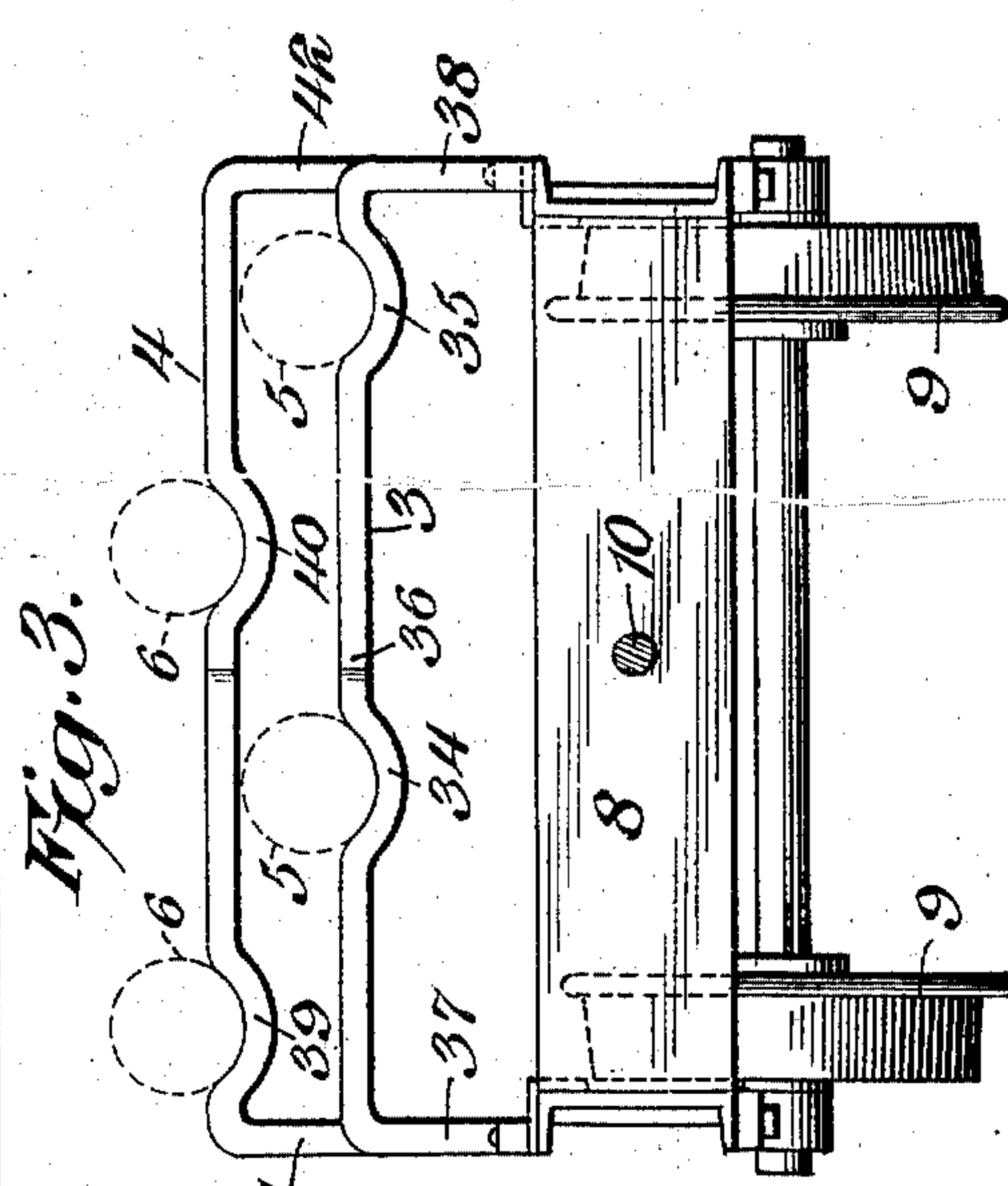
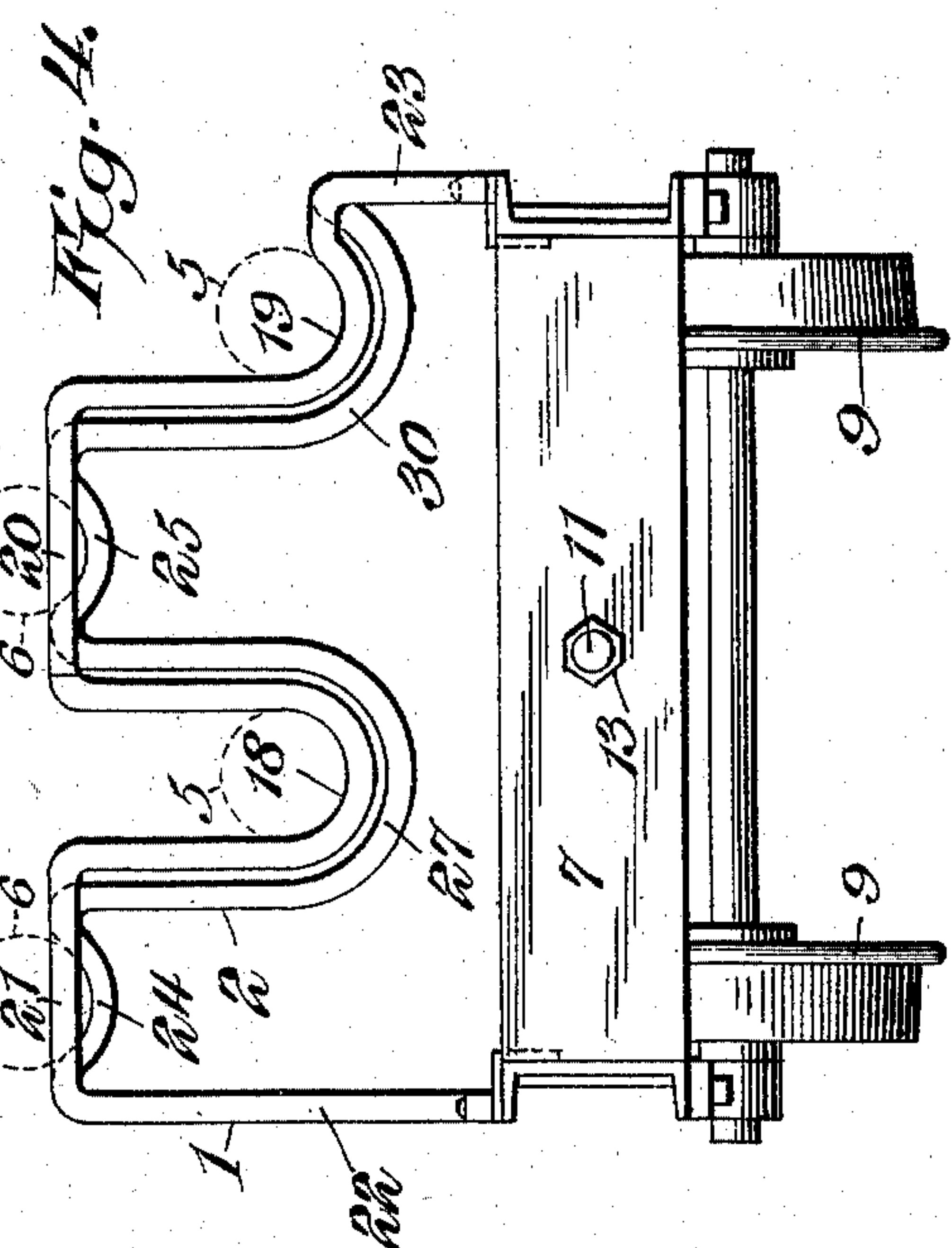
