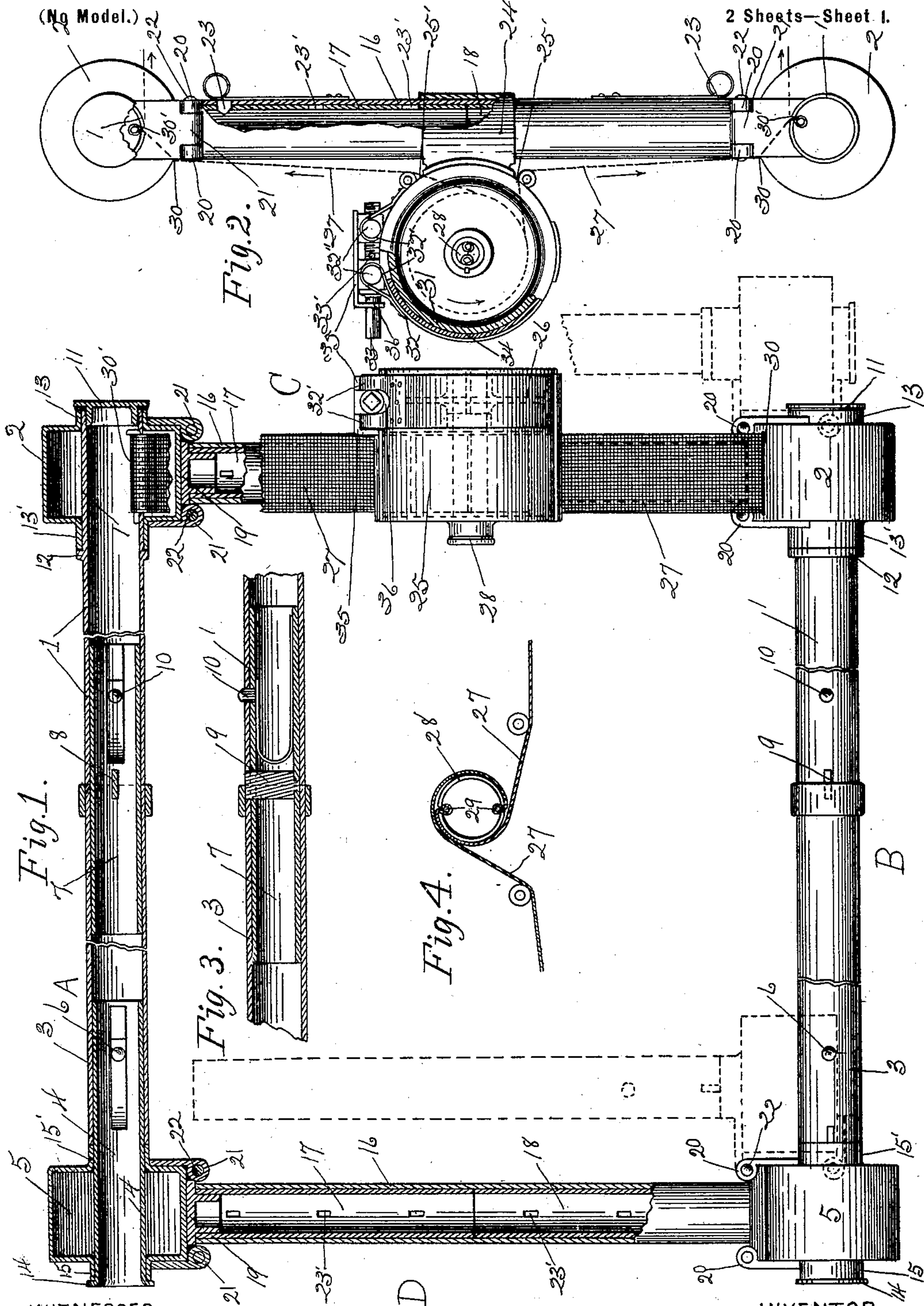


C. W. WELLMAN.
BURIAL APPARATUS.

(Application filed July 18, 1902.)

2 Sheets—Sheet 1.



WITNESSES:

David C. Walter
Arthur N. Goldhaus

INVENTOR.

