Feb. 24, 1925. 1,527,435

J. S. OECHSLE

MOBILE UNIT

Filed April 15, 1924

Fig. 1.

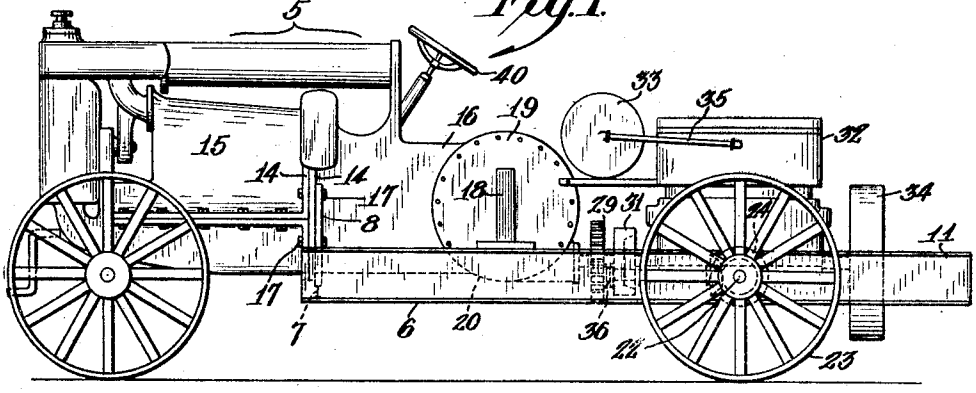


Fig. 2.

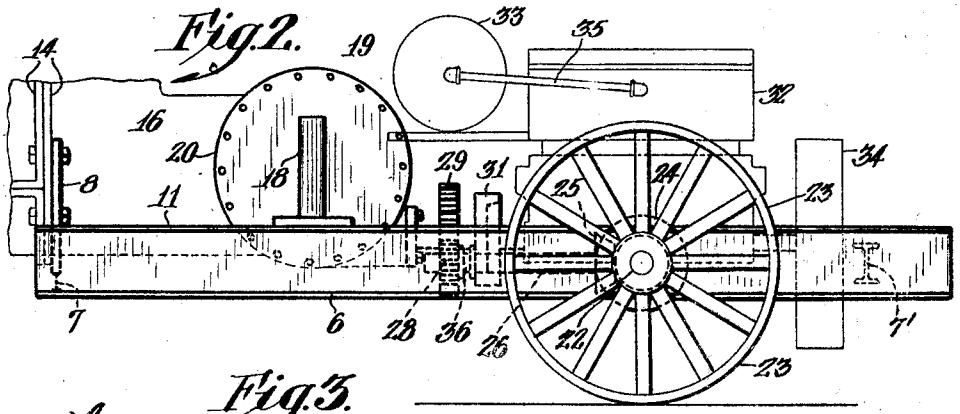


Fig. 3.

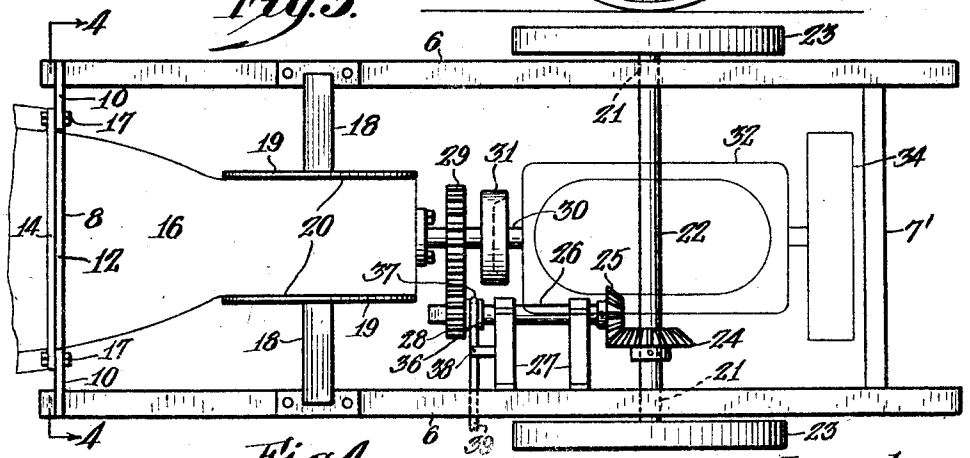
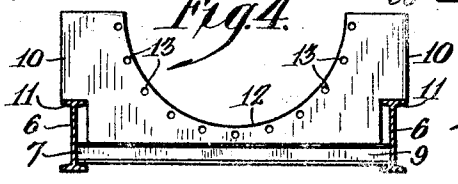


Fig. 4.



Inventor.
Joseph S. Oechsle.
by Alfred J. Battey
Attorney.

Patented Feb. 24, 1925. 1,527,435

UNITED STATES PATENT OFFICE.

JOSEPH S. OECHSLE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO METALWELD SERVICE CORPORATION, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

MOBILE UNIT.

Application filed April 15, 1924. Serial No. 706,724.

