

G. WARD.
PORTABLE CARRYING TABLE.

APPLICATION FILED AUG. 15, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

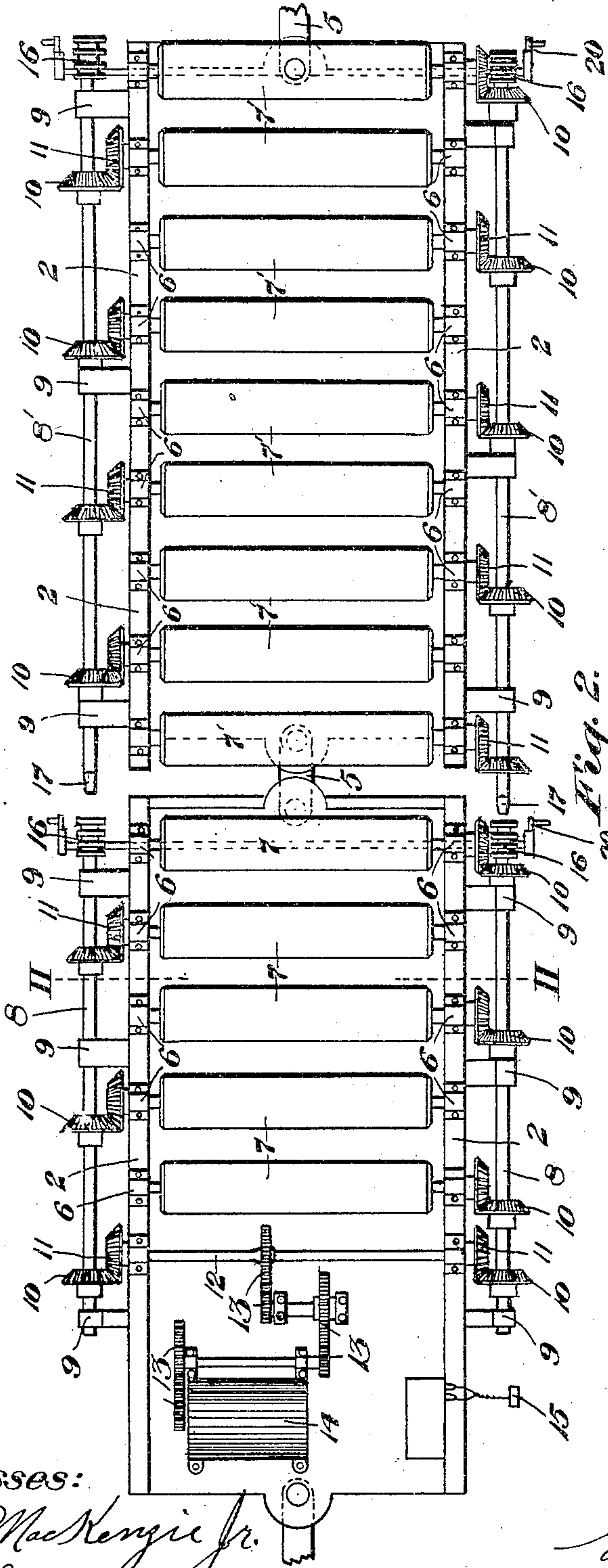
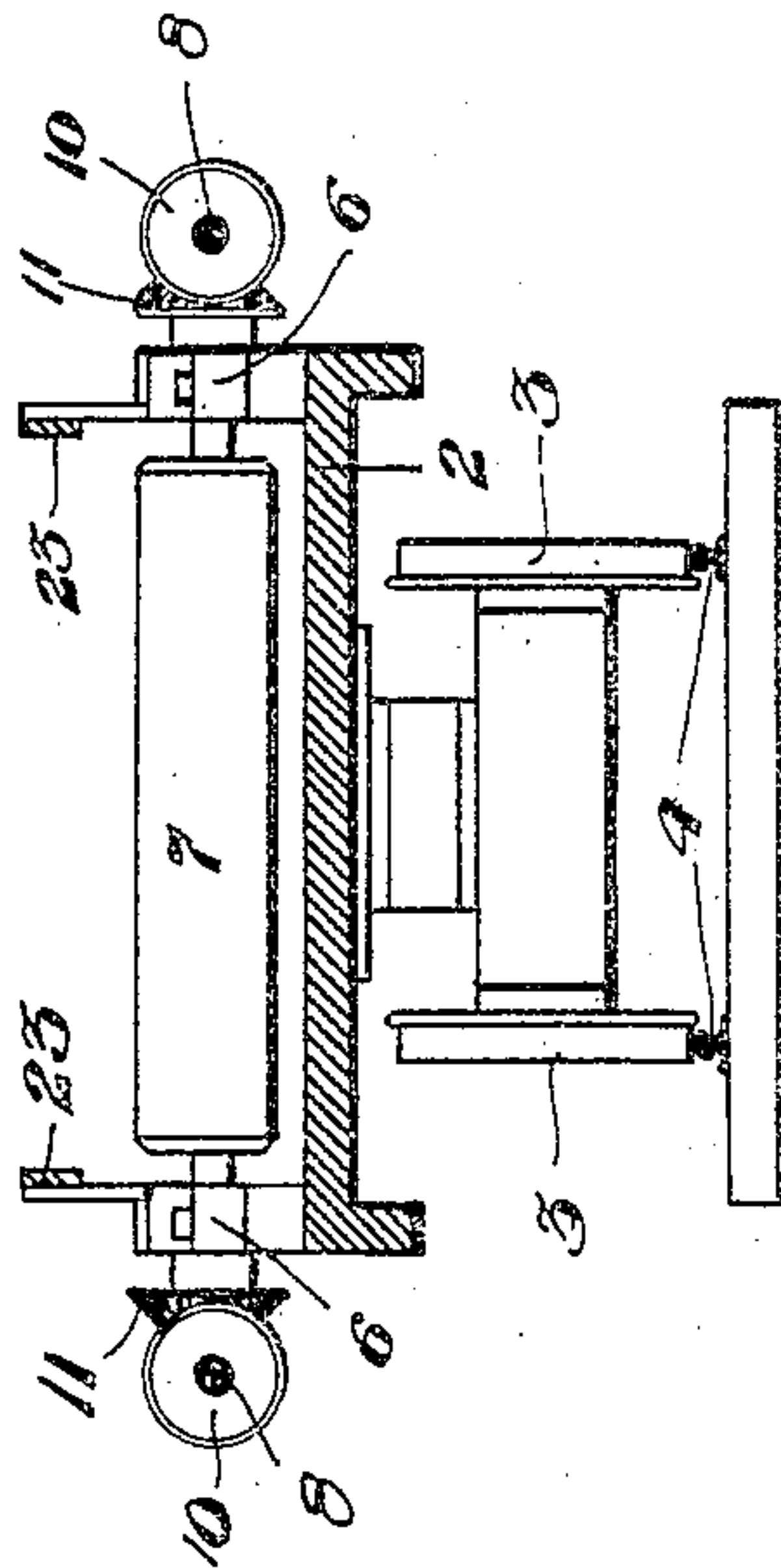