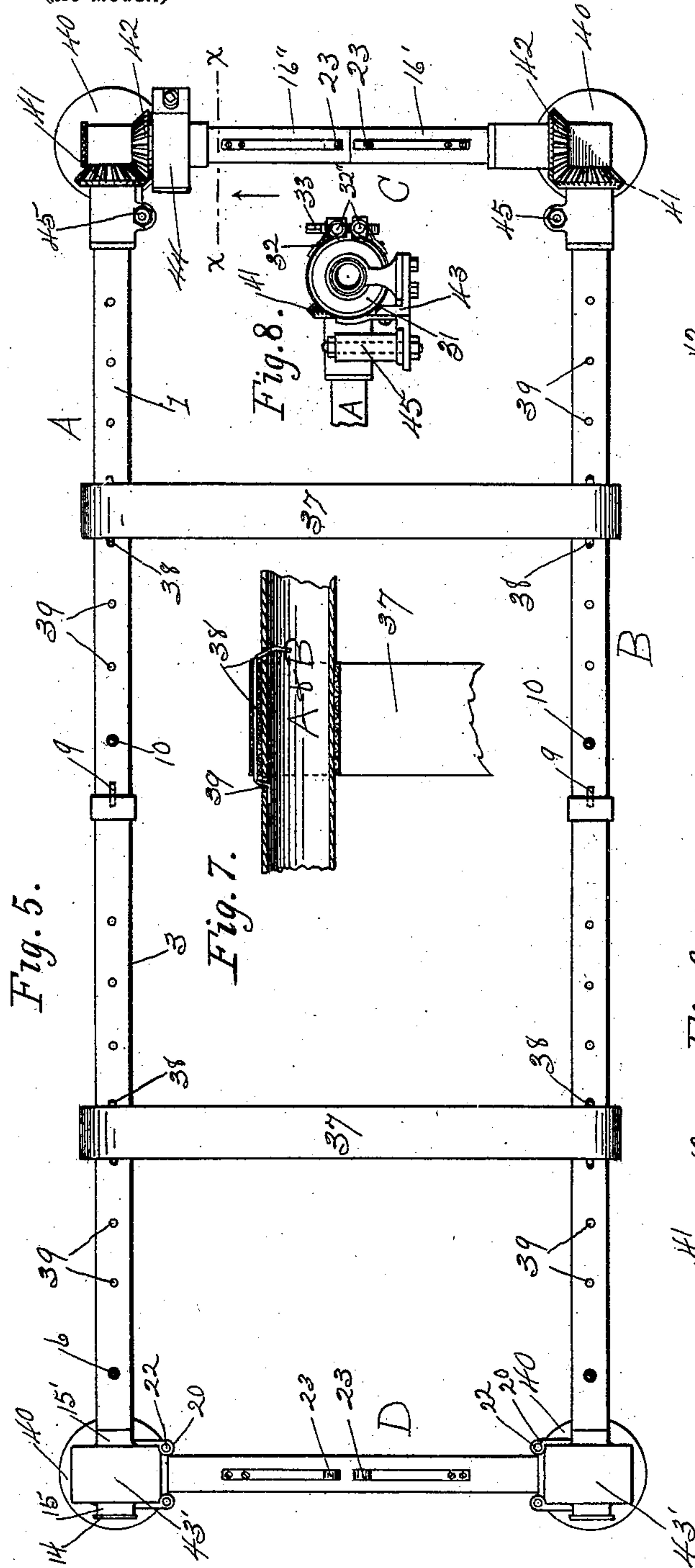
Calvin W. Wellman.
By Owen & Owen
His Attorneys

