

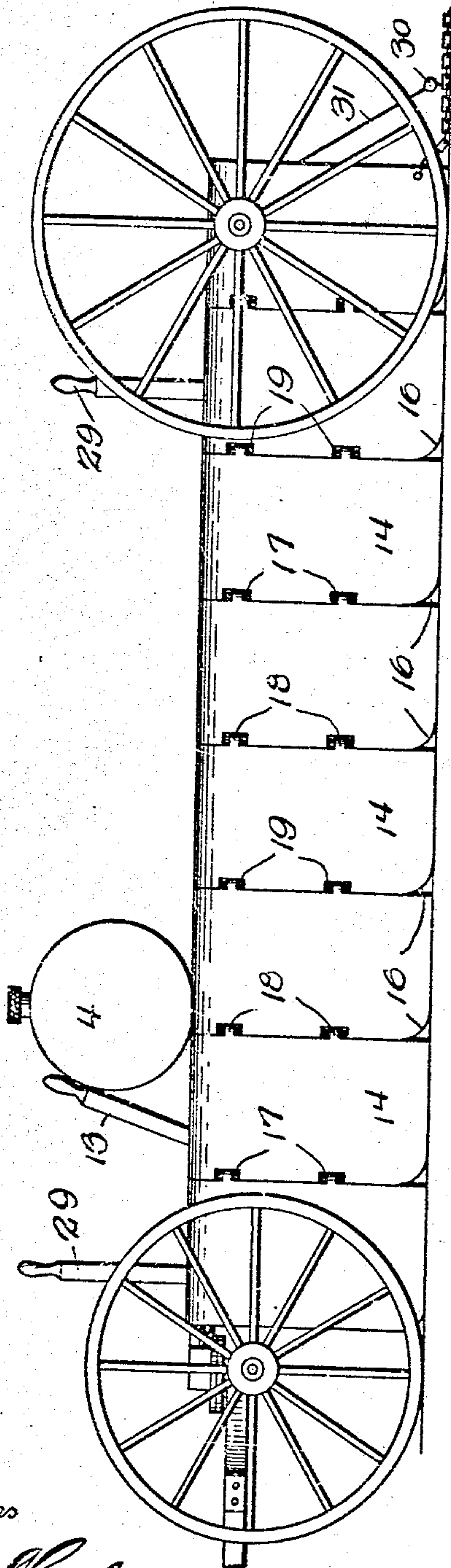
985,379.

W. STINSON.
GRASS OR STUBBLE BURNER.
APPLICATION FILED MAR. 18, 1910.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

