Jan. 6, 1925. 1,522,331

G. H. SCHAEFFER

ROAD SCRAPER AND LAND LEVELER

Filed July 12, 1923 2 Sheets-Sheet 1

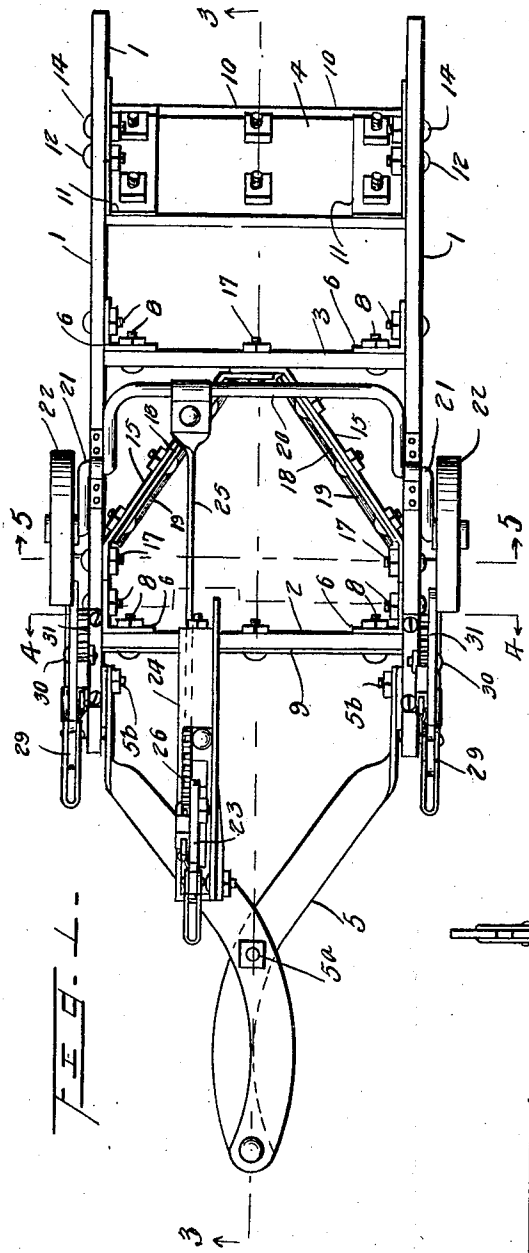


FIG. 1.

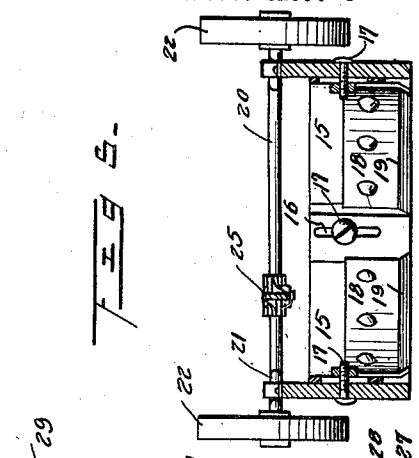


FIG. 5.

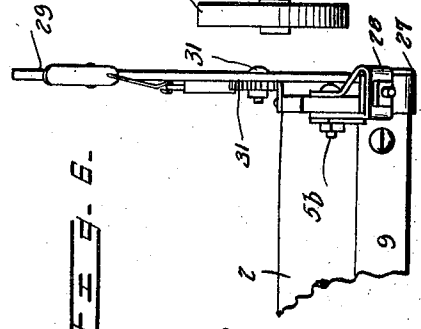


FIG. 6.