Fig. 2.



Witnesses:

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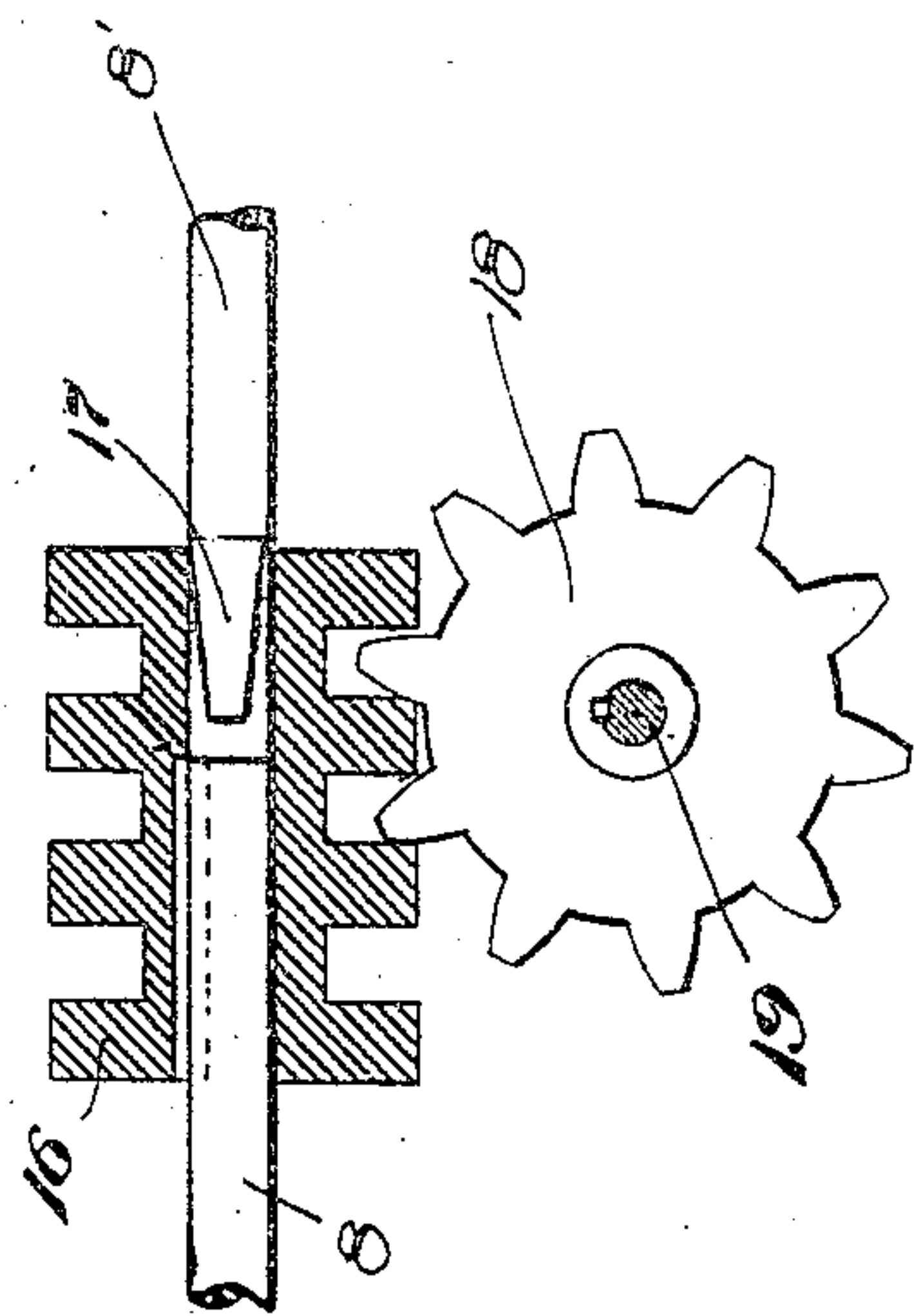