To all whom it may concern:

Be it known that I, JOSEPH S. OECHSLE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Mobile Units, of which the following is a specification.

This invention relates to portable power actuated apparatus, and more particularly to means for effecting a predetermined purpose, and it has for its primary object to provide what may be aptly termed an extension unit for attachment to standard types of tractors with but little trouble or the expenditure of much time and labor, said extension unit serving to support means adapted to be directly operated by the tractor motor when not functioning for propulsive purposes.

Another object of this invention is to provide a mobile unit embodying the characteristics of compactness, ready mobility and adaptability for quick change for propulsion under its own power or stationary placement for the particular purpose had in use.

Other objects are to provide an improved form of supporting framework for the unit—per se—which can be readily connected to, or detached from, a standard tractor, whereby repair and renewal of worn or damaged parts may be promptly accomplished.

Further objects and attendant advantages, associated with this invention, will be referred to—or become apparent—from the following detailed description of one practical embodiment and assemblage thereof.

In the further disclosure of my invention reference will be had to the accompanying sheet of explanatory drawings, constituting a part of this specification, and in which corresponding parts are designated by the same reference characters in all the views.

Figure 1—is a side view illustrative of the adaptation of my invention as a complete mobile compressor unit for use in the metal welding industries.

Figure 2—is a somewhat enlarged side view of the unit attachment—per se—in association with a fragmentary portion of the tractor shown in the preceding figure.

Figure 3—is a plan view of the same; and,

Figure 4—is a detail showing of a supporting member hereinafter more fully described and taken approximately on the line 4—4 in the preceding figure.

In said drawings, the principal elements comprised in my novel mobile unit are shown with sufficient detail to enable the invention to be well understood by anyone but slightly conversant with the art, such minor parts, however, that do not constitute essentials thereof, being omitted for simplicity in illustration accordingly the drawings have been made more or less diagrammatic in character.

Referring more in detail to the several views a Fordson tractor—by way of example—is comprehensively designated by the numeral 5, and from which I remove the usual traction wheels (not shown), drawbar, rear axle housing and differential closures, for purposes hereafter fully explained

In accordance with my invention I construct a base or framework embracing spaced longitudinal I-beams 6, 6 which are rigidly secured in parallel relation at their forward and rear ends by means of cross ties 7, 7′ respectively; and a stirrup plate 8, said plate being conveniently welded in longitudinal alignment directly above the web 9 of the cross tie 7, which it will be seen is also of I-section. The cross ties 7, 7′ are also welded at their ends to the webs of the longitudinals 6, 6. In like manner the lateral wing portions 10, 10 of the stirrup plate 8 are welded transversely across the top flanges 11, 11 of the spaced longitudinals 6, 6. Thus it will be readily seen that the parts 6, 6—7, 7′—and 8, become, or are, incorporated into a rigid unit.

The stirrup plate 8 it will be seen by Figure 4 is cut out to afford a semi-circular seat 12 having adjacent holes 13 adapted for registration with the bolt holes around the connecting flanges 14, 14 between the front and rear portions 15, 16 respectively of the tractor 5. It is particularly to be noted that the semi-circular seat 12 is of a dimension to snugly abut the shell of the rear portion 16 aforesaid, and that it is rigidly clamped to the flanges 14, 14 by means of bolts 17 as longer substitutes for those ordinarily employed to secure said flanges together. Furthermore, it will be noted that by virtue of the assemblage and welded connection between the parts 6, 6, 7 and 8 that the tractor

body is securely braced and rigidly supported at a very vulnerable point, while its strength is considerably enhanced thereby.

At suitable locations, intermediate the ends of the longitudinals 6, 6, and in opposed relation, I conveniently weldingly connect inwardly and upwardly inclined struts or brackets 18, 18 of appropriate section, to the free ends whereof are correspondingly secured stout discs 19, 19 provided with circumferential bolt holes, whereby said discs are clamped in place to the opposed sides of the rear axle housing 20, as will be readily understood from the illustrations. It will of course, be clearly comprehended that the discs 19, 19 are arranged in parallelism with special relation to snugly accommodate the rear axle housing 20, with appropriate packing to ensure tight joints thereat.

Journaled in suitable bearings 21, transversely of the longitudinals 6, 6 I mount a rear axle 22 to which the traction wheels 23, 23 are secured in any of the well known ways; and it is observable in connection therewith that my novel mobile unit is thereby afforded an extended wheel base whereby increased stability for said unit is ensured. The rear axle is adapted for rotation by means of a bevel gear 24 thereon in mesh with a similar gear 25 at the end of a counter shaft 26, journaled in spaced bearings 27, 27 conveniently attached to the adjacent longitudinal 6. This counter shaft 26 is in turn provided with a toothed wheel 28 in mesh with a second toothed wheel 29 splined on the drive shaft 30, which is preferably of the type described in my prior application for patent filed the 29th day of August, 1923, under Serial Number 659,897, and it is adapted for positive drive by the tractor transmission. Said shaft 26 is also fitted with an appropriate clutch 31 affording a direct drive for the compressor 32 adapted to replenish the storage tank 33. The fly wheel of the compressor 32 is indicated at 34 while a pipe 35 affords conduit connection between said compressor and the storage tank 33.