C. C. Richardson.
Geo. Gould.

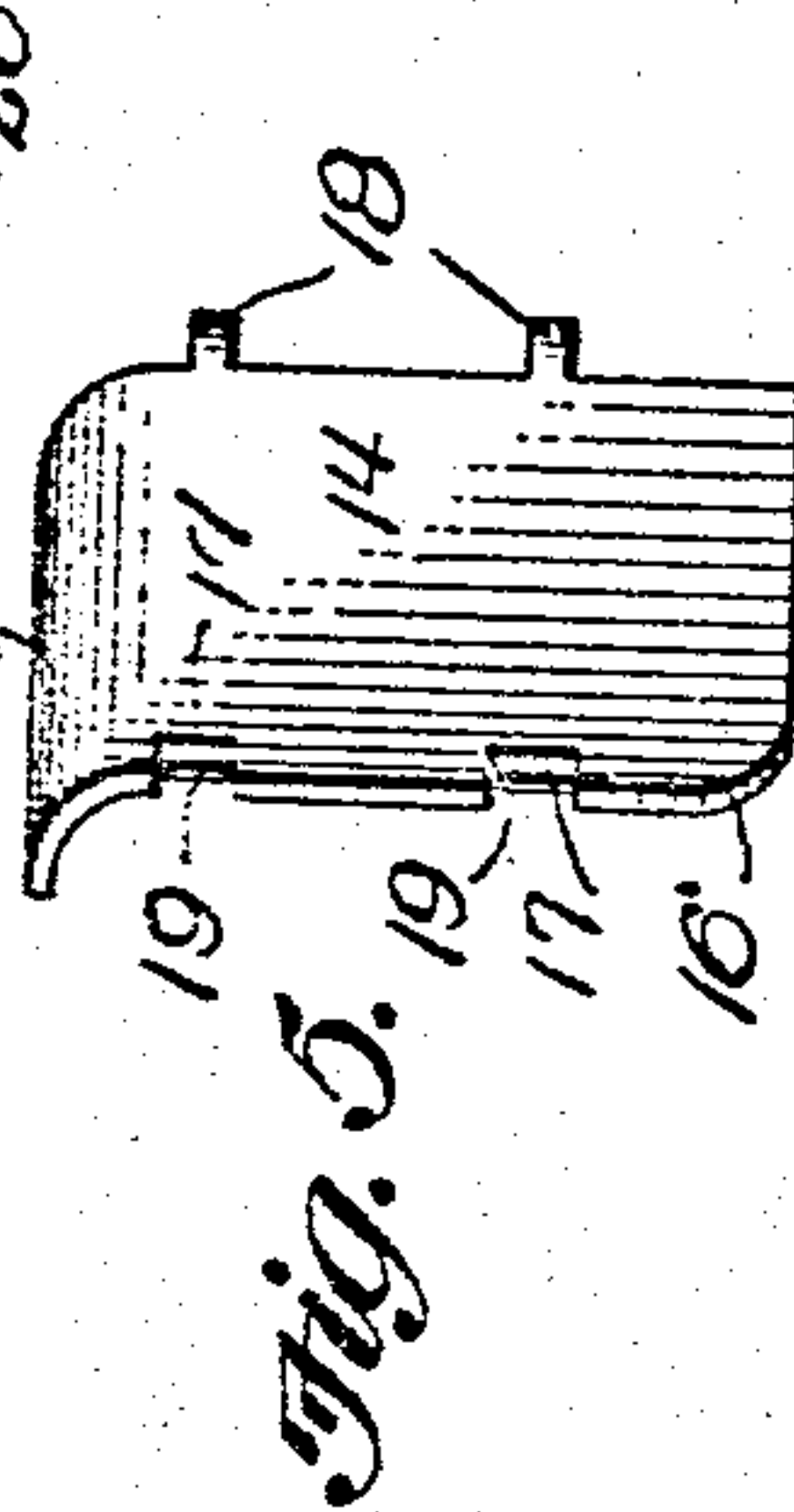


Fig. 5.

