June 20, 1939. W. H. WOLCHEK 2,163,507

CONTROL MEANS FOR TRANSMISSION MECHANISMS

Filed Jan. 19, 1937 2 Sheets-Sheet 2

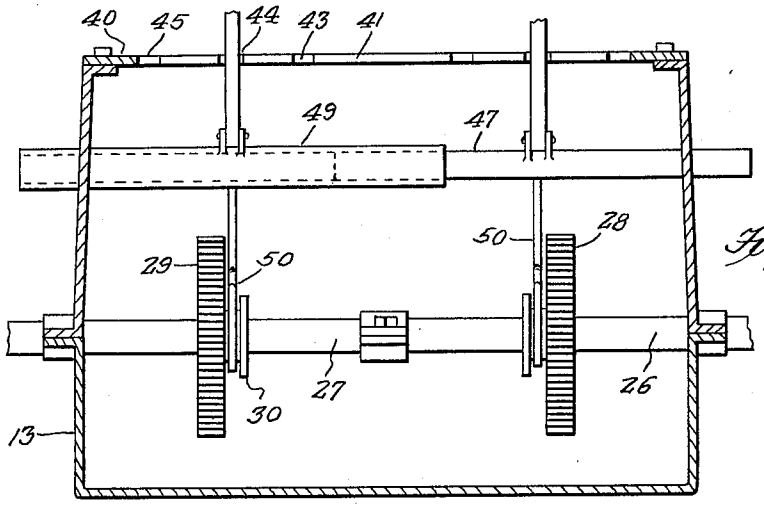


Fig. 2

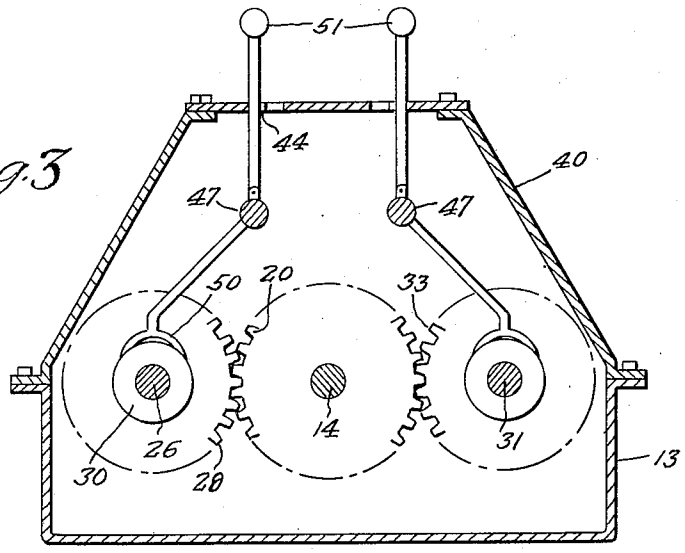


Fig. 3

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CONTROL MEANS FOR TRANSMISSION MECHANISMS

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2 Claims. (Cl. 74—473)

This invention relates to new and useful improvements in transmission controls.

The principal object of the invention is to provide an efficient transmission mechanism for operating selectively vehicle jacks mounted on the vehicle in front and rear pairs.

These and other important objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:

Figure 1 is a view in top plan of a preferred embodiment of my improved transmission with the cover broken away to show the interior parts.

Figure 2 is a view in longitudinal vertical section taken on the line 2—2 of Figure 1 looking in the direction indicated by the arrows, and

Figure 3 is a view in transverse section taken on the line 3—3 of Figure 1 looking in the direction indicated by the arrows.

Referring to the drawings by numerals, the transmission of my invention is adapted to be interposed between front and rear pairs of jacks to operate the same through the medium of front and rear pairs of jack operating shafts 37, 38, respectively. The construction of the jacks being immaterial to the present invention, suffice it to explain that each jack 10, one of which is shown in Figure 1, comprises a jacking shaft 65 operated by the related operating shaft 37, or 39, as the case may be, through the medium of a worm 69 on the related operating shaft meshing with a worm gear 66 fast on the jacking shaft, the operating shaft being suitably journaled in the housing 67 of the jack to extend toward the transmission designated as a unit by numeral 12. It may be further stated, that the jack 10 is operative to jack lowering, neutral, and jack raising positions, respectively.

The transmission 12 consists of the open top case 13 having the central shaft 14 extending longitudinally therein and through the rear end of the case where it is equipped with the gear 15 meshing with the pinion 16 on the shaft of the electric motor 17.

On the shaft 14 are the gears 18—19 for the rear jack units and the gears 20—21 for the front jack units.

The gear 18 is provided with the idler gears 22—23 meshing therewith, while the gear 20 is provided with idler gears 24—25 meshing therewith.