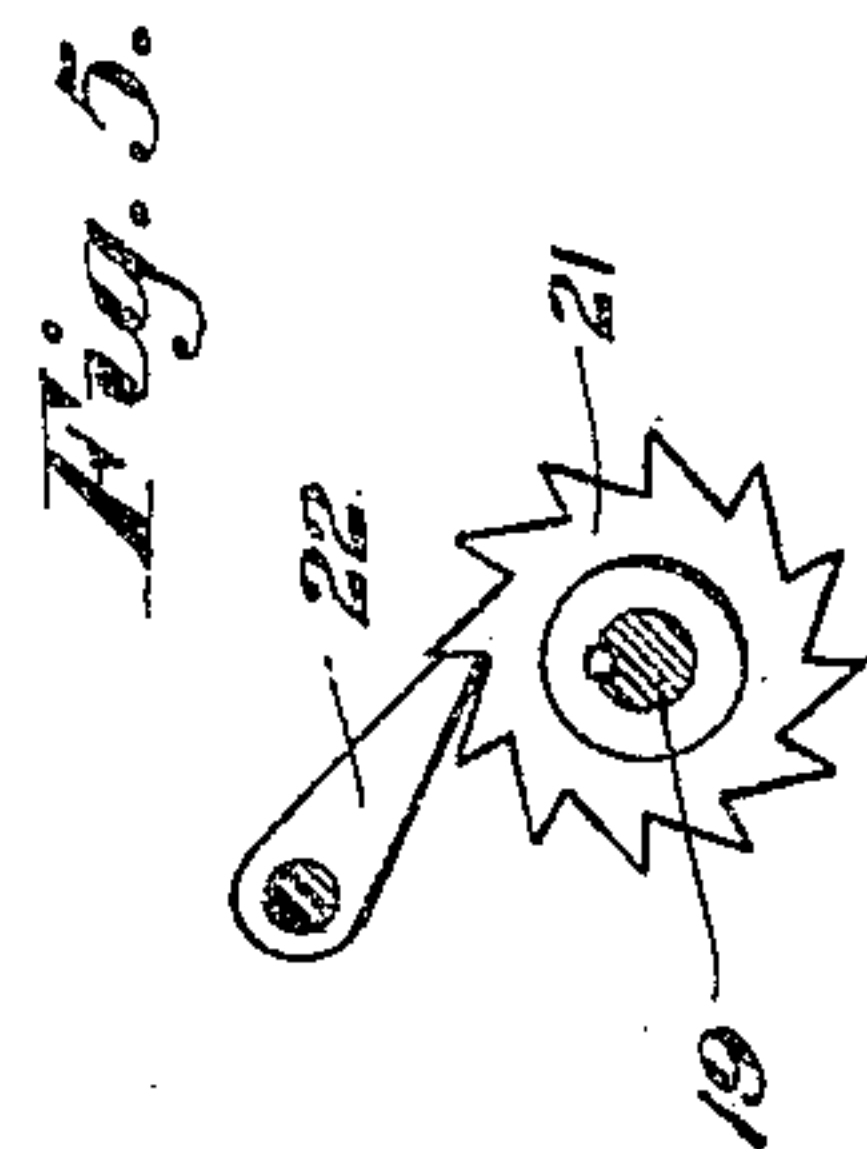
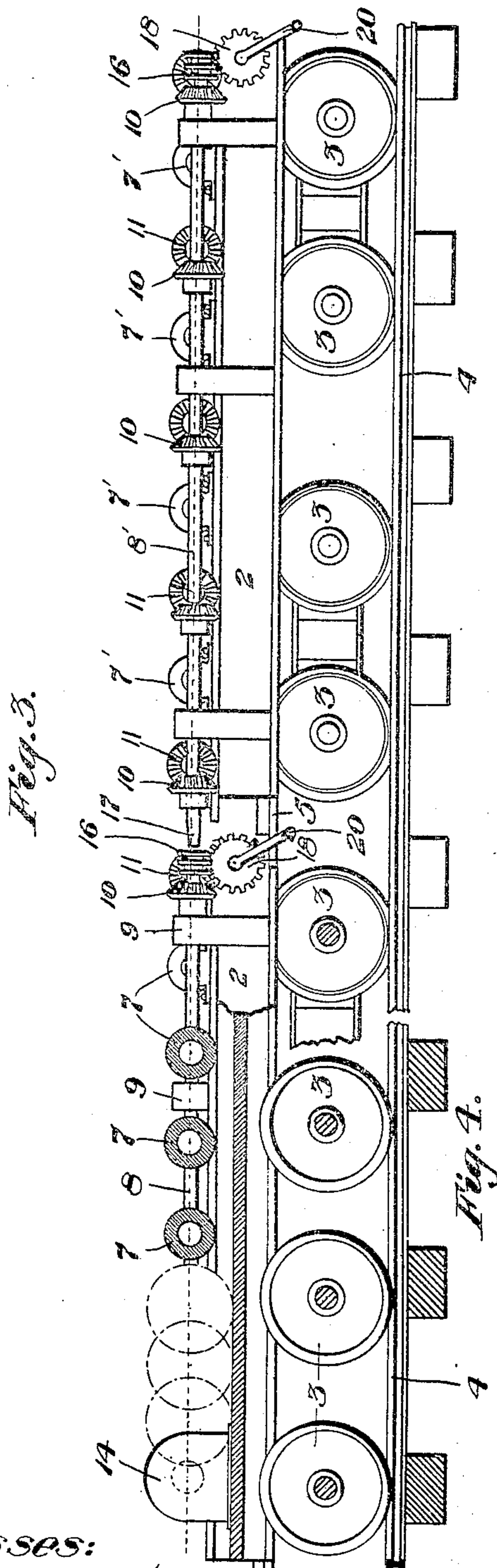
No. 778,613.

