolt out of the same.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

15 1. An implement as described comprising a wheel mounted platform, a tongue pivotally connected thereto means for swinging the platform with relation to the tongue, a scoop pivotally connected to the platform  
20 and means for swinging the scoop with relation to the platform.

2. An implement as described comprising a platform which is V-shaped in plan, wheels supporting the same, a tongue pivotally con-  
25 nected to the platform means for swinging the platform with relation to the tongue, a scoop pivotally connected to the platform at the ends thereof and lying behind the converging edges of the platform and means

for swinging the scoop with relation to the  
platform. 30

3. An implement as described comprising a wheel mounted platform a tongue pivotally connected thereto uprights attached to the platform and crossing the tongue, a lever ful-  
35 crumed between the uprights, links pivoted to said lever and to the tongue, a scoop pivotally mounted upon the platform and means for swinging the scoop with relation to the platform. 40

4. An implement as described comprising a wheel mounted platform provided at its rear edge with a vertically disposed lug, a tongue having at its end portion side plates the extremities of which are upwardly curved  
45 and pivotally attached to said lug, a lever mechanism for swinging the platform with relation to the tongue, a scoop pivotally mounted upon the platform and a lever mechanism for swinging the scoop with rela-  
50 tion to the platform.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OSCAR E. PENWELL.

Witnesses:

HARRY WATKINS,  
HERBERT L. DAVIES