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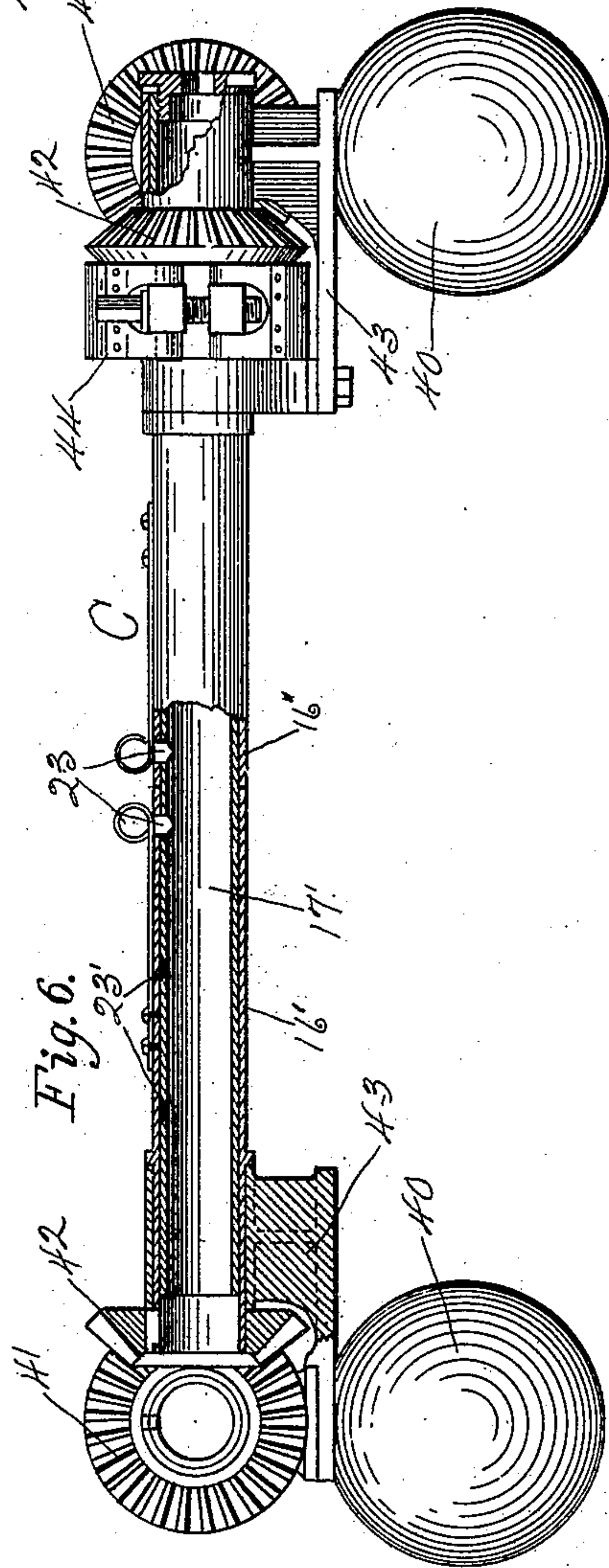
2 Sheets—Sheet 2.

(No Model.)



WITNESSES:

David C. Walter
Stanton N. Goldhamer



INVENTOR.

Carvin W. Wellman
By Owen Owen
His Attorneys.

UNITED STATES PATENT OFFICE.

CALVIN W. WELLMAN, OF TOLEDO, OHIO.

BURIAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 713,187, dated November 11, 1902.

Application filed July 18, 1902. Serial No. 116,029. (No model.)

To all whom it may concern:

Be it known that I, CALVIN W. WELLMAN, a citizen of the United States; residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Burial Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in the class of machines used for mechanically lowering caskets into graves and to improvements in the apparatus described in the application for United States Letters Patent filed by me April 15, 1901; and the object of the same is to provide a simple, cheap, and effective means for performing the above function—that is, first, light and durable in construction; secondly, positive in its operation and yet under complete control, so that the casket may be gently and evenly lowered to the bottom of the grave; thirdly, easily adjustable in length and width to accommodate any size of casket, and, fourthly, that can be readily folded into a compact form and easily and conveniently carried about by a person or placed on the foot-rest of the hearse at the driver's feet, thus obviating the necessity of supplying a separate carriage for its transportation.

In the drawings, Figure 1 is a detail partly-sectional top view of my apparatus, showing by dotted lines the mode in which the parts may be folded and also showing the drum in which the tension-tape winds, together with its friction-brake mechanism and the manner in which the sections of the frame are secured. Fig. 2 is a detail end elevation of the same, showing the tape-drum and friction-brake. Fig. 3 is a detail longitudinal sectional view of one of the sides of my apparatus, showing the manner in which it is strengthened at the joint. Fig. 4 illustrates the manner in which the tape is secured to and wound upon the hub of the drum. Fig. 5 is a top plan view of a modified construction of my improved apparatus. Fig. 6 is a detail

end elevation of the same, showing the miter-gears and friction-brake thereon. Fig. 7 is a detail longitudinal sectional view of one of the sides, showing the manner in which the transverse supporting-straps are secured and wound thereon; and Fig. 8 is a vertical sectional view of a portion of the frame, taken on the dotted line *xx* of Fig. 5 and showing the brake mechanism as used on the modified construction.