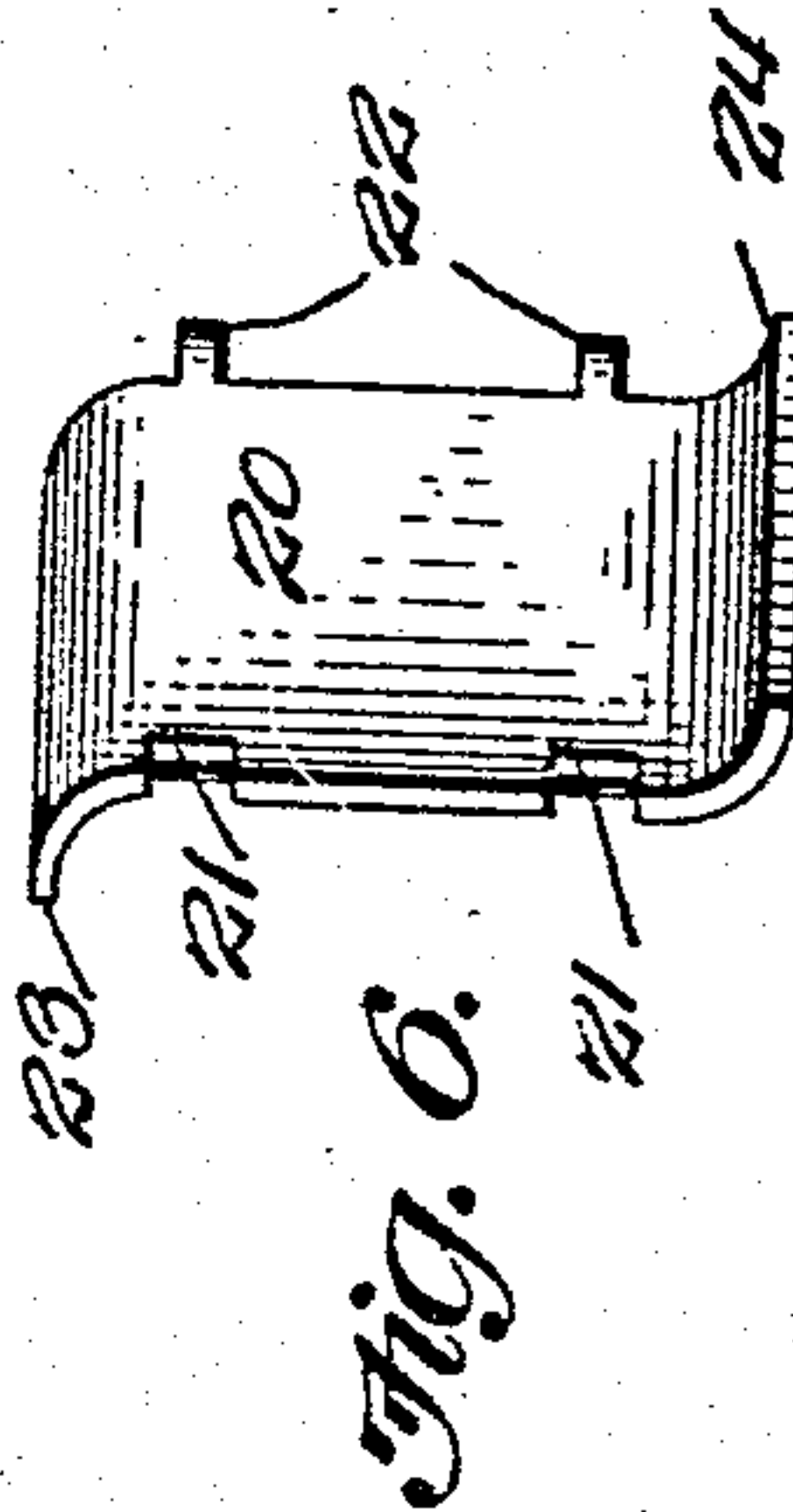


Fig. 6.

