

No. 813,055.

PATENTED FEB. 20, 1906.

C. MORSING.
ROAD GRADER.

APPLICATION FILED MAY 13, 1905.

2 SHEETS—SHEET 1.

FIG. 1.

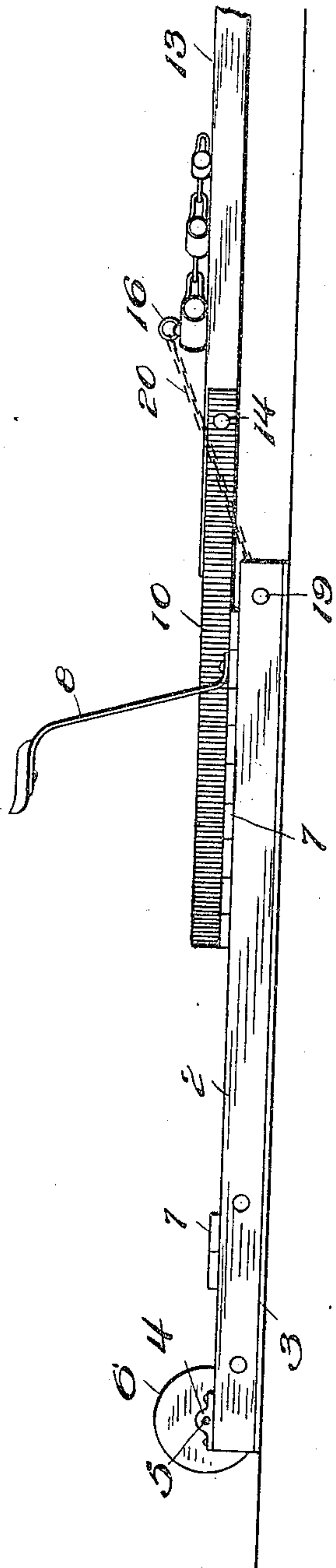


FIG. 3.

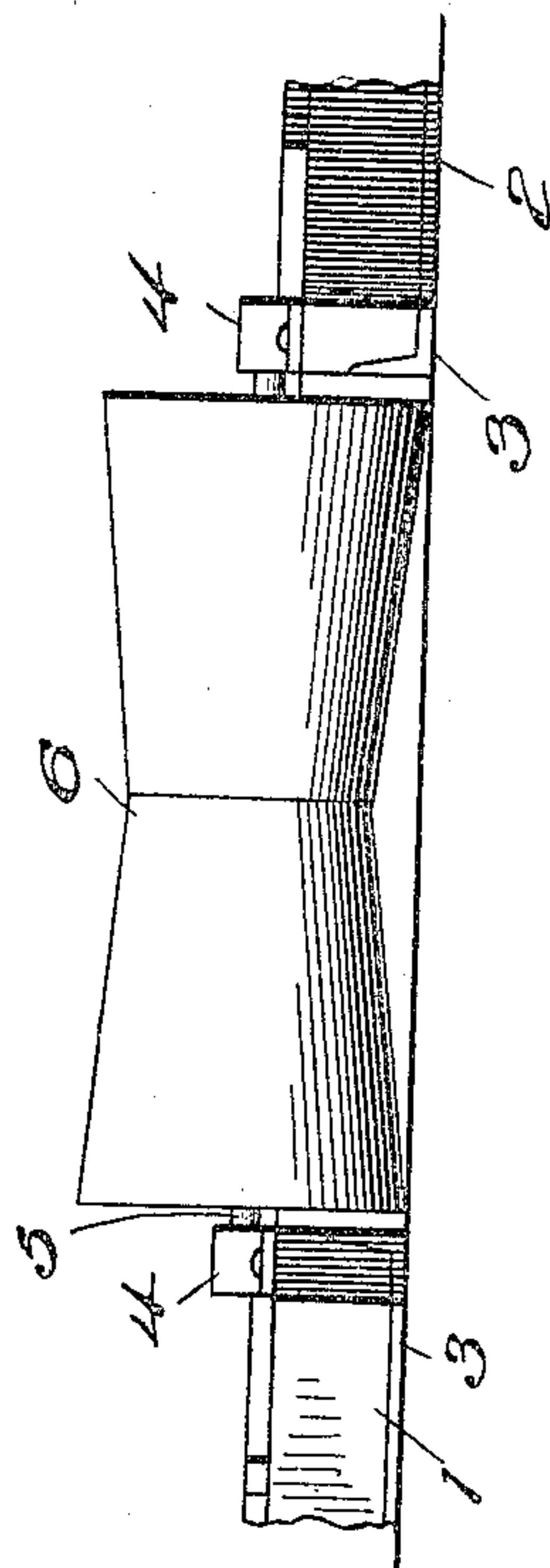


FIG. 4.