Similar letters and numerals of reference indicate similar parts in all the figures of the drawings.

In the construction of my invention I employ the tubular rotary side bars A and B, which are journaled within suitable boxes or casings secured to the ends of the transverse tubular end bars C and D.

Difficulty has been experienced in the manufacture of casket-lowering apparatus in providing a light, portable, and easily-adjustable device that will still be durable and strong enough to withstand the great strain caused by the lowering of heavy metallic caskets and boxes. I have overcome this difficulty by making the frame of tubular sectional parts suitably strengthened by linings or independent telescoping parts inclosed within the said tubular sections and secured by means of spring-pressed keys or pins, thus providing a frame that is light and strong and adapted to be easily adjusted in length or width to receive and lower a casket of any required size.

Proceeding now to describe in detail the construction of my invention, the sides A and B each consists of the tubular section 1, having its outer end journaled in the enlarged box or casing 2, and the tubular section 3, the outer end of which meets and partly incloses the lining 4. The lateral movement of section 1 in the casing 2 is limited by reason of the flanged cap 11 and the annular collar 12 on said section abutting against the opposite flanged portions 13 and 13' of the casing 2, respectively. The projecting end of the lining 4 is journaled in the enlarged box or casing 5 and is prevented from lateral movement therein by reason of the annular flange 14 on its outer end and the adjacent end of section 3 abutting against the flanged portions 15 and 15' of the casing 5, respectively. The spring-pressed key 6, which is placed

within said lining, engages with suitable registering apertures provided in sections 3 and 4 and hold the same in proper adjustment.

In order to strengthen the sections 1 and 3 at their middle or meeting point, I insert the lining 7. Near the center of the lining or strengthening-tube 7 is provided an elongated slot 8, which is adapted to register with a similar slot provided in the abutting ends of the sections 1 and 3. A pin 9 is suitably secured within the lining 7 at a point opposite the slot 8 therein and is adapted to project through said slot 8 and engage with the slots provided in the abutting ends of the sections 1 and 3, thus preventing any independent rotary movement of said sections 1 and 3. In order to retain the said lining 7 in place within one of said sections when the same are in separated position, I provide the spring-pressed key 10, which projects through registering perforations provided in said parts. If it is desired to more securely retain the said sections 1 and 3 together when the frame is in use and prevent any possibility of the sections withdrawing from each other, a key may be provided to engage with the other section in like manner. It will be obvious that the parts as thus connected and mounted within the casings provided for their reception constitute a rotary shaft on which the straps used in supporting and lowering the casket are adapted to be wound.

Interposed between and connecting the corresponding bearing-casings 2 and 5 of the sides A and B are the end bars C and D of the frame, each of which comprises the outer tubular section 16 and the telescoping tubular sections or linings 17 and 18, which are inserted in the ends of the tubular section 16. Annularly-flanged caps 19 are made integral with or rigidly secured to the outer ends of said linings and are provided with the perforated lugs 20, which are pivotally secured to the perforated lugs 21 of the casings 2 and 5 by means of the pins 22, thus providing suitable hinged joints to enable the sections to be folded upon each other and better facilitate the carrying or storing of the device when not in use. The linings 17 and 18 are movably secured within the sections 16 and are adapted to be withdrawn any desired distance to adjust the width of the frame to fit over the grave and receive and lower a casket therein, the spring-pressed keys 23, which are secured to either end of the sections 16 and pass through apertures in said sections and engage with suitable apertures 23' in the linings 17 and 18, being provided to rigidly retain the same in proper adjustment.