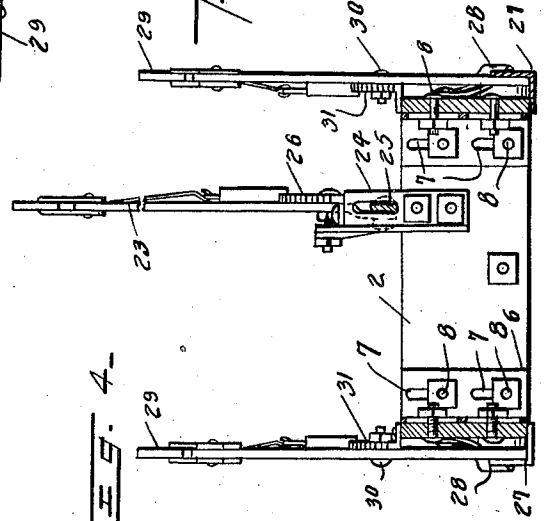


FIG. 4.

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FIG. 2.

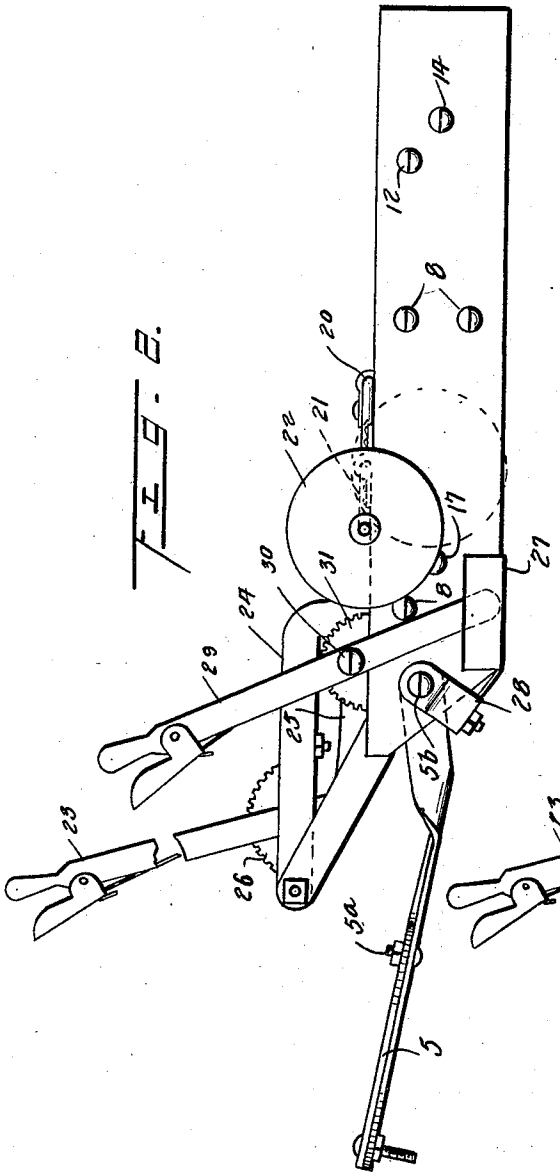
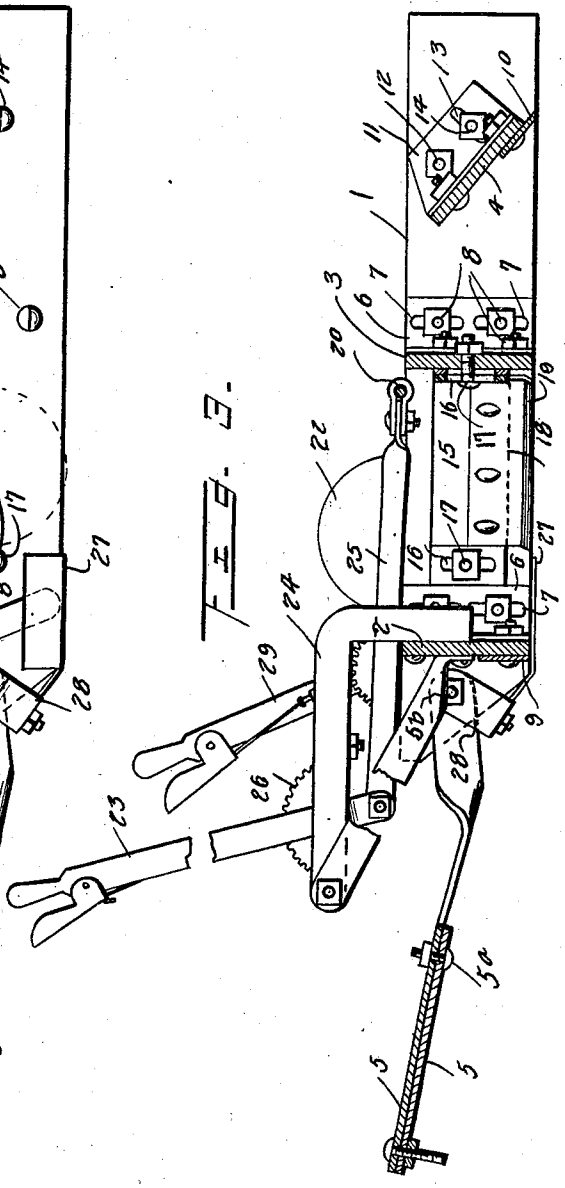