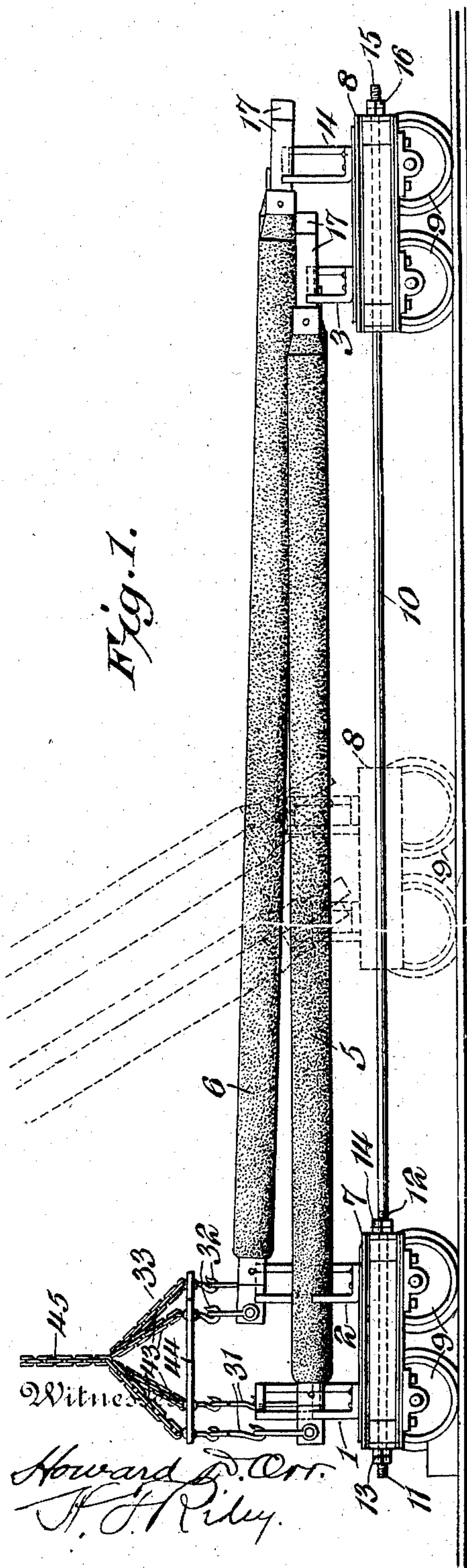


