

May 5, 1936.

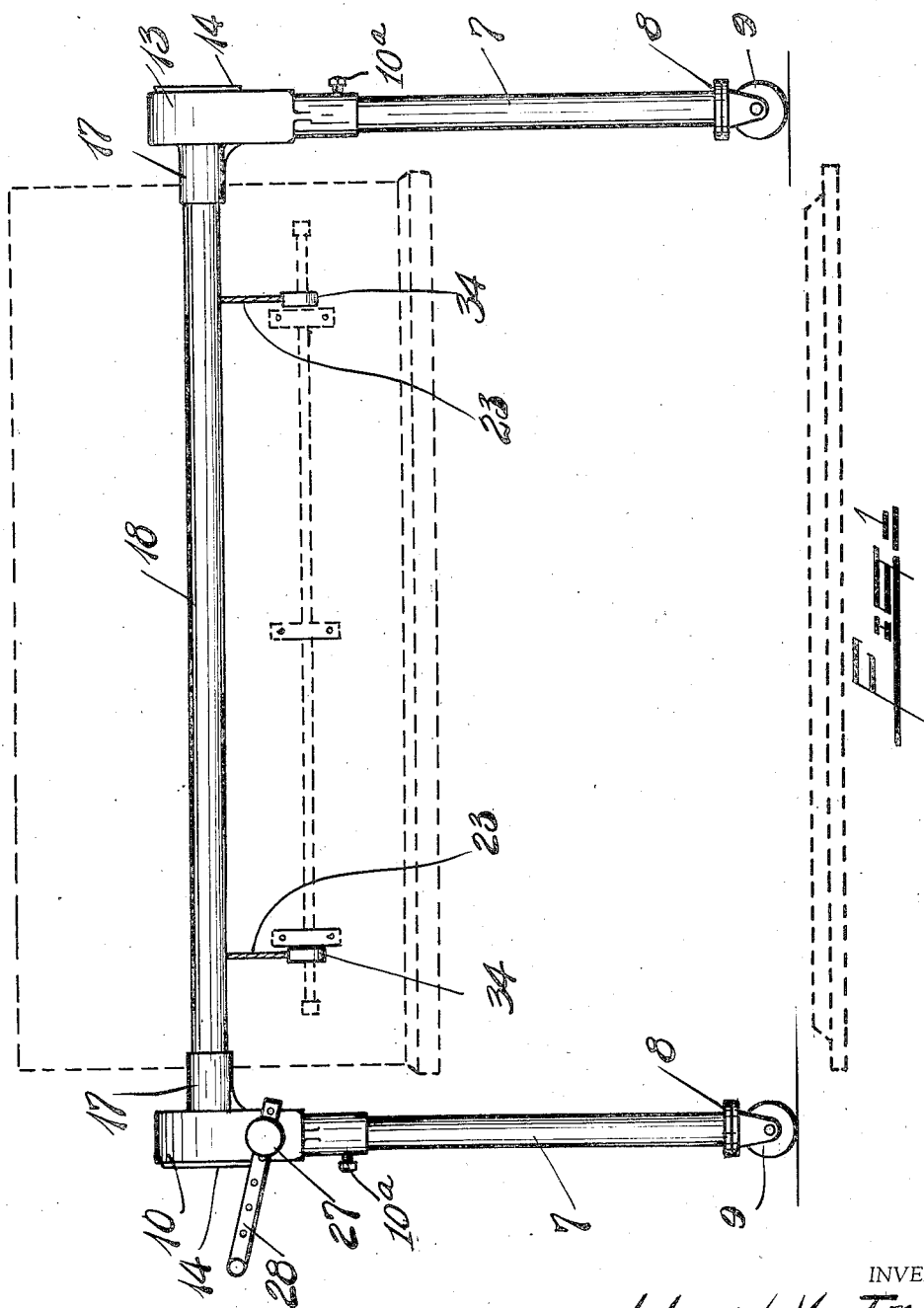
L. V. TROUP

2,039,464

APPARATUS FOR LOWERING AND HANDLING BURIAL VAULTS

Filed Feb. 15, 1935

3 Sheets-Sheet 1