FIG. 3.



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UNITED STATES PATENT OFFICE.

GEORGE H. SCHAEFFER, OF GANADO, TEXAS.

ROAD SCRAPER AND LAND LEVELER.

Application filed July 12, 1923. Serial No. 651,115.

To all whom it may concern:

Be it known that I, GEORGE H. SCHAEFFER, a citizen of the United States, residing at Ganado, in the county of Jackson and State of Texas, have invented certain new and useful Improvements in Road Scrapers and Land Levelers; and I 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.

The object of the present invention is the provision of a machine which may be used for surfacing roadways and leveling land for irrigating purposes, said machine operating both as a scraper and leveler whereby to remove elevations and fill depressions, the projecting earth, bumps or ridges removed being subsequently used for filling depressions, ruts and low places, with the result that the surface is leveled.

Other objects and advantages will be apparent and suggest themselves as the nature of the invention is understood.

While the drawings illustrate an embodiment of the invention it is to be understood that in adapting the same to meet different conditions and requirements, various changes in the form, proportion and minor details of construction may be resorted to without departing from the nature of the invention.

Referring to the accompanying drawings forming a part of the application:

Figure 1 is a top plan view of a road scraper and land leveler embodying the invention,

Figure 2 is a side view thereof,

Figure 3 is a vertical central longitudinal section of the machine on the line 3—3 of Figure 1,

Figure 4 is a transverse section on the line 4—4 of Figure 1. looking forwardly as designated by the arrows,

Figure 5 is a cross section on the line 5—5 of Figure 1, looking to the rear as indicated by the arrows, and

Figure 6 is a detail view showing more clearly the runner shoe and the parts associated therewith.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawings by like reference characters.

The frame of the machine comprises runners 1 and front, intermediate and rear crosspieces 2, 3 and 4, respectively. A hitch is provided for attaching the machine to a tractor or team and the same comprises draft bars 5 crossing intermediate their ends and connected at the point of crossing by a suitable fastening 5^a, and having their front ends overlapped and adapted to be coupled either to a tractor or a team, and having their rear ends upturned and pivoted at 5^b to the front ends of the runners 1. The several crosspieces connect the runners and are adapted to be vertically adjusted as required. The front and intermediate crosspieces have a vertical arrangement, whereas the rear crosspiece 4 is inclined rearwardly and downwardly and operates to catch and compress loose earth. Angle irons 6 connect the front and intermediate crosspieces 2 and 3, respectively, with the runners 1 and are formed with vertical slots 7 which receive bolts 8 and in this manner, the crosspieces are adapted to be adjusted vertically and made secure in the required adjusted position. A steel blade 9 is secured to the lower front side of the crosspiece 2 and sustains the wear and is replaceable when worn. A similar steel blade 10 is secured to the lower front portion of the crosspiece 4.