PATENTED DEC. 27, 1904.

G. WARD.
PORTABLE CARRYING TABLE.

APPLICATION FILED AUG. 15, 1904.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

GEORGE WARD, OF HOMESTEAD, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO THOMAS J. TIERNEY, OF PITTSBURG, PENNSYLVANIA.

PORTABLE CARRYING-TABLE.

SPECIFICATION forming part of Letters Patent No. 778,613, dated December 27, 1904.

Application filed August 15, 1904. Serial No. 220,757.

To all whom it may concern:

Be it known that I, GEORGE WARD, a citizen of Great Britain, residing at Homestead, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Portable Carrying-Tables, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of my improved carrying-table embodying two connected sections, the driving-shafts being uncoupled. Fig. 2 is a cross-section indicated by the line 11 11 of Fig. 1. Fig. 3 is a side elevation, partly broken away. Fig. 4 is a detail view illustrating the shifting-coupling for the driving-shafts and operating mechanism therefor. Fig. 5 is a detail view illustrating the ratchet and pawl.

My invention relates to improvements in portable carrying-tables; and it consists of one or more trucks mounted on supporting-wheels provided with power-driven rollers with means for driving them in either direction, together with means for connecting two or more such trucks, so as to drive all of the rolls thereof simultaneously.

The invention is particularly adapted to handling large heavy bodies, as ingots, &c., and is adapted to be moved around over tracks on a mill-floor or elsewhere and brought into receiving position, as in front of a roll-table, then transported along the tracks to any desired point of delivery, as cars for shipment or a storage-platform upon which the supported bodies are delivered by rotation of the rolls.

Referring now to the drawings, 2 represents the truck or carriage mounted upon the usual wheels 3, adapted to travel on tracks 4, and provided with any suitable coupling devices, as links 5, by which the trucks may be coupled to each other and whereby they are readily carried around curves in the track. Mounted in suitable bearings 6 upon the frames upon the sides of trucks 2 are rollers 7, each of which is designed to be rotated positively in one direction or the other, for which

purpose driving-shafts 8 8 are mounted in suitable bearings 9 at each side of the truck and geared with the shafts of rolls 7 by bevel-gearing 10 11. Shafts 8 are driven from shaft 12, connected by suitable pinion or other gearing 13 with a motor 14, mounted on one of the trucks at its end. The motor 14, as shown, is an electric motor provided with the usual controller or other necessary attachments and adapted to be connected with any suitable source of power by a coupling 15, with which connections may be made at the receiving and delivery points or, if preferred, the current may be taken from a supply-wire by the usual well-known trolley. Other types of prime mover may also be employed—as, for instance, a steam, gas, or gasolene engine, compressed air, or other motor—and I do not desire to be limited to the use of an electric motor, as it is obvious that any suitable power may be utilized to transmit driving movement to the shafts 8. In case of a fluid-actuated engine the engine may be provided with pressure from any suitable source at different points by suitable couplings, or a steam-engine may be connected directly with the boiler of the shifting-locomotive.

One or more trucks may be coupled with the motor-carrying truck as has been described, and each of such supplemental trucks is provided with driving-shafts 8', connected with the rolls 7' thereof by similar bevel-gearing 10 11. Slidably connected with either shaft 8 or 8' is a coupling 16, adapted to engage the end 17 of shaft 8', which is suitably squared or otherwise formed, so as to fit within a corresponding socket in coupling 16 when the same is shifted onto the end of the shaft 8'. The coupling 16 is preferably circular on the outside and provided with a longitudinal series of annular rack-teeth, with which engages the teeth of a pinion 18, mounted on shaft 19, which shaft is provided with a turning-handle 20, by which shaft 19 may be rotated forward or back. The shaft also carries a ratchet-wheel 21 with which engages a pawl 22, by which the shaft is held against reversal when coupling is made; but which will permit the coupling to be thrown back by releasing the pawl. The ad-

vantage of this construction is that the shafts 8 and 8' may be readily uncoupled when the trucks are to be transported from one point to another and may be coupled together again at the receiving or delivery points.