Secured to one of the end bars CD by means of the binding collar or sleeve 24 is my improved tape-drum and brake mechanism, which comprise the drum portion 25 and the friction-brake 26. The ends of the tape 27 are passed through elongated slots 25' in the lower portion of the drum 25 and are secured within elongated slots provided in the hub

28 of the drum by means of suitable pins passed through the loops 29 in their ends, as shown in Fig. 4, and their other ends are passed through elongated slots 30 in the casings 2 and secured within the slots 30' of the shafts A and B in a similar manner, having first wound a sufficient amount of tape upon the hub 28 of the drum. The brake mechanism comprises a friction-wheel 31, which is rigidly mounted on the end of the shaft or hub 28 of the tape-drum, a friction-band 32, having its ends connected by the binding-bolt 33, and the collar or band 34, of leather or other suitable material, interposed between the bearing-surfaces of the wheel 31 and the band 32 and adapted to frictionally engage with said wheel when the band 32 is tightened by means of the bolt 33. The friction-band 32 is bifurcated at each end, and the bifurcated portions thereof are formed into loops, as at 32', in which are seated suitable bars or lugs 32'', having enlarged perforated centers, the perforations in the outer bar being screw-threaded for the reception of the threaded portion of the screw-bolt 33, the other or smooth portion of said bolt being movably seated in the perforation of the inner bar. The pin 33' is adapted to bear against the inner face of the inner bar 32'' and cause the friction-band 32 to quickly respond to the turning of said bolt when it is desired to release the brake.

Projecting outwardly from and integral with the casing of the drum 25 is the flange or extension 35, which extends beyond the binding-bolt 33 and in close proximity thereto. Formed on the upper portion of the flange 35 and bent inwardly therefrom is the apertured tongue 36, through which aperture the head of the bolt 33 projects. The purpose of this brace is to secure an even release of the friction-band 32 when the bolt is loosened and impart to the casket a steady and gradual movement as it is lowered. I have found that the use of this brace entirely obviates the uneven motion very often occasioned by the person operating the device allowing the weight of his body to rest upon the wrench and cause the said friction-band to bind upon the wheel 31, thereby retarding or causing an uneven movement of the casket as it makes its descent. By the use of this brace any weight or strain upon the wrench is brought to bear upon the casing of the drum 25 and not upon the clutch mechanism.

Having the parts of the frame secured together, I next secure the transverse straps 37, used for supporting and lowering the casket, to the longitudinal rotary shafts A and B. The ends of the straps 37 are secured to the shafts by means of the peculiarly bent wires 38, which are inserted through loops formed in the ends of said straps, and have their inwardly-bent ends hooked in apertures 39, provided at suitable distances apart in the said shafts, as shown in Figs. 5 and 7, thus adapting them to be adjusted thereon. Hav-

ing secured the straps 37 a suitable distance apart on the said shafts A and B, the hub 28 of the drum 25 is turned by means of a crank provided for that purpose, thus transferring the straps 27 from the ends of the shafts within the casings 22, upon which they are wound, to the hub 28 within the drum 25, the straps 37 being thus in turn wound upon the said shafts and drawn taut across the frame in position to receive and support the casket preparatory to its being lowered. The binding-bolt 33 is then tightened to retain the tapes in place. When it is desired to lower the casket, the brake is slightly released and the casket descends by its own weight acting upon the straps.

The straps 37 and apertures 39, provided in the shafts to receive the hooks or wires 38, are not shown in Fig. 1, it being a detail view of the frame and more particularly intended to illustrate the several parts and sections thereof.

Figs. 5, 6, and 8 are modified constructions of my improved lowering device shown in Figs. 1, 2, and 4, in which I employ miter-gears to control the operation of the shafts A and B instead of the drum 25 and tape 27. In this construction the frame is suitably supported at each corner by the standards or legs 40. On the ends of the shafts A and B, adjacent to the transverse bar or shaft C, are rigidly mounted the miter-gears 41, which mesh with the companion miter-gears 42 of the shaft C. The shafts A, B, and C are suitably mounted in the brackets 43 and the opposite ends of the shafts A and B in the casings 43', all secured to and resting upon the standards 40. The brake 44, which is similar to that above described, is located at one end of the shaft C, the friction-wheel 31 being rigidly secured thereto and the friction-band 32 prevented from revolving with said wheel by being secured to the bracket 43 adjacent thereto. The end bar or shaft C of the modified form is also changed in its construction, being the reverse of that of the end bars shown in Figs. 1 and 2. It will be noticed that instead of providing a single outer section 16 and the telescoping sections 17 and 18 I use a single lining or tube 17', inclosed by the sections 16' and 16''. The outer ends of the sections 16' and 16'' are closed by suitable caps secured therein and also have the gears 42 rigidly mounted thereon. When it is desired to widen the frame, the spring-pressed keys 23 are withdrawn from engagement with the lining 17' and the sections 16' and 16'' drawn outwardly thereon a required distance and rigidly locked in position by said keys, which engage with apertures 23' in the lining.

