No. 609,196. Patented Aug. 16, 1898.

A. J. P. DE SOUZA.

TRACTION MOTOR.

(Application filed Sept. 1, 1896.)

(No Model.) 2 Sheets—Sheet 1.

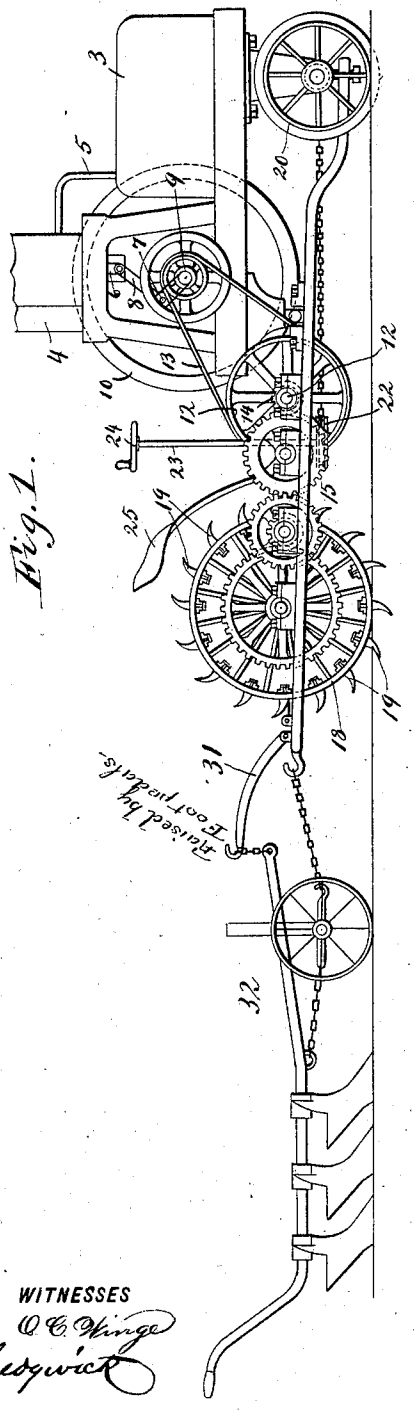


Fig. 1.

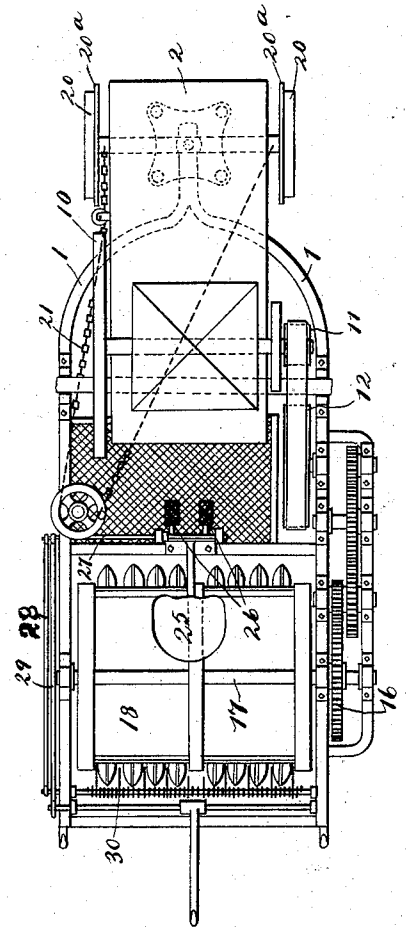


Fig. 2.

WITNESSES

O. C. Hinga

C. Sedgwick

INVENTOR

A. J. P. de Souza

BY

Cary, Deemer & Co

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 609,196. Patented Aug. 16, 1898.

A. J. P. DE SOUZA.

TRACTION MOTOR.

(Application filed Sept. 1, 1896.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

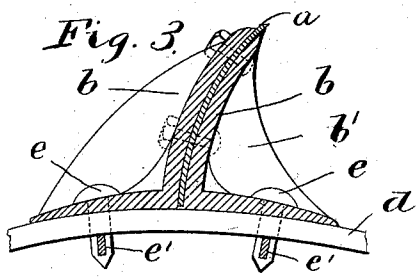


Fig. 4.