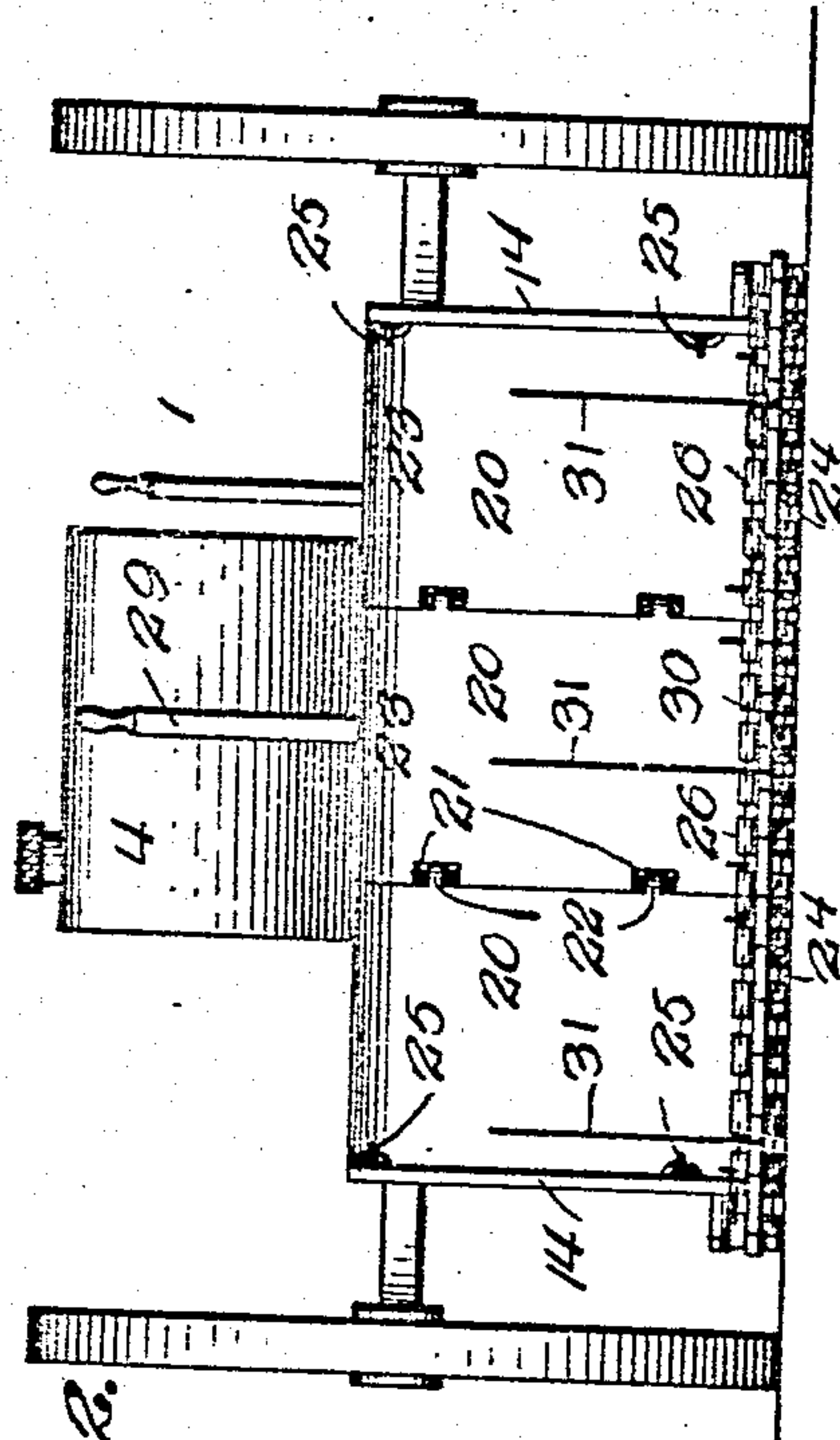


Fig. 2.

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2 SHEETS-SHEET 2.