J. R. McWANE & W. D. MOORE.
 PORTABLE CORE SUPPORT.
 APPLICATION FILED NOV. 18, 1909.

967,040.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 1.



James R. McWane
 and William D. Moore, Inventors
 By *E. G. Siggers*
 Attorney

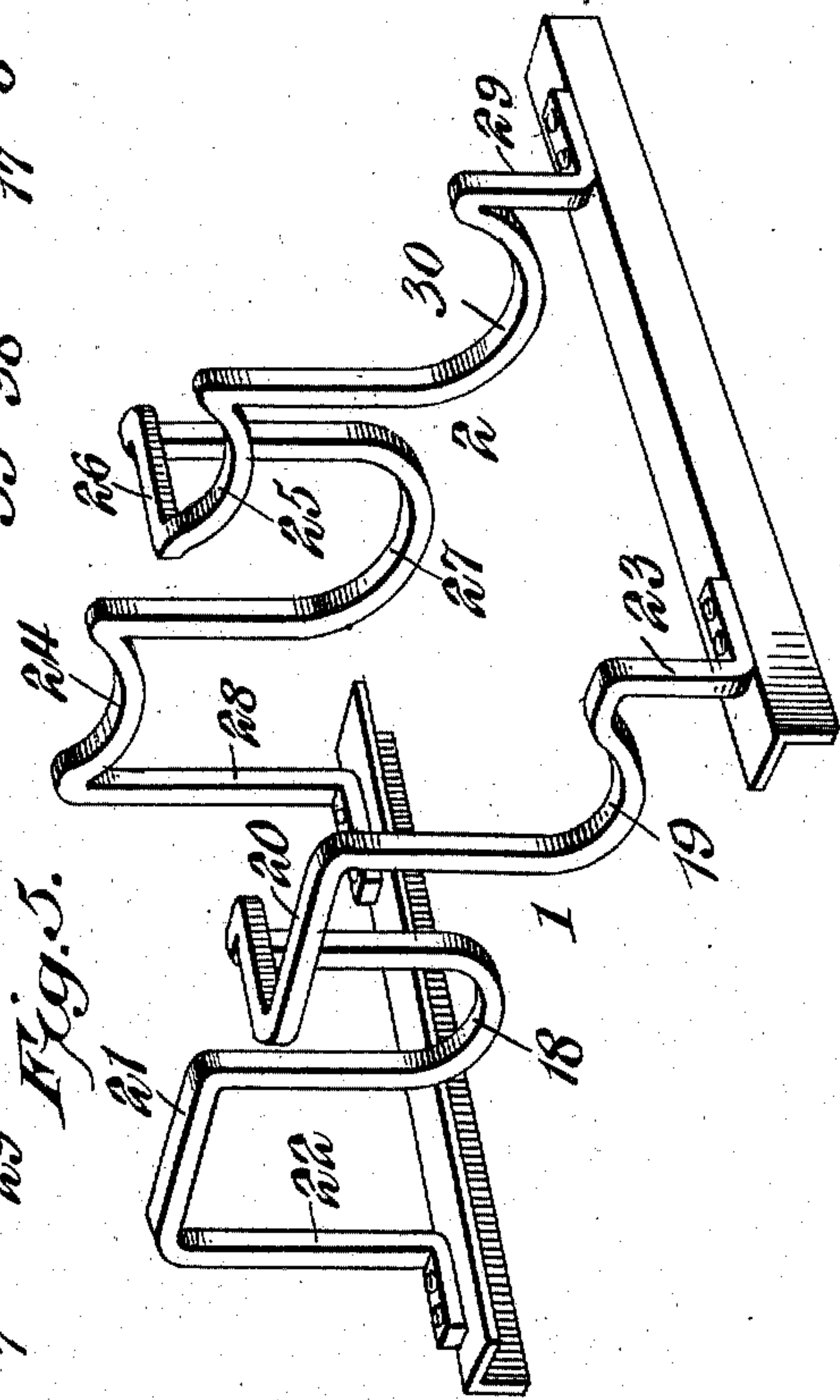
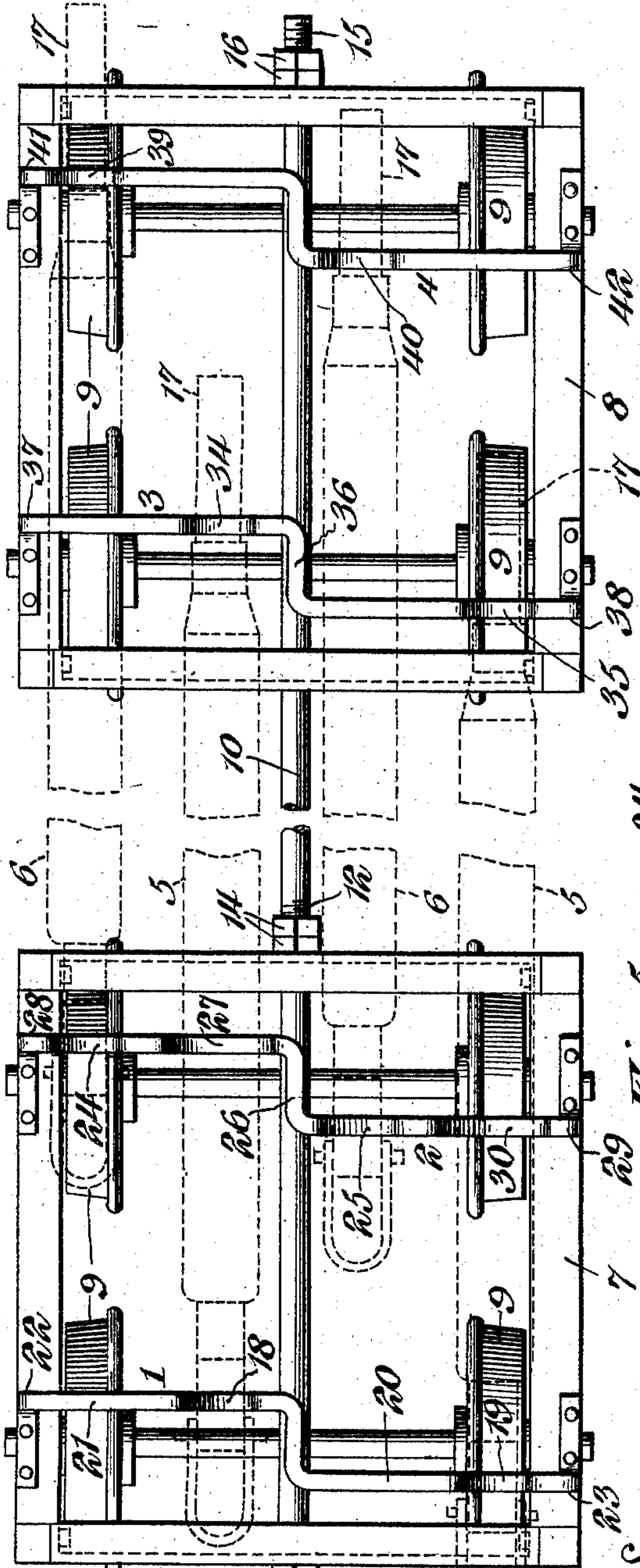
Howard D. Orr.
H. J. Riley.