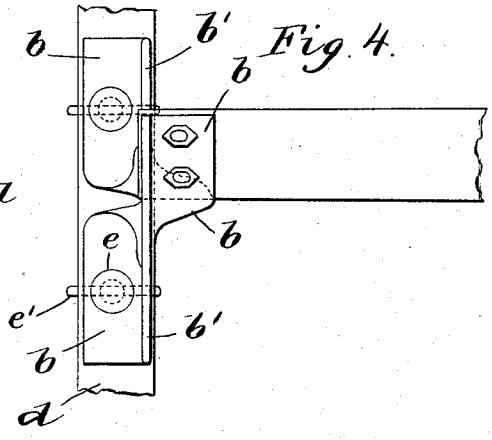


Fig. 5.

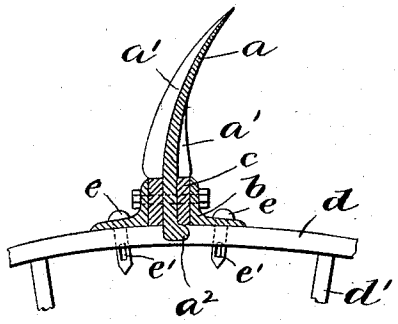


Fig. 6.

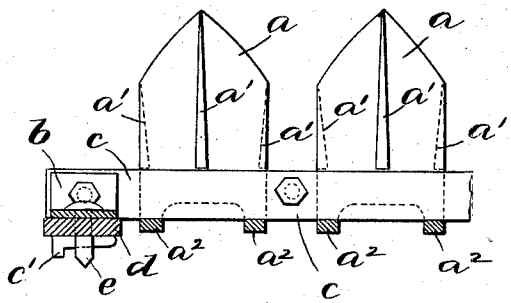


Fig. 7.

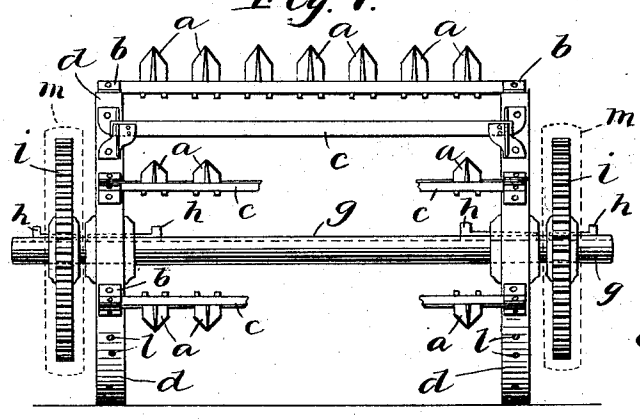
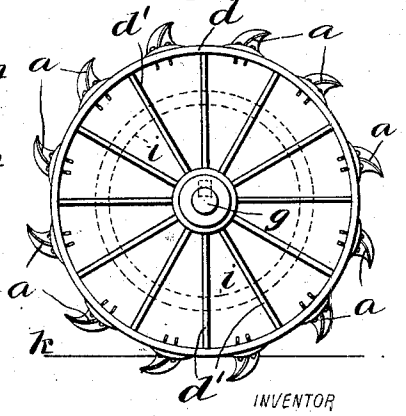


Fig. 8.



WITNESSES:

O. C. Winge

C. Sedgwick

INVENTOR

A. J. P. De Sousa

BY

Carr & Carr & Co

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANTOINE JEAN PATERNOSTER DE SOUZA, OF PARIS, FRANCE.

TRACTION-MOTOR.

SPECIFICATION forming part of Letters Patent No. 609,196, dated August 16, 1898.

Application filed September 1, 1896. Serial No. 604,518. (No model.) Patented in England October 24, 1894, No. 20,367; in France June 27, 1895, No. 248,494; in Canada September 18, 1896, No. 53,525, and in Hungary February 10, 1897, No. 27,570.

To all whom it may concern:

Be it known that I, ANTOINE JEAN PATERNOSTER DE SOUZA, a citizen of the Republic of France, and a resident of Paris, France, have invented certain new and useful Improvements in Traction-Motors, (for which I have obtained a patent in England, dated October 24, 1894, No. 20,367; in Hungary, dated February 10, 1897, No. 27,570; in Canada, dated September 18, 1896, No. 53,525, and in France, dated June 27, 1895, No. 248,494,) of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters and figures of reference indicate corresponding parts.