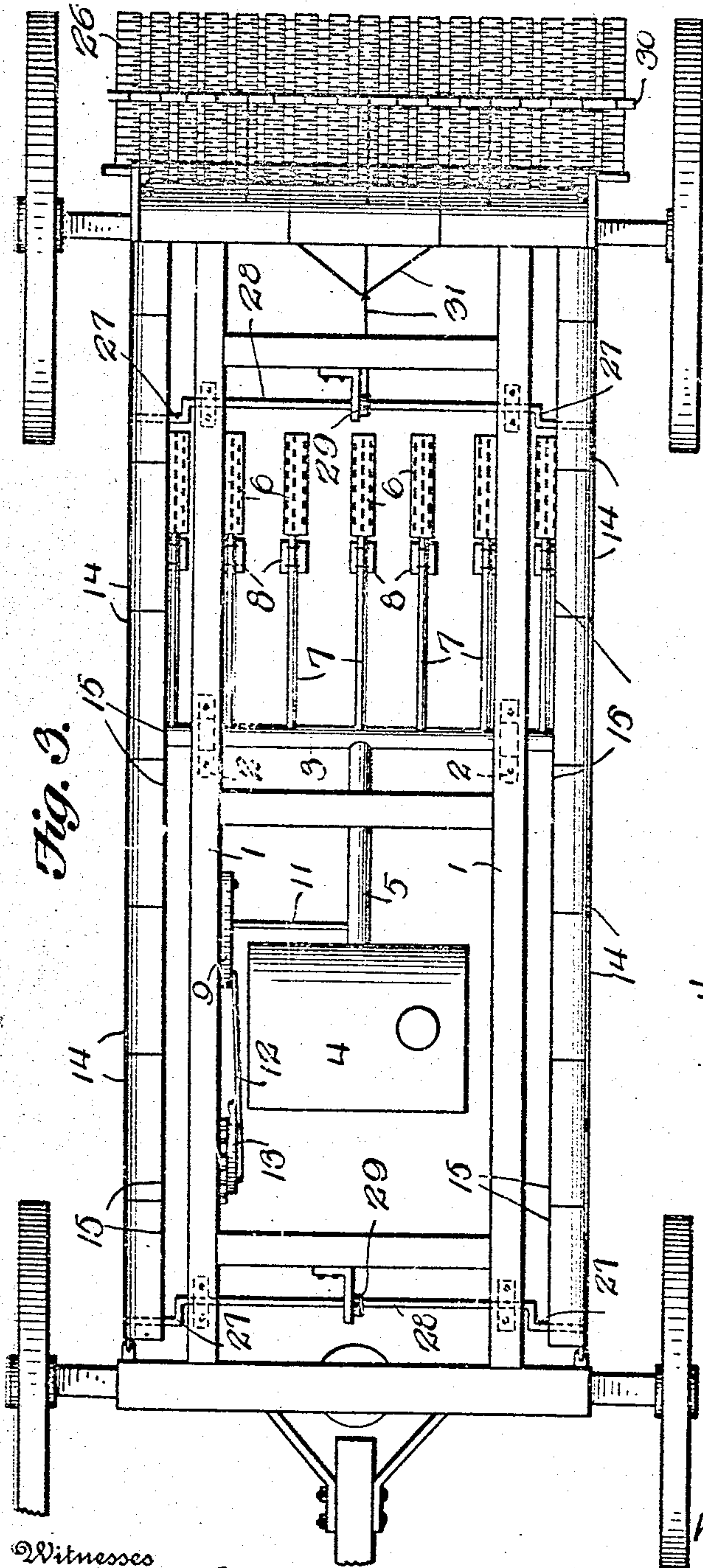


Fig. 3.

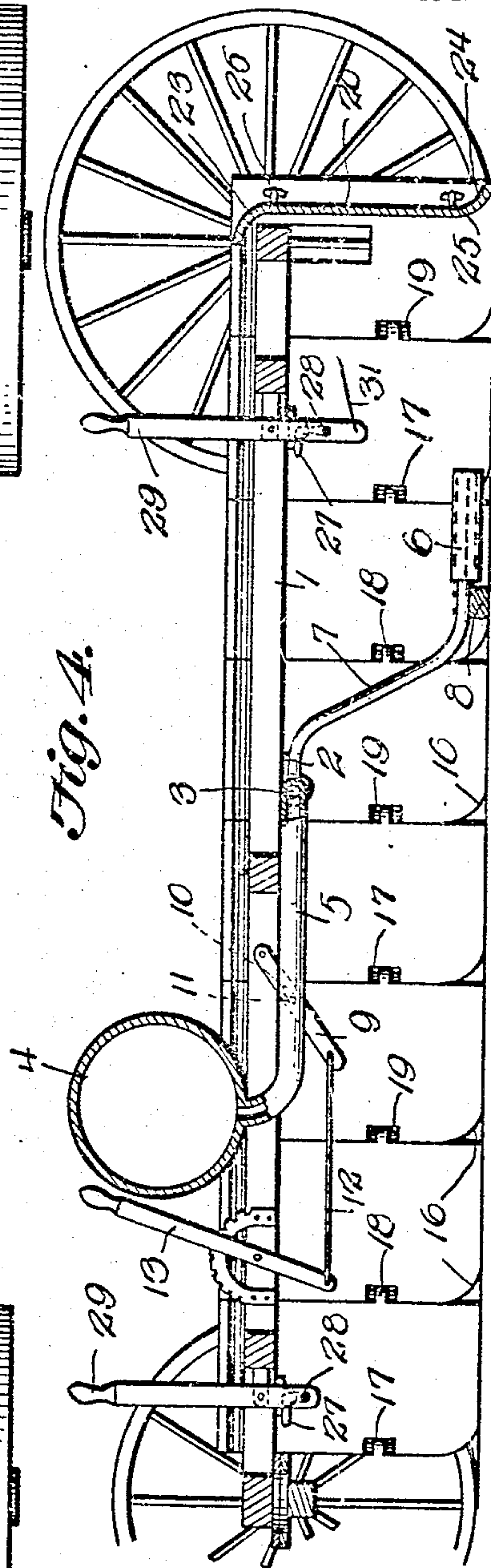


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM STINSON, OF PIPESTONE, MANITOBA, CANADA.