Angle irons 11 have one wing bolted or otherwise secured to the rear crosspiece 4 and the other wing pivoted to a runner at 12 and formed with a slot 13 to receive a bolt 14, whereby the crosspiece 4 may be secured in the required adjusted position when turned about the pivot 12. This arrangement provides for adjusting the inclination of the rear crosspiece and raising or lowering the lower edge provided with the blade 10.

A pair of scraping blades 15 is disposed intermediate the crosspieces 2 and 3 and the blades are rearwardly converged with their front ends secured to the runners 1 and their rear ends attached to the crosspiece 3. The terminal portions of the blades 15 are bent and formed with vertical slots 16 which receive bolts 17, whereby the blades are adjustably connected to the runners and to the crosspiece 3, to admit of vertical adjustment as required. Steel cutting blades 18 are applied to the lower edge portions of the blades 15 and their lower edge portions are curved forwardly, as indicated at 19.

An arched bar 20 has its side members offset at 21 and mounted upon the runners

1 and provided with ground wheels 22. A lever 23 mounted upon a bracket 24 is connected by a link 25 with the bar 20 for rocking the latter to effect a raising or lowering of the wheels 22 as required. When crossing a bridge or traveling through sand, the lever 23 is operated to lower the wheels 22 which elevate the runners 1 and materially lessen the draft. The lever 23 is provided with the usual hand latch which cooperates with a toothed segment 26 whereby to hold the lever 23 and the wheels 22 in the required adjusted position.

A shoe 27 located at the front end of each of the runners 1 is attached to a bracket 28 which is pivoted to the runner by the fastening 5^b. A lever 29 mounted at 30 has its lower end in engagement with the shoe 27 whereby to depress the shoe and elevate the runner to give the proper or required camber to the road. The lever 29 is provided with the usual hand latch to cooperate with a toothed segment 31 whereby to hold the lever and shoe in the required adjusted position.

In practice, the machine is adapted to be drawn over the road or the land to be leveled and the cutting blades applied to the lower portions of the crosspiece 2 and blades 15 operate to remove elevations, such as bumps and ridges, and the earth thus removed drops into depressions, ruts and other low places and fills the same and this loose earth is compressed and packed by the rear crosspiece 4. The vertical movement of the machine incident to unevenness in the surface of the road or land insures a discharge of the earth removed by the leveling of bumps, ridges and other elevations with the result that the machine is prevented from choking and the roadway or land leveled.

What is claimed is:

1. In a machine of the character specified, runners, a crosspiece between the runners and inclined rearwardly and downwardly, angle irons secured to opposite ends of the crosspiece and having their outer wings pivoted at their upper ends to the runners and provided in their lower ends with enlarged slots, and bolts passing through said slots and the runners to secure the crosspiece in the required pivoted adjusted position.

2. In a machine of the character specified, runners, crosspieces between and connecting the runners, a pair of rearwardly converged blades having opposite end portions bent and formed with vertical slots, bolts connecting the slotted ends of the blades to the runners and to one of the crosspieces whereby said blades may be adjusted vertically.

3. A machine of the character specified comprising runners, a front, an intermediate and a rear crosspiece, the front and intermediate crosspieces having a vertical arrangement and the rear crosspiece inclining rearwardly and downwardly, angle irons adjustably connecting the respective crosspieces to the runners, a hitch attached to the runners, and a pair of rearwardly converged blades disposed between the front and intermediate crosspieces and adjustably connected at their respective ends to the runners and the intermediate crosspiece.

4. In a road scraper, runners, a shoe pivoted to each of the runners and adapted to travel on the ground and to be held in place by the runners, and means unconnected to the shoes located in contact therewith for controlling their position to regulate the camber of the road.

5. In a road scraper, runners, a shoe pivoted to each of the runners and adapted to travel on the ground and be held in place by the runners, said shoes having upstanding portions opposite the runners, a lever pivoted to each runner, said levers being located between the runners and said upstanding portions, unconnected to the shoes and in contact therewith for controlling their position to regulate the camber of the road.

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

GEORGE H. SCHAEFFER.

Witnesses:
S. G. SAMPLE,
O. W. FREEMAN.