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2 SHEETS—SHEET 2.



Witnesses
 Howard D. Orr.
 J. H. Ruy.

Fig. 2.

James R. McWane
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By

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UNITED STATES PATENT OFFICE.

JAMES R. McWANE AND WILLIAM D. MOORE, OF BIRMINGHAM, ALABAMA.

PORTABLE CORE-SUPPORT.

967,040.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed November 18, 1909. Serial No. 528,764.

To all whom it may concern:

Be it known that we, JAMES R. McWANE and WILLIAM D. MOORE, citizens of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented a new and useful Portable Core-Support, of which the following is a specification.

The invention relates to a portable core support.

The object of the present invention is to provide a support, adapted to hold a plurality of cores in position for enabling the same to be simultaneously lifted and transferred from the support to a multiple flask, and inserted therein by a crane without permitting the cores to strike against each other.

Another object of the invention is to provide a portable core support, adapted to enable a plurality of cores to be quickly and conveniently carried to a pipe pit from a core car, or other means for making and drying cores, whereby the cores may be prepared any distance from a pipe pit without inconvenience in handling them or danger of injuring them in transferring the cores to the pipe pit or other point where the said cores are introduced into the flasks.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a side elevation of a portable core bar support, constructed in accordance with this invention. Fig. 2 is an enlarged plan view of the same, the draft rod being broken away and the core bar being illustrated in dotted lines. Fig. 3 is an elevation of the rear end of the portable core bar support. Fig. 4 is a similar view of the front end thereof. Fig. 5 is a perspective view of the inner and outer core bar receiving brackets or stands of the front truck.

Where the words "core bar" are used they are intended to cover the idea of core and bar, the core having been swept up on the bar and dried.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

In the embodiment of the invention illustrated in the accompanying drawings, the brackets or stands 1, 2, 3 and 4 for the core bars 5 and 6 are mounted upon a car in order to enable the core bars to be quickly and conveniently transferred from a core strike, or other means for making and preparing core bars, to the pipe pit, or other point where the core bars are introduced into the flasks, but the brackets or stands may be mounted in a fixed position adjacent to a pipe pit or other convenient place, and the core bars may be placed on the said brackets or stands by hand. The car is composed of trucks 7 and 8, equipped with wheels 9 and connected by a draft rod 10, fixed to the frame of the truck 7, and slidable through the frame of the truck 8. The trucks may be of any preferred construction, and the draft rod 10 preferably pierces the frame of the front truck 7 and is threaded at 11 and 12 in advance and in rear of the same for the reception of nuts 13 and 14, arranged in pairs and adapted to rigidly secure the front end of the rod 10 to the frame of the front truck. The frame of the rear truck 8 is provided with a central opening through which the rear portion of the draft rod passes, and the rear terminal 15 thereof is threaded for the reception of nuts 16, forming a stop for retaining the draft rod and the truck in their slidable relation. The rear truck may be equipped with suitable anti-friction devices to enable the same to slide freely on the draft rod, but this is not essential, and as such devices do not constitute a portion of the present invention, illustration thereof is deemed unnecessary. The truck 7 in the present description is termed the front truck for convenience, as the brackets or stands for the upper or shackle ends of the core bars may be mounted in either truck.