GRASS OR STUBBLE BURNER.

985,379.

Specification of Letters Patent.

Patented Feb. 28, 1911:

Application filed March 18, 1910. Serial No. 550,143.

To all whom it may concern:

Be it known that I, WILLIAM STINSON, a citizen of Canada, residing at Pipestone, in the Province of Manitoba and Dominion of Canada, have invented new and useful Improvements in Grass or Stubble Burners, of which the following is a specification.

The invention relates to a grass or stubble burner designed particularly for continuous travel over a field and for the complete burning of all grass, stubble or refuse during such travel.

The main object of the present invention is the provision of a burner of the type described which will be effective for the purpose designed and which is constructed to confine the flame or sparks to a prescribed area, whereby to prevent the uncontrollable extension of the flames and the attendant dangerous results.

The invention in its preferred details of construction will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a view in side elevation of the improved burner. Fig. 2 is a rear elevation of the same. Fig. 3 is a top plan of the same. Fig. 4 is a central longitudinal section of the same. Fig. 5 is a perspective view of one of the side apron sections. Fig. 6 is a perspective view of one of the rear apron sections.

Referring particularly to the accompanying drawings, the improved burner comprises a wheel frame 1 constructed in any preferred or usual manner to be drawn over the surface of a field or the like by draft animals or the like. The frame is preferably of skeleton type and at a point transverse of the same there is pivotally supported in appropriate bearings 2 a fuel feed pipe 3. The pipe is in communication with a fuel tank 4 through the medium of a supply pipe 5, and is also in communication with a series of independent burners 6, through the medium of pipes 7. The burners are arranged in spaced parallel relation transverse of the frame, and cover an aggregate space equal to or exceeding the width of the frame. The pipes 7 are projected downwardly from the feed pipe 3 so that, when the burners are spaced a slight distance above the surface over which the device is

traveling, the fuel tank 4 will be positioned on a plane above the burners so as to feed the fuel thereto by gravity. Each pipe 7, adjacent the burner 6, carries a bearing block 8, said block being more or less loosely connected to the pipe and designed in the operation of the device to rest upon the surface whereby to support a particular burner in proper spaced relation to said surface and at the same time prevent injurious contact with any material, such as stone or the like, as the block will follow the inequalities of the surface and maintain the burner at all times in proper relation thereto.

The fuel feeding means is adapted for regulation and to be rendered inoperative at will, the former result being gained by any suitable valve structure and the latter by means for controlling the relative positions of the tank and burners. For the latter construction I pivotally connect a link 9 on the frame and form the same with an elongated slot 10 in which rests a rod 11 projected from the supply pipe 5. The free end of the link is connected by a rod 12 with a manually operable lever 13. By manipulation of the lever the fuel controlling means may be turned on the feed pipe 3 as a pivot so as to lower the tank 4 and raise the burner 6, under which operation, when the tank and burners are about on a horizontal plane, the gravity feed of the oil will stop.

Each side of the machine is protected by what will be termed a side curtain including a plurality of sections 14. These sections, as shown more particularly in Fig. 5, are strips of sheet material, as iron or the like, inwardly curved at the upper edge to form flanges 15 and rounded at the juncture of the forward and lower edges, as at 16. The respective sections are designed for movable connection with each other, for which purpose the forward edge of one section will be formed with recesses 17 to receive gudgeons 18 on the rear edge of the adjacent sections, a pivot pin 19 connecting the parts. The recesses 17 are of materially greater height than the similar dimensions of the gudgeons 18, so that each section is adapted for a limited vertical play independent of the adjacent sections. The side curtains are of a length co-extensive with the length of the frame, and inclose the sides of the frame throughout the length and height of the lat-

ter, the forward section being connected to the frame as shown. The rear curtain is made up of a section 20 formed with recesses 21 and gudgeons 22 similar to the side curtain sections. The rear sections are also provided at the upper edges with inturned flanges 23 and are additionally provided at the lower edge with outturned flanges 24. The rear curtain is of a length to extend between the rear end sections of the side curtains, and the end sections of the end curtain are connected to the end sections of the side curtains by a loose connection, as at 25. The side and end curtains thus provide an inclosure for the sides and ends of the frame, effectively preventing the escape of sparks or the like beyond such confined space. In the travel of the machine the respective sections, by reason of their relatively independent movement, will separately accommodate themselves to the surface over which they are traveling, the rounded forward edge 16 of the side sections and the rearwardly curved lower edge of the rear sections facilitating such communication in an obvious manner.