On one side of the shaft 14 are the front and rear countershafts 26—27 carrying the gears 28—29, respectively, each being equipped with a grooved collar 30, while at the opposite side of the shaft 14 are the front and rear countershafts 31—32 equipped with the gears 33 and 34, respectively, each of these gears having a grooved collar 35 thereon.

The forward ends of the front shafts 26—31 extending through the forward end of the case 13 and are connected by universal joints 36 to the operating shafts 37 leading to the front jacks not shown.

The rear countershafts 27—32 extend through the rear end of the case 13 and are connected by universal joints 38 to the operating shafts 39 which extend to the rear jack units.

Referring to Figure 1, it can be seen that numeral 40 represents the cover for the transmission 12 and as is shown in said figure this cover 40 is provided with the pair of longitudinally extending slots 41—42, the same being located over the shafts 26—27 and 31—32, respectively.

At the rear end of the cover 40, the cover at the edges of the slots 41—42 is provided with notches as at 43, 44 and 45 corresponding to jack lowering position, neutral and jack raising position. The cover 40 at the forward end thereof is similarly provided with notches 43, 44, 45 and there is a group of these notes for each of the jacks.

By referring to Figure 1, it can be seen that the cover 40 supports a pair of slide bars 46—47 which telescope the slidable tubes 48—49, respectively.

Each of the bars 46—47 as well as the tubes 48—49 carries a fork 50 for engaging the corresponding collar 30, 35 of the gears 28, 29, 33 and 34.

Extending from the bars 46—47 and tubes 48—49 and through the said slots 41—42 are stems equipped with knobs 51 at their upper ends. These stems are normally engaged in the neutral notches 44 of the plate 40.

Let it be assumed that the right rear jack 10 is to be operated to jack lowering, or in other words, jacking position.

The knob 51 at the right rear corner portion of the cover 40 is gripped and moved along the slot 42 and forwardly to engage into the notch 43.

The gear 34 (see Figure 1) is now engaged with the idler gear 23 and in turn with the gear 18. By closing the circuit of the motor 17 which is connected with a suitable course of current 52, the drive is from the motor through the gears 15—16, shaft 14, gears 18, 23 and 34 to the countershaft 32 and from there by way of the operating shaft 39 to the jack for lowering the same against the ground.

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METHOD AND APPARATUS FOR THE MELTING OF METALS

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FIG. 1.

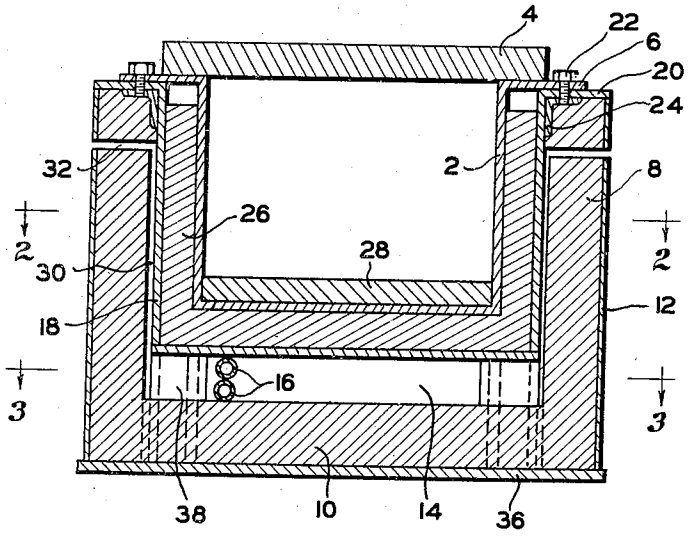


FIG. 2.

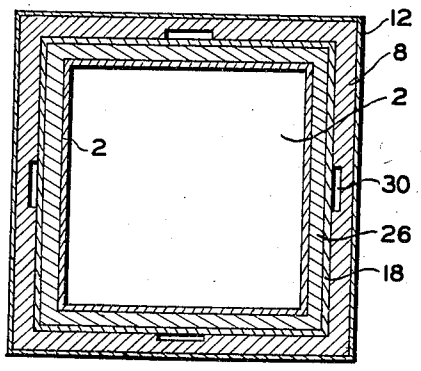
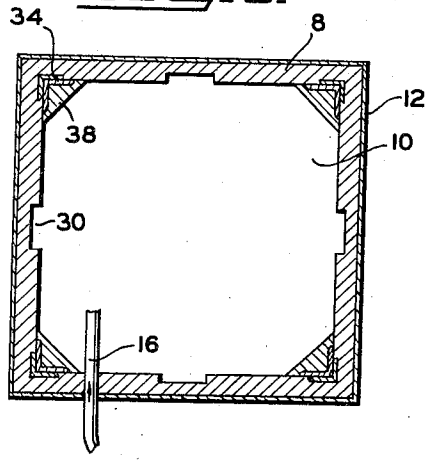


FIG. 3.



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