The brackets or stands shown in the accompanying drawings are designed to hold a set of core bars for use in a four-way or multiple flask, and the core bars 6 are arranged at a higher elevation than the core bars 5, as clearly illustrated in Fig. 1 of the drawings, and each core bar is located in a different vertical plane, as shown in Fig. 3 of the drawings, the core bars being staggered both laterally and vertically in order to prevent them from striking against each other

and being injured when they are lifted from the car by a crane. The front brackets or stands 1 and 2 receive the shackle ends of the core bars 5 and 6, and the rear brackets or stands 3 and 4, which support the other ends of the core bars, receive wooden sticks or bars 17, which are inserted in the core bars to facilitate carrying the same.

Each of the brackets or stands is preferably constructed of a single bar or piece of metal bent into the form shown. The front bracket or stand 1 is provided with curved seats 18 and 19, arranged in the same horizontal plane and spaced apart a sufficient distance to permit one of the upper core bars 6 to lie above the intervening space between the said lower core bars 5. The adjacent sides of the curved seats 18 and 19 are extended upward to the top of the bracket or stand and are connected by an angularly bent approximately L-shaped horizontal portion 20, the seat 19 being located slightly in advance of the seat 18. The outer side of the seat 18 is also extended to the top of the bracket or stand, and is connected by a straight transverse portion 21 with the adjacent side 22 of the bracket or stand. The side 22 of the bracket or stand is vertical, and has its lower end bent outwardly and bolted or otherwise secured to the frame of the truck. The seat 18 is formed by an approximately U-shaped loop or portion of the bracket or stand 1, and the seat 19 is formed by an approximately J-shaped portion, which is connected at the outer terminal with the adjacent side 23 of the bracket or stand 1. This leaves the bracket or stand 1 open at the outer side of the seat 19, and the side 23 of the bracket or stand is short, and has its lower terminal extended inwardly and bolted or otherwise secured to the frame of the truck.

The inner front bracket or stand 2 is provided with curved seats 24 and 25, located at the top of the bracket or stand in the same horizontal plane. The seat 25 is located in advance of the seat 24, and is connected by a short horizontally disposed longitudinal portion 26 with an approximately U-shaped portion 27, spacing the seats 24 and 25 and providing an open space located opposite the seat 18 for the passage of the adjacent lower core bar 5. The seat 24 is connected directly at its outer end with the vertical side 28 of the bracket or stand 2. This side 28 of the bracket or stand is relatively long and the other side 29 is relatively short, being connected with the seat 25 by a curved approximately J-shaped portion 30, which forms an opening opposite the seat 19. The sides 28 and 29 of the bracket or stand 2 have their lower terminals extended in opposite directions and bolted or otherwise secured to the frame of the truck. The seat 25 is located in advance

of the seat 24 and by locating the seats of the front brackets or stands in different transverse planes, the shackles are also located in different longitudinal planes, and are in proper position to be readily engaged with the hooks 31 and 32 of a core bar carrier 33, as clearly shown in Fig. 1 of the drawings.