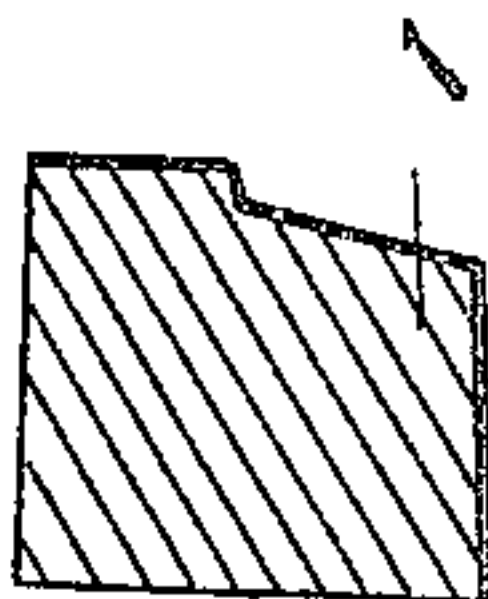
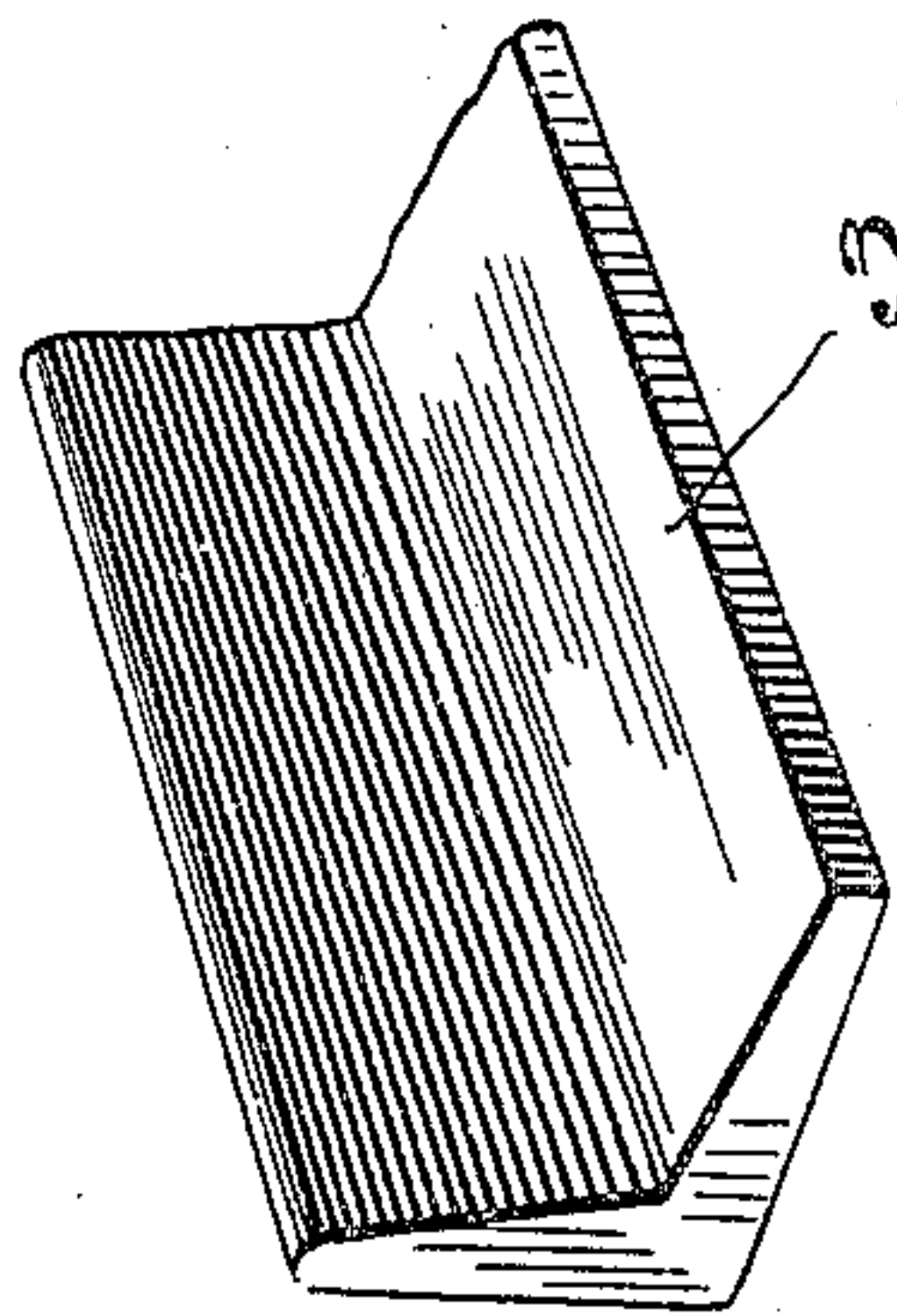


FIG. 5.