To provide for effectively extinguishing the sparks or glowing embers remaining after the immediate passage of the machine, I provide an extinguisher removably connected to the rear curtains in any suitable manner and comprising a series of chain lengths 26 connected together to provide an upper rectangular chain body. This extends in rear of the machine and rests practically throughout its length and width upon the surface, so that in the travel of the machine all sparks or glowing embers are crushed out.

It being desirable to provide for the convenient travel of the machine from one place to another when not in use, I arrange to move the respective curtains and also the extinguisher to a comparatively elevated position and out of contact with the surface over which the machine is traveling and thereby eliminating the drag or friction of such parts on the surface. To this end the side curtains are connected upon the crank ends 27 of crank shafts 28 mounted in the frame, and these shafts are adapted for operation by levers 29. By means of the shafts the side curtains, and therefore the end curtain supported, thereby, can be elevated a sufficient distance to raise their lower ends beyond the surface. The extinguisher 26 is provided with a transverse centrally arranged bar 30 connected by a flexible connection 31 with the rear lever 29, so that, in the operation of said lever to elevate the curtains, the extinguisher will be likewise upwardly drawn so as to elevate it above the surface of the ground.

The machine is of simple construction and is admirably adapted for the purpose de-

signed and is particularly serviceable in emergency uses, as for burning a strip of definite area in advance of a prairie fire or the like to check said fire. It is also adapted, however, for burning the refuse on a field, for melting snow over a prescribed area and other similar purposes.

Having thus described the invention, what I claim as new, is:—

1. A grass or stubble burner comprising a frame, burner elements mounted thereon, and curtains inclosing the sides and one end of the frame beyond the burner, said curtains being made up of sections connected on their meeting vertical edges to permit their independent movement.

2. A grass or stubble burner comprising a frame, burner elements mounted thereon, curtains inclosing the sides and one end of the frame beyond the burner, said curtains being made up of sections connected on their meeting vertical edges to permit their independent movement, and means for simultaneously elevating said curtains above the surface over which the burner is traveling.

3. A grass or stubble burner comprising a frame, burner elements mounted thereon, and curtains inclosing the sides and one end of the frame beyond the burner, said curtains being made up of connected independently movable sections, each of said sections being formed at the upper edge with an inturned flange to provide a deflector.

4. A grass or stubble burner comprising a frame, burner elements mounted thereon, and curtains inclosing the sides and one end of the frame beyond the burner, said curtains being made up of sections connected on their meeting vertical edges to permit their independent movement, the sections of said curtains being rounded on their forward edges to permit said sections to override obstructions.

5. A grass or stubble burner comprising a frame, burner elements mounted thereon, and curtains inclosing the sides and one end of the frame beyond the burner, said curtains being made up of sections connected on their meeting vertical edges to permit their independent movement, the sections of said curtains being rounded on their forward edges to permit said sections to override obstructions, the sections of the end curtain being formed on their lower edges with outturned flanges to present a considerable section area for contact with the surface for use as an extinguisher.

6. A grass and stubble burner comprising a frame, burner elements mounted thereon, curtains inclosing the sides and one end of the frame beyond the burner, said curtains being made up of sections connected on their meeting vertical edges to permit their independent movement, and a flexible extinguisher connected to the rear curtain.

7. A grass or stubble burner comprising a frame, burner elements mounted thereon, curtains inclosing the sides and one end of the frame beyond the burner, said curtains being made up of sections connected on their meeting vertical edges to permit their independent movement, a flexible extinguisher connected to the rear curtain, and means for

elevating said extinguisher above the surface when desired.

10

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

WILLIAM STINSON.

Witnesses:

C. E. WOODCOCK,
HUGH MACINTYRE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