The inner rear bracket or stand 3 is provided with curved seats 34 and 35, located in the same horizontal planes and connected with each other by an intermediate angularly bent portion 36. The seats 34 and 35 are connected with sides 37 and 38 of the bracket or stand, which have their lower terminals extended in opposite directions and secured to the frame of the rear truck. The outer rear bracket or stand 4 is of substantially the same construction as the inner rear bracket or stand 3 with the exception of the seats 39 and 40, which are curved and located in different longitudinal planes than the seats 34 and 35 and at a higher elevation, the sides 41 and 42 being extended above the horizontal plane of the top of the bracket or stand 3, as clearly illustrated in Fig. 3 of the drawings.

When the core bars are placed in the seats of the front and rear brackets or stands, they are arranged at different elevations, two of them being located above the other two. The members of the pair of upper core bars are arranged in the same approximately horizontal plane, the upper core bars 6 of being slightly inclined, as shown in Fig. 1, and the members of the pair of lower core bars are arranged in the same horizontal plane. Also each core bar is located in a different transverse and a different vertical plane from the other core bar.

The hooks 31 of the core bar carrier 33 are of a length greater than the hooks 32. The hooks 31 and 32 are connected with chains 43, which are spread by arms of a spider 44, to maintain the hooks in proper position with relation to the compartments of the four-way flask, in which the core bars are to be introduced. The chains 43 are connected with a central chain 45, which is suitably connected with the chain of the crane (not shown), and when the core bar carrier is raised, the shackle ends of the core bars are lifted from the brackets or stands of the front truck, and the gradual raising of the front ends draws the rear ends of the core bars forwardly beneath the core bar carrier, the rear truck being moved forwardly along the draft rod, so that the core bars do not leave the rear brackets or stands until they are in approximately a vertical position. This enables the core bars to be simultaneously lifted from the support by a crane without injuring each other. When the core bars are suspended from the carrier, they hang in proper position to enable them

to be inserted in the compartments of a four-way flask. The compartments of a four-way flask are arranged so close to each other that it is impossible to arrange the core bars on the brackets or stands in a position corresponding strictly to the relative arrangement of the said compartments, and it is necessary to stagger the core bars on the support in order to prevent them from striking each other when they are lifted from the support by a carrier having its supporting means arranged to suspend the core bars in proper position for inserting the same in the compartments of a flask. Although four core bars are shown in the accompanying drawings, yet the brackets or stands may be arranged to accommodate a different number of core bars.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A core bar support including a plurality of front and rear seats adapted to support the front and rear ends of a plurality of core bars and arranged in spaced relation to enable them to be simultaneously lifted from the support by a crane without striking each other.

2. A core bar support including a plurality of core bar receiving seats arranged to support a plurality of core bars in staggered relation, whereby they are adapted to be lifted simultaneously from the support without striking against each other.

3. A core bar support including a plurality of front and rear core bar receiving seats staggered vertically and arranged to support a plurality of core bars in position for enabling the same to be simultaneously lifted from the support by a crane.

4. A core bar support including a plurality of front and rear core bar receiving seats staggered vertically and laterally of the support and adapted to space the core bars for enabling them to be lifted clear of the support without striking against each other.

5. A core bar support including a plurality of front and rear seats staggered vertically and laterally and arranged in different transverse planes, whereby the core bars are adapted to be lifted from the support by a crane without striking against each other.

6. A core bar support including upper and lower front and rear seats arranged in pairs, the members of each pair being arranged in the same horizontal plane and the seats of the several pairs being staggered laterally.

7. A core bar support including front and rear seats arranged in pairs, the members of each pair of seats being located in the same horizontal plane and arranged in different transverse planes and the members of the several pairs being located in different vertical planes.

8. A core bar support including inner and outer front core bar receiving stands provided with seats arranged at different elevations, and inner and outer rear core bar receiving stands having seats arranged at different elevations.

9. A core bar support including inner and outer front core bar receiving stands provided with seats arranged at different elevations, and inner and outer rear core bar receiving stands having seats arranged at different elevations, said seats being disposed in pairs and the members of each pair being located in different transverse planes.