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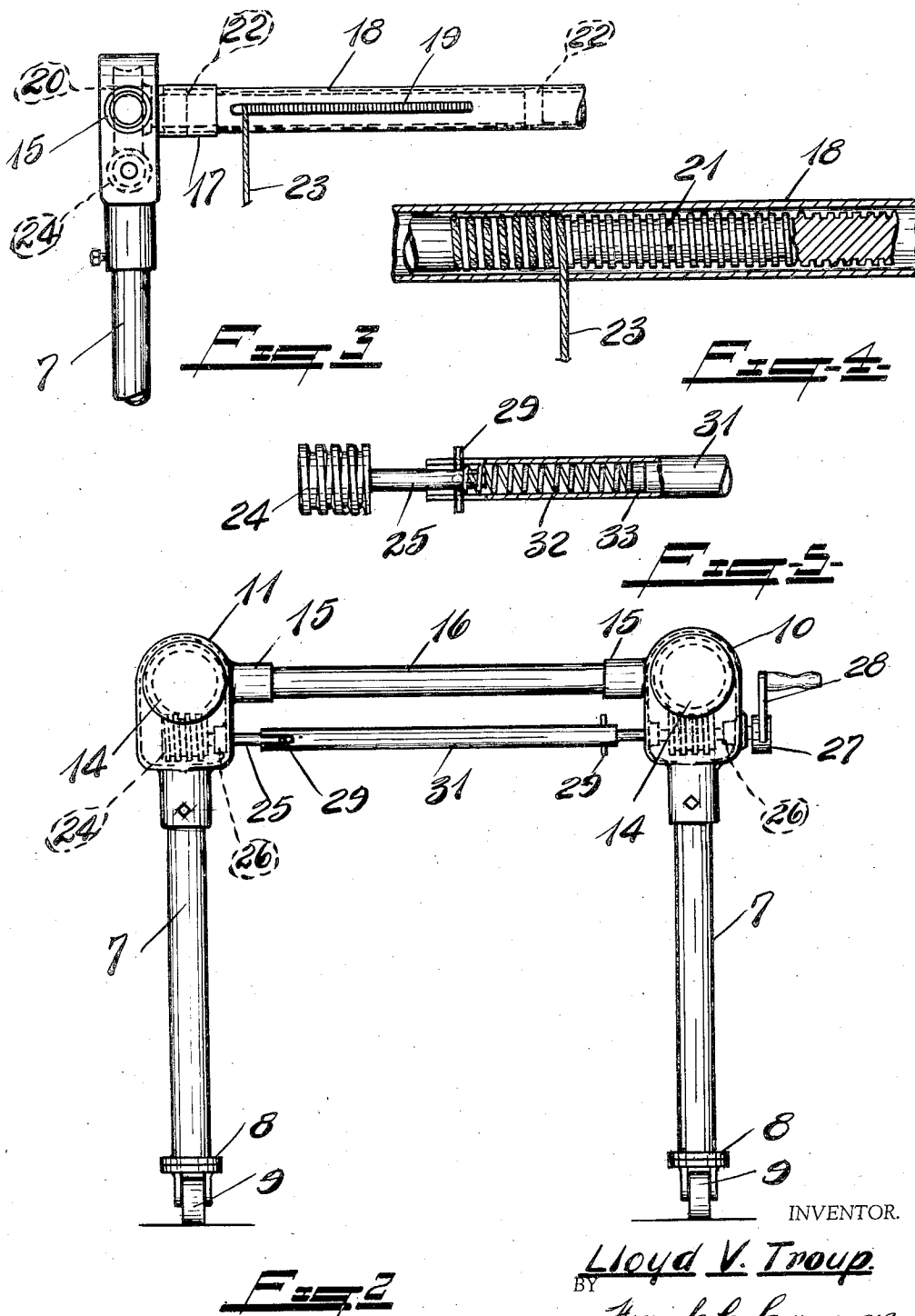
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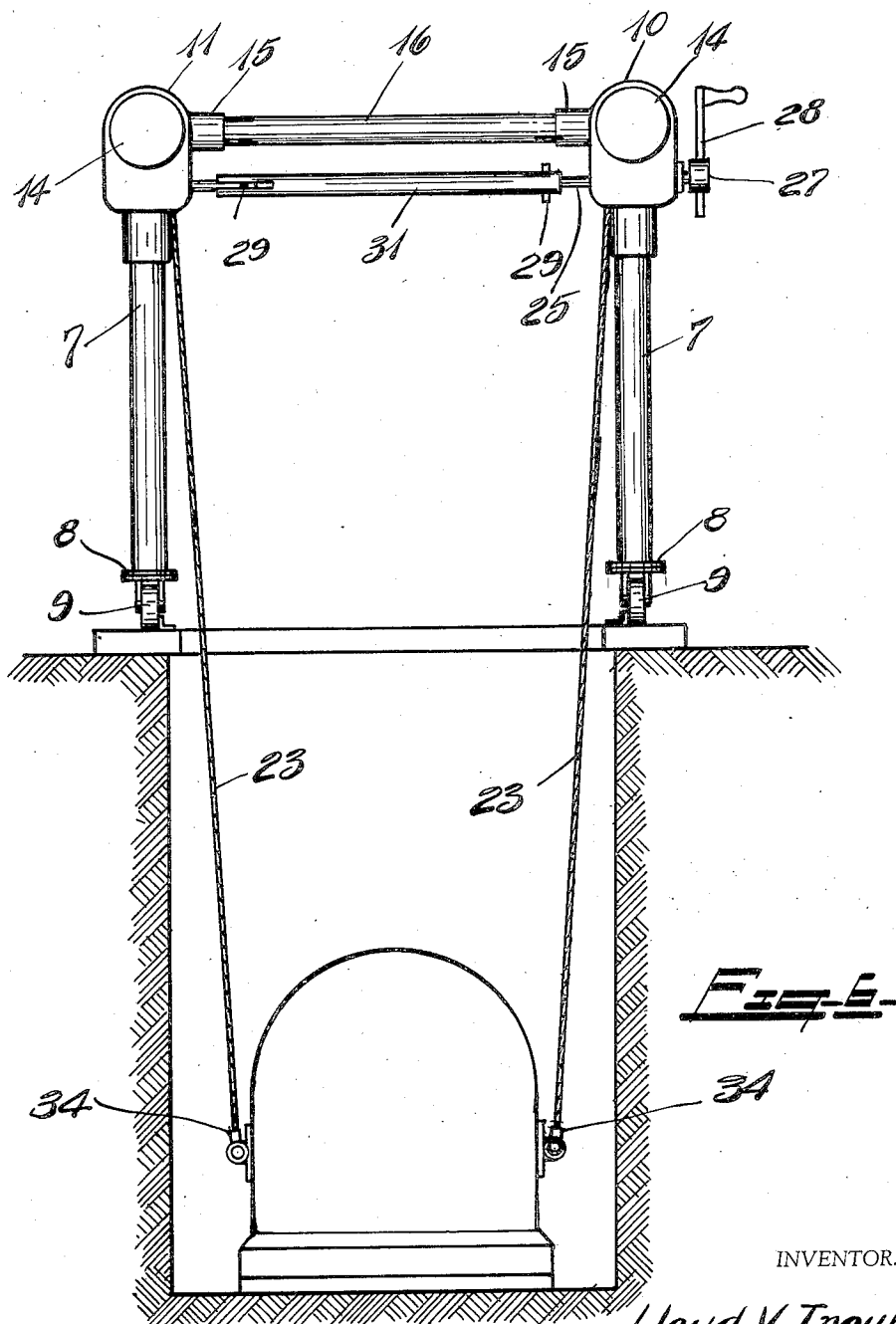