This invention relates to an improvement in traction-motors adapted for use in connection with cultivators, plows, reapers, or other agricultural machines, the object of the invention being to provide means for drawing and operating machines of this character without the aid of horses, a further object being to facilitate and quicken the operation of this class of machines.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of my improved device, showing the same attached to a cultivator; and Fig. 2 is a plan view thereof. Fig. 3 represents a side elevation of one of the cross-bars. Fig. 4 is a plan view of the same. Fig. 5 is a side elevation of another form of cross-bar. Fig. 6 is a face elevation of Fig. 5. Fig. 7 is a face elevation of the roller and cross-bars, and Fig. 8 is a side elevation of the roller.

The cross-bars *c*, extending across from the fellies of the traction-wheel, carry the curved teeth *a*, mounted thereon, said teeth being applied to the cross-bars in such a manner that when the wheel is rotated in a forward direction they will act as anchors upon entering the earth. The teeth are secured upon the bar by means of bolts *e*, passing through their lower portions, and the cross-bars are placed at such intervals that the earth will fall down between them. The wheels are adapted to be moved laterally and secured by means of keys *k* upon the shaft *g*, so that cross-bars of different widths may be employed and the tread of the traction-wheel adjusted to any desired width. The teeth *a* are secured upon the fellies *d* of the wheel by means of the angular strengthening-plates *b'*, bolted thereto, and upon the cross-bars by the strengthening-pieces *a'* and a^2. *i* represents the driving-gear, *d* the traction-wheel, and *l* the holes in the fellies to receive the bolts *e*. When the cross-bars and their attachments are removed from the wheel, they can travel over the road like any ordinary wheeled vehicle.

In the practice of my invention I provide a framework 1, upon which is mounted a bed-plate 2, which said bed-plate carries a tank 3 and a motor 4, which said motor is preferably a petroleum-motor, and the tank carries the petroleum or other suitable matter adapted to operate the motor, said motor being fed by means of a pipe 5. To the piston-rod 6 of this said motor is attached a crank 7 by means of a connecting-rod 8, which said crank forms part of a shaft 9, which said shaft has attached to its respective ends a balance-wheel 10 and a pulley 11, which said pulley is connected to a pulley 12 by means of a belt 13.

The shaft 14, supporting the pulley 12, has connected thereto a toothed pinion, which communicates with a train of gearing 15, which said gearing communicates rotary motion to a pinion 16, attached to a shaft 17, which said shaft carries a traction-wheel 18, which has teeth 19 projected from its surface, adapted to dig into the ground when the device is being operated.

The bed 2 or forward truck of the device is mounted upon wheels 20, to the shaft of which is attached a chain 21, which engages with a sprocket-wheel 22, connected to the lower end of a vertical shaft 23, which said shaft has a steering-wheel 24 mounted upon the top thereof, whereby an operator can readily steer the device, and to facilitate the operation of the steering-wheels 20 they may be provided with projecting flanges 20^a.

Mounted upon the framework 1 is a seat 25, adapted to hold an operator, and immediately below this seat are two pedals 26, which

are connected to a shaft 27. These said pedals connect, respectively, through the medium of rods 28 and 29 to spring-scrapers 30, adapted to clean the teeth of the traction-wheel, and to a hook 31, adapted to couple any suitable agricultural machine 32 and also to elevate the same when desired to bring the plow out of engagement with the ground.

In the operation of the device the engine or motor 4 will be started, whereby rotary motion will be supplied to the traction-wheel 18, which will force the whole machine in a forward direction, thus dragging any suitable agricultural machine which is attached thereto.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a traction-roller of the character described, teeth comprising the curved plate *a*, the curved angular support *b*, brace *b'*, bolts *e*, and means for securing them to the fellies and cross-bars, substantially as shown and described.

2. In a traction-roller of the character described, the combination, with a wheeled motor of the traction-roller provided with curved teeth, a plow or other implement detachably connected to the frame of the motor and a lever upon the frame connected to rods by which the plow and a scraper are attached, said lever adapted to operate the rods to raise the plow out of engagement with the ground and clean the teeth of the roller, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 24th day of July, 1896.

ANTOINE JEAN PATERNOSTER DE SOUZA.

Witnesses:
EDWARD P. MACLEAN,
HUBBARD T. SMITH.