10. A core bar support including inner and outer front stands provided with seats, the seats of the outer front stand being located in a plane below those of the inner front stand, and a pair of rear stands having seats, the seats of the inner rear face corresponding with those of the outer front stand and being located below the seats of the outer rear stand.

11. A core bar support including inner and outer front stands provided with seats, the seats of the outer front stand being located in a plane below those of the inner front stand, and a pair of rear stands having seats, the seats of the inner rear face corresponding with those of the outer front stand and being located below the seats of the outer rear stand, and each set of the front and rear seats being located in different vertical planes.

12. A core bar support including front and rear stands arranged in pairs and provided with core bar receiving seats, each stand being constructed of a single piece of metal bent to form said seats, and side supporting portions.

13. A core bar support including front and rear stands disposed in pairs and arranged transversely of the support, each stand being constructed of a single piece of metal bent to form core bar receiving seats and intermediate spacing portions, the seats of the front and rear stands being arranged to support the core bars in staggered relation.

14. A core bar support including front and rear inner and outer stands, the front outer stand consisting of a single piece of metal bent to form a pair of spaced seats, supporting portions connected with the outer ends of the seats, and an intermediate portion connecting the seats.

15. A core bar support including front and rear inner and outer stands, the front outer stand consisting of a single piece of metal bent to form a pair of spaced seats, supporting portions connected with the outer ends of the seats, and an angularly related intermediate portion connecting the seats, the latter being located in different transverse planes.

16. A core bar support including front and rear inner and outer stands, the outer front stand consisting of a single piece of metal bent to form round and short side supports, a substantially U-shaped portion forming a seat and connected with the long side support, and an approximately J-shaped portion connected at the bottom with the short side support and at the top with the adjacent side of the U-shaped portion.
17. A core bar support including inner and outer front and rear stands, the inner front stand being provided at the top with core bar receiving seats and having an open space between the seats and at the outer side of one of the seats.
18. A core bar support including inner and outer front and rear stands, the inner front stand being composed of seats arranged at the top of such stand, a substantially U-shaped portion connecting the seats and forming an open space between the same, and an approximately J-shaped portion arranged at the outer end of one of the seats to form an open space to receive a core bar.
19. A core bar support including inner and outer front and rear stands, the inner front stand being constructed of a single piece of metal bent to form side supports, a pair of spaced top seats, one of the seats being connected to one of the supports, an approximately J-shaped portion connecting the other seat with the other support, and an approximately U-shaped portion located between and connected with the seats.
20. A core bar support including inner and outer front and rear stands, the inner front stand being constructed of a single piece of metal bent to form long and short side supports, spaced seats arranged in transverse planes, one of the seats being connected with the long side support, an approximately J-shaped portion connecting the other seat with the short side support, an approximately U-shaped portion arranged between the seats and connected to one of the same, and a short longitudinal portion connecting the U-shaped portion with the other seat.
21. A core bar support including front stands having core bar receiving seats, and rear stands provided with transverse top portions arranged at different elevations and having core bar receiving seats.
22. A core bar support including front stands having core bar receiving seats, and rear stands provided with transverse top portions arranged at different elevations and having core bar receiving seats, the latter being located in different transverse planes.
23. A core bar support including front and rear stands, the rear stands being each constructed of a single piece of metal bent to form side supporting portions, and a top portion having opposite seats, said top portion being also bent at an intermediate point to arrange the seats in different transverse planes.
24. A core bar support including stands having core bar receiving seats and spaced apart a sufficient distance to allow the opposite ends of the core bars to be supported in the said seats, said stands having a relative movement toward and from each other, whereby when the core bars are lifted by one end from one stand the other end of each core bar will be permitted to rest upon and be steadied by the other stand until the core bars are in an upright position to prevent them from striking against each other.
25. A core bar support including a plurality of front and rear core bar receiving seats staggered laterally to arrange the core bars in different longitudinal planes, whereby the core bars may be simultaneously lifted from the support without striking each other.
- In testimony, that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.
- JAMES R. McWANE.
WILLIAM D. MOORE.
- Witnesses:
H. J. BLAIR,
D. W. WALLACE.