Fig. 5-

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UNITED STATES PATENT OFFICE

2,039,464

APPARATUS FOR LOWERING AND
HANDLING BURIAL VAULTS

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Application February 15, 1935, Serial No. 6,659

2 Claims. (Cl. 254-136)

One of the prime objects of the invention is to provide novel apparatus whereby the interment may be carried out so that the usual casket may be enclosed in a vault of concrete or other suitable material, and which will effectively protect the casket after it has been placed in the ground.

My invention is decidedly advantageous when used in connection with a separate individual base or bottom which is positioned in the grave opening just below the ground line, so that the opening can be concealed from view while the usual services are carried on, after which my vault handling apparatus is wheeled over to straddle said opening, the cover of the vault being suspended by said apparatus at an elevation sufficient to permit it to easily clear the top of the casket, after which the cover is lowered to position on the base. The base and cover are then secured together, and the unit is then lowered into the grave in the usual manner.

Another object is to provide an apparatus of this character which is easily mobile, which is smooth and efficient in operation, and which is neat in appearance.

A further object is to design a lowering and handling apparatus of knockdown construction, so that it can be readily disassembled and transported from place to place, which is very easy to manipulate, and which is smooth and quiet in operation.

A still further object is to provide an apparatus in which all of the wound cable and the cable winding means is concealed from view, and which is covered so that it cannot catch clothing or become fouled.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion, and minor details of construction, without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings—

Fig. 1 is a side view of the apparatus set up and ready for use, the vault base and cover being shown in broken lines.

Fig. 2 is an end view of the apparatus.

Fig. 3 is a slightly enlarged fragmentary view showing one of the corner legs and side bars.

Fig. 4 is an enlarged fragmentary part sectional view of the side bar and cable winding means.

Fig. 5 is an enlarged fragmentary view of the driving means.

Fig. 6 is a side view showing the vault and casket lowered to the bottom of the grave.

In carrying out my invention, I provide the four corner posts 7 which are preferably formed of pipe, a flange 8 being provided on the lower end of each post, and a castor 9 is secured thereto so that the apparatus may be freely and easily wheeled into and out of position over a grave.

The upper ends of the corner posts are turned at a point directly adjacent the upper end thereof, and gear housings 10, 11, 12, and 13 respectively are mounted on said posts, set screws 10^a serving to secure them in position, these housings being formed as clearly shown in Figs. 2 and 3 of the drawings, and a cover plate 14 is provided on the one face of each housing to facilitate the assembly of the necessary driving gears therein.