Witnesses

G. R. Thomas
B. M. Colford

Inventor

C. Morsing

By

Charles Chandler

Attorney

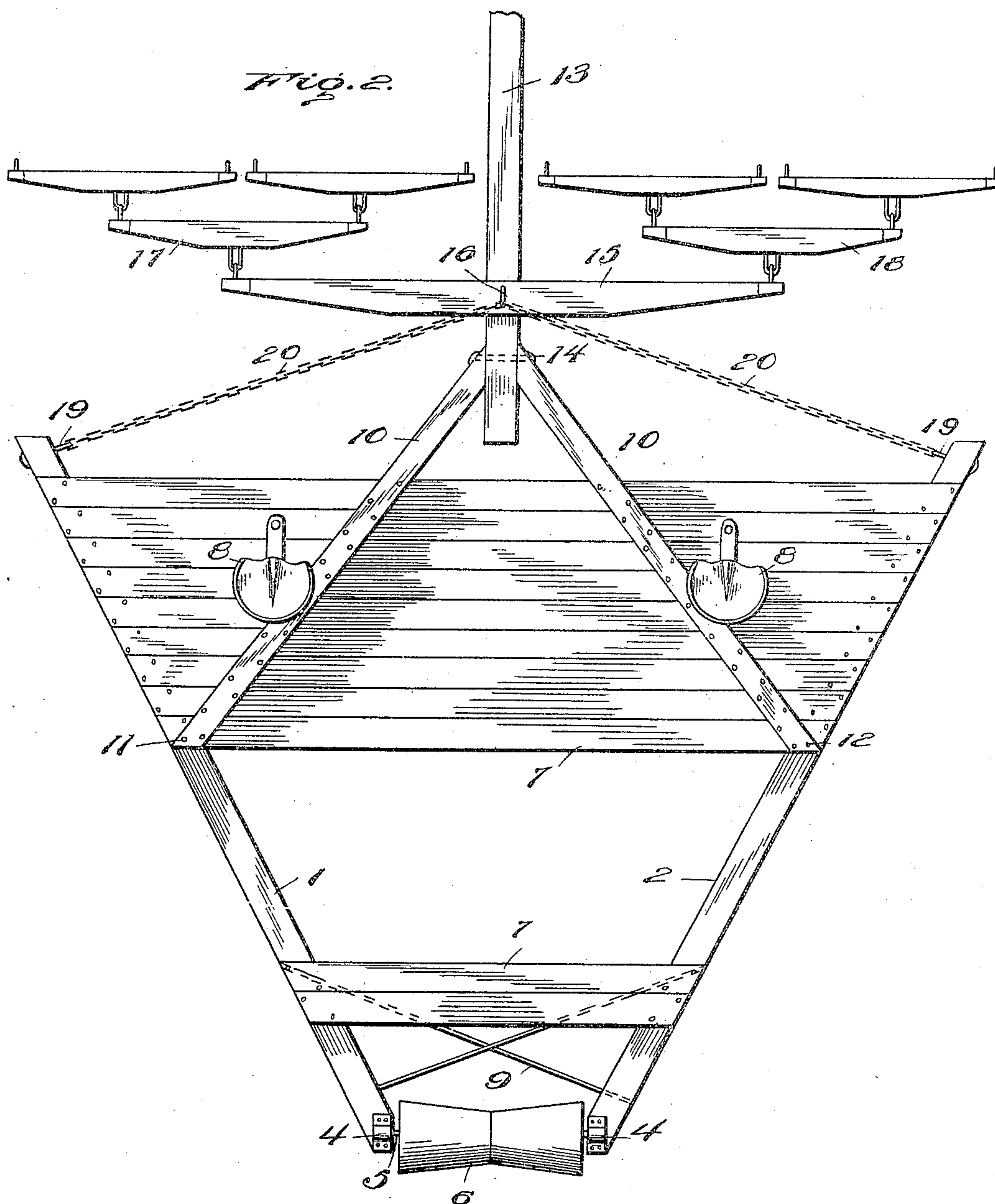
No. 813,055.

PATENTED FEB. 20, 1906.