For the purpose of preventing lateral travel of the ingot or other article guide-rails 23 may be provided at each side of the truck of a suitable height and design to engage and guide the ingot or other material being carried. The gage of the wheels of the truck is preferably standard gage, thus facilitating the use of the trucks upon standard railroad-tracks, so that they may be run into a mill or out upon a track to a siding or elsewhere where it may be desired to load or unload material.

The operation will be readily understood from the foregoing description. The trucks are carried around over the tracks by means of a locomotive or other suitable power stationed in front of a roll-table or other source from which the load is to be received, and the weights to be carried, as ingots, are fed upon the rolls 7 by means of other similar shifting mechanism or by lifting-cranes and when thus delivered may be either originally disposed and distributed over the carrying-rolls or these rolls may be actuated so as to shift the load throughout the length of the carriage. Power may then be thrown off of the motor and the trucks transported along the tracks to any point of delivery where power is again connected, or the motor is set into motion in any suitable manner, shafts 8 and 8' having been first coupled together, when by rotation of the rollers the load will be bodily shifted off of the trucks and delivered upon any suitable receiving apparatus.

The invention is comparatively simple in construction and well suited for the objects in view. It obviates the necessity of manual handling of the load and greatly reduces the labor of handling and transporting heavy bodies, such as those indicated. By the arrangement of the gearing shown, the rollers being geared alternately from oppositely-disposed shafts, the rollers may be located adjacent to each other with sufficient clearance room for gearing, couplings, bearings, &c.

Various changes or modifications may be made in the design, proportions, and various other details of the invention by the skilled mechanic; but all such are to be considered as within the scope of the following claims.

Having described my invention, what I claim is—

1. A portable truck consisting of a suitable framework provided with carrying-wheels, a series of rollers mounted thereon, a motor mounted on the truck and gearing for simultaneously rotating all of the rollers in either direction, and means for connecting the roll-driving mechanism with an adjacent similar truck, substantially as set forth.

2. A transporting-truck for heavy bodies consisting of a suitable framework provided with supporting-wheels and roller-bearings, rollers mounted in said bearings, driving-shafts located at each side and geared with the shafts of said rollers, a driving-motor mounted on the truck and connected with said driving-shafts, and coupling devices on the shafts adapted to connect them with shafts of a corresponding adjacent truck, substantially as set forth.

3. In a portable carrying-table, the combination of a plurality of supporting-tables provided with rotatable rollers, a driving-shaft arranged longitudinally of each of said tables and geared with said rollers, and a motor geared with one of said shafts; of a slidingly-arranged coupling mounted on the shaft of one of said tables adapted to engage the shaft of the adjacent table, with means for throwing said coupling into and out of engagement therewith, substantially as set forth.

4. In a portable carrying-table, the combination of a plurality of supporting-tables provided with rotatable rollers, a driving-shaft arranged longitudinally of each of said tables and geared with said rollers, and a motor geared with one of said shafts; of a slidingly-arranged coupling mounted on the shaft of one of said tables adapted to engage the shaft of the other of said tables, said coupling being provided with rack-teeth, a pinion in engagement with said rack-teeth, a supporting-shaft, an operating-crank therefor, and a ratchet-wheel and arresting-pawl, substantially as set forth.

5. In a portable carrying-table the combination of a plurality of trucks mounted on supporting-wheels and connected together, a series of adjacent rollers mounted in bearings on each truck, driving-shafts geared therewith, slidingly-mounted couplings and actuating devices therefor for connecting and disconnecting the shafts of adjacent trucks, and a motor mounted on one of the trucks and geared with the driving-shafts thereof, substantially as set forth.

6. A portable carrying-table consisting of a truck mounted on suitable wheels and provided with a series of rotatable rollers mounted in bearings on the truck, driving-shafts at each side of the truck in driving engagement with said rollers, a motor mounted on the truck and geared with said shafts, a second table flexibly connected with said first table and similarly provided with rollers, gearing, and driving-shafts of the first table, and adapted to be coupled with the shafts of the second table, substantially as set forth.

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

GEORGE WARD.

Witnesses:

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C. M. CLARKE.