To afford a simple and efficient coupling connection between the drive shaft 30 and counter shaft 26, when it is necessary that the unit be traveled under its own power, I make use of a clutch or grooved collar 36 integral with the toothed wheel 28, feathered on said counter shaft, and shifter 37, fulcrumed at 38, to one of the bearings 27, and movable by means of a hand lever 39 in any of the well known ways. Thus it will be readily understood that the toothed wheel 28 can be easily moved from and into mesh with the wheel 29 whereby the rear axle is connected up for propulsive purposes or disconnected when the unit is in service respectively. When the parts just described are operatively connected it will be obvious that the complete unit may be traveled under its own power and guided by the customary steering wheel 40; and when so operated it will be apparent that the compressor 32 is disconnected by releasing the clutch 31.

From the foregoing it will be clearly evident that by my invention I have provided a mobile unit capable of accomplishing all the purposes had in view, while the manner of attaching the driven instrumentalities to a standard tractor, or disconnecting same for replacement by other desired means than that specified herein, by way of example only, needs no further explanation. Additional facilities or equipment may, obviously, be included in and operated by the tractor 5, and employed with ease and facility under all normal service conditions.

The entire unit is such that the several component parts are capable of ready assembly or disconnection for inspection, repair or adjustment without expenditure of much time and labor, while a positive drive is absolutely maintained. Furthermore the supporting frame-work is of a character and design to withstand great vibration whilst ensuring rigidity heretofore unattainable.

In conclusion, I wish it clearly understood that the particular details of construction hereinbefore set forth, as well as the specific type of unit illustrated and described is by way of example only, seeing that it is the primary intent and purpose of my invention to provide a mobile attaching unit for connection to any standard type of tractor irrespective of its service, therefore the right is reserved to make all such reasonable changes as fairly lie within the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. The combination with a tractor of an extension attachment adapted for connection to the body and rear axle housing closures thereof, said attachment comprising spaced longitudinals and integrally connected transverse ties, one of which is fashioned to afford a stirrup support adapted to be coupled to the tractor body flanges, and opposed angularly braced and integrally connected parallel discs for coupling to the rear axle housings.

2. The combination with a tractor of an extension attachment adapted for connection to the body and rear axle housing closures thereof, said attachment comprising spaced I-beams and rigidly attached transverse I-section ties, the forward one of which affords a stirrup support aligning with its web for connection to the tractor body flanges, and angularly braced members for coupling closure to the rear axle housing.

3. The combination with a tractor of an extension attachment adapted for connection

to the body and rear axle housing closures thereof, said attachment comprising spaced I-beams and rigidly attached transverse I-section ties, the forward one of which affords a stirrup support aligning with its web for connection to the tractor body flanges, and opposed angularly braced parallel discs as coupling closures for the rear axle housing.

4. The combination with a tractor of an extension attachment adapted for connection to the body and rear axle housing closures thereof, said attachment comprising spaced I-beam longitudinals and weldingly attached transverse I-section ties, the forward one whereof affords a stirrup support aligning with the vertical web thereof, and angularly braced parallel disc closures for coupling to the rear axle housings, said longitudinals, ties, and disc closures constituting an integral unit.

5. The combination with a tractor of an extension attachment adapted for connection to the body and rear axle housing closures thereof, said attachment comprising spaced I-beam longitudinals and weldingly attached transverse I-section ties, the forward one whereof affords a stirrup support aligning with the vertical web thereof, and angularly braced parallel disc closures for coupling to the rear axle housings, said longitudinals, ties, and disc closures constituting an integral unit, and bearings in the aforesaid longitudinal I-beams for a rear axle and traction wheels.

6. The combination with a tractor of an extension attachment adapted for connection to the body and rear axle housing closures thereof, said attachment comprising spaced I-beam longitudinals and weldingly attached transverse I-section ties, the forward one whereof affords a stirrup support aligning with the vertical web thereof, and angularly braced parallel disc closures for coupling to the rear axle housings, said longitudinals, ties, and disc closures constituting an integral unit, bearings in the aforesaid longitudinals I-beams for a rear axle and traction wheels, and clutch mechanism whereby the tractor is adapted for mobile or unit operating purposes.

7. The combination with a tractor of an extension attachment adapted for connection to the body and rear axle housing closures thereof, said attachment comprising spaced I-beam longitudinals and weldingly attached transverse I-section ties, the forward one whereof affords a stirrup support aligning with the vertical web thereof, and angularly braced parallel disc closures for coupling to the rear axle housings, said longitudinals, ties, and disc closures constituting an integral unit; a rear axle and traction wheels journaled in the aforesaid longitudinal I-beams, mechanism whereby the tractor and attachment may be coupled up for propulsive purposes or disconnected, and means—when the said mechanism is disconnected—whereby the tractor motor is adapted to directly drive a power actuable stationary unit mounted on the attachment.

In testimony whereof I affix my signature this 10th day of April, 1924.

JOSEPH S. OECHSLE.