C. MORSING.
ROAD GRADER.

APPLICATION FILED MAY 13, 1905.

2 SHEETS—SHEET 2.



Witnesses

G. R. Thomas
E. M. Gofford

Inventor

C. MORSING

By

Charles J. Gault

Attorneys

UNITED STATES PATENT OFFICE.

CHRISTIAN MORSING, OF PLUMMER, MINNESOTA.

ROAD-GRADER.

No. 813,055.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed May 13, 1905. Serial No. 260,289.

To all whom it may concern:

Be it known that I, CHRISTIAN MORSING, a citizen of the United States, residing at Plummer, in the county of Red Lake, State of Minnesota, have invented certain new and useful Improvements in Road-Graders; 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.

This invention relates to road-graders.

One object of the invention is to provide an exceedingly simple, inexpensive, durable, and efficient means for leveling highways.

Another object of the invention is to provide a device of the character named wherein the sides of the road will be properly graded and the middle of the road will be rolled according to the inclination of the sides of the roadway.

A still further object of the invention resides in the provision of a device embodying scraping members adapted to scrape the earth toward the middle of the highway in the form of a ridge, the ridge being well rolled by means of a roller carried directly on the runners.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the present invention.

In the drawings, Figure 1 is a side elevation of the invention. Fig. 2 is a top plan view. Fig. 3 is a rear elevation. Fig. 4 is a cross-sectional view of one of the scraping members with the shoe removed. Fig. 5 is a perspective view of a portion of one of the shoes.

Referring now more particularly to the accompanying drawings, the reference characters 1 and 2 designate scraping members, of wood or any other suitable material, each having a metallic or other shoe 3 countersunk or otherwise fitted in the inner side of the corresponding runner and extending beneath the under surface thereof. The scraping members 1 and 2 converge toward the rear, the rear end of each member having a suitable bearing 4 for the reception of the

shaft 5, carrying the roller 6, which latter is of a greater cross-sectional diameter at its ends than at its middle portion. It will be seen that the roller is mounted directly upon the scraping members.

Connecting the scraping members and mounted upon the upper faces thereof are planks or the like, 7, upon which will be seen one or more seats 8, there being two shown—one upon each side of the device—the seats being designed for the convenience of one or more attendants.

Metallic or other cross-rods 9 are secured through opposite scraping members to brace them at their rear ends, while at the forward end thereof are two wooden or other braces 10, each having one end secured, as at 11 and 12, respectively, to the planks directly over the scraping members 1 and 2, there being nails, bolts, or the like passed through the last-named braces and the planks forming the top of the body of the device, the braces converging toward and beyond the forward end of the device or implement and having their free ends beveled to provide a seat for the reception of the inner end of the tongue 13, which is pivotally mounted therein by means of the pivot-bolt 14. An evener 15 is pivotally mounted, by means of the pivot-bolt 16, upon the tongue, the evener having the ordinary doubletree attachments 17 and 18 associated therewith at its ends, it being understood, of course, that other draft appliances may be employed, if desired.

Passing through the scraping members at their inner ends are bolts 19, to which are connected in any suitable manner the free ends of a chain or the like 20, connected intermediate its ends with the pivot-bolt 16, this flexible connection serving to relieve the tongue and especially the scraping members of more or less strain.

It has been hereinbefore intimated that the sides of the shoes 3 were countersunk in the inner sides of the scraping members, and such is shown in the accompanying drawings; but it is to be understood that the sides or flanged portions 3' need not be necessarily countersunk in the scraping members. It is obvious that in any event the side flange and the bottom of the shoes or treads will greatly protect the bottoms and sides of wooden scraping members against wear, the convergency of the scraping members causing the loose dirt to be laid out in the middle of the road in the form of a ridge, the intermediate hol-

lowed or cut-out portion 6' of the roller working upon the ridge to level it according to the inclination of the sides of the highway.

I claim—

- 5 1. A road-grader, including scraping members having shoes, and a roller secured at the rear ends of the scraping members.
2. A road-grader comprising scraping members converging rearwardly, and a roller
10 mounted between the convergent end thereof.
3. A road-grader, comprising scraping members converging rearwardly toward each other, a shaft mounted in the rear ends of the
scraping members, a roller mounted upon the

shaft, metallic rods crossing each other and 15 connected at their opposite ends to the scraping members to brace the latter, other braces associated with the scraping members, a tongue pivoted to said other braces, a flexible connection between the tongue and scrap- 20 ing members, and a seat upon the body of the scraper.

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

CHRISTIAN MORSING.

Witnesses:

JULIUS PEETE,
HENRY J. ENDERLE.