Outwardly projecting, tubular sections 15 are formed integral with each housing, and horizontally disposed end bars or members 16 are inserted in these sockets to secure them in rigid spaced apart relation, similar tubular sections 17 projecting from the side wall of each housing, and the side bars 18 are mounted therein so that the corner posts are rigidly secured together to form a complete frame or unit, each side bar being slotted as shown at 19 and for a purpose to be presently described.

The actuating or driving mechanism is mounted on the one end only of the frame and comprises a worm wheel 20 which is mounted on a threaded shaft 21, said shaft being journaled in spaced apart bearings 22 provided in the tubular sections 17 and in the side bars 18 respectively, the threaded sections of the shaft 21 forming a grooved drum, the side walls of the threads being slightly tapered so that the winding element or cable 23 slightly wedges in the grooves, the clearance between the outside of the shaft 21 and the inside of the bar 18 being so limited that it forces the wound cable into the grooves.

A worm 24 is also mounted in the housing 10, meshing with and driving the worm wheel 20, the shaft 25 projecting beyond the housing and being journaled in the bearings 26 provided in the housing. The driving mechanism is applied to one end only of the apparatus, each corner post and housing assembly 10 and 11 respectively containing similar worm and worm wheel units, the worm shaft in the housing 10, however, projecting through both side walls, and a disc shaped member 27 is keyed on one end of this shaft and is suitably formed to detachably receive a

crank or handle 28 which is adjustable therein, so that the necessary desired leverage can be secured, and further to permit removal when the device is disassembled.

- 5 Driving units are adapted to be connected together so that they are simultaneously driven when the crank or handle 28 is rotated, a transversely disposed pin or key 29 being provided adjacent the end of each worm shaft, and are
10 adapted to be slidably mounted in slots 30 provided in a pipe member 31, a spring 32 being provided in said pipe, the inner end of the spring butting against a plug 33 provided in the pipe, the outer end engaging the pin or key 29, and it
15 will be obvious that this connecting pipe 31 can be readily removed by forcing it endwise to compress the spring 32 sufficiently to permit the pin 29 to be disengaged from the slot in the opposite end of the pipe.
- 20 Each pair of cables 23 is anchored to the threaded member 21 which is journaled in the side bars, and is thence wound on the threaded section of each member, the free ends of the cables leading through the slots 19 and are provided with hooks
25 for attachment to the vault, these vaults being usually provided with side bars 34 anchored or secured thereto in any approved manner, and it will be obvious that when the apparatus is set up and the cables attached to the vault, that
30 operation of the crank 28 will serve to lower or raise the vault, depending on the direction of rotation. There can be no fouling or overriding of the cable as the side bars 18 force the cables into the threaded grooves which are slightly tapered
35 as previously pointed out.

- I am, of course, aware that other vault handling apparatus is now in commercial use, but these have inherent disadvantages in that none of them are designed or capable of wheeling the
40 apparatus, together with the cover over the casket; therefore, more time and labor is required, they are not sectional for easy transportation, the grave opening is exposed to view,

and the entire operation cannot be performed in the smooth, easy manner such as is possible with the present device, nor do they have the flexibility of drive present in this design.

From the foregoing description it will be obvious that I have perfected a very simple, practical, and efficient apparatus for handling and lowering burial vaults.

What I claim is:

1. In an apparatus of the class described and comprising a wheeled sectional frame, including end and side bars, gear housings connecting said end and side bars, a shaft in each side bar and threaded to form a winding drum, a worm wheel on the end of each shaft, a worm shaft journaled in the housing, a worm mounted thereon and meshing with the worm wheel, a transversely disposed pin mounted in the worm shaft adjacent the end thereof, a hollow shaft connecting the worm shafts and provided with slotted end sections adapted to accommodate the transversely disposed pins, springs in said hollow shaft and bearing against said pins, slots in the side bars, and cables anchored to and wound on the threaded shafts and leading through said slots.

2. In an apparatus of the class described and comprising a mobile frame including spaced apart end and side bars, gear housings connecting said end and side bars, a threaded shaft journaled in each side bar and projecting into the gear housings, a gear assembly mounted in certain of said gear housings for driving said shafts, quickly detachable means for operatively connecting said gear assemblies, and comprising worm shafts, a transversely disposed pin mounted in each shaft adjacent the end thereof, a hollow shaft, a slot in each end of the hollow shaft and adapted to accommodate said transverse pins, springs in the hollow shaft and bearing against said pins, slots in the side bars, and cables anchored to and wound on said shafts with the free ends leading through the said slots in the side bars.

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