The modified construction is otherwise similar to that above described. It is therefore obvious that the casket is placed on the straps 37 and lowered in the same manner—that is to say, the clutch is sufficiently released to permit the shafts to revolve and the casket to be lowered into the grave.

In folding my apparatus the sides A and B are broken in two by withdrawing one of the sections from the lining 7. In folding the broken parts one of the extending arms on each of said parts is drawn in toward its respective end bar by means of the hinged joint formed by the insertion of the pin 22 in the lugs 20 and 21, as shown by the dotted lines at the foot of the frame in Fig. 1, and the other extending arm on each of said parts is turned upon the axis formed by the telescoping tube 17, which is permitted to turn within the section 16 by releasing the key 23 until the arm extends in the opposite direction, when it is folded inwardly upon the end bar, to which it is attached on the opposite side to that of the other folded arm, as shown by the dotted lines at the head of the frame in Fig. 1. The modified construction is folded in same manner, except that the bolts 45 act as pivots on which the parts adjacent to the miter-gears are enabled to fold. It will therefore be seen that the frame when in folded position is composed of two parts, which can easily be carried from place to place and quickly set up in operating position.

It is obvious that the frame may be extended to any desired length by releasing the key 6 and withdrawing the lining 4 from the section 3 and adding one or more of the sections 3 by securing one end of the outer section over the lining 4 and strengthening and securing the intermediate sections 3 by the required linings 7.

It will of course be understood that I have merely shown and described preferred forms of construction of the frame of my adjustable burial apparatus and its operating mechanism and that the same may be varied in their construction without departing from the spirit of my invention or sacrificing any of the numerous advantages apparent to those skilled in the art to which it appertains.

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

1. The combination with a burial apparatus having a rectangular frame and means on said frame for supporting and lowering a body, of pivotally-connected side and end bars in said frame, said side bars composed of separable parts and adapted, when separated, to be folded in close adjacent parallel position to their respective end bars.

2. The combination with a burial apparatus of the class described, said apparatus comprising means for supporting a body and means for causing a retarded lowering of said body, of end bars and separable side bars, said separable parts having hinged connection with said end bars and adapted to turn with said bars as their axes and be folded on opposite sides of said bars in substantially parallel positions thereto.

3. In a burial apparatus, the combination with means for supporting a body and means for causing a retarded lowering of said body,

of spaced bars composed of inner and outer adjustable tubes, casings pivotally secured at each end of said bars to one of said tubes and adapted to turn upon said bars as axes, 5 separable bars mounted in said casings and connecting said spaced bars, and adapted, when separated, to turn with said casings and fold on opposite sides of said spaced bars.

4. In a burial apparatus, the combination 10 with a frame composed of end and separable rotary side bars, and provided with means for supporting a body and means for causing a retarded rotation of said side bars, of hinged connections between the adjacent ends of 15 said end bars and said side bars to adapt said side bars, when separated, to fold upon their respective end bars in substantially a parallel position thereto.

5. In a burial apparatus, a frame having 20 side and end bars, said side bars composed of separable parts and said end bars of adjustable telescoping parts, and hinges connecting said separable parts and said telescoping

parts in such manner as to enable said separable parts to turn upon said telescoping 25 parts to which they are attached and fold upon opposite sides thereof.

6. In a burial apparatus, the combination with means for supporting a body and means for causing a retarded lowering of said body, 30 of the end bars C, D composed of outer and inner adjustable tubes, rotary shafts connecting said bars C, D and hinged at each end to one of said adjustable tubes, said shafts adapted to be broken in two and one of the 35 broken parts on each of said bars folded on one side thereof and the other broken part turned upon said bar as an axis and folded on the other side thereof.

In testimony whereof I have signed my 40 name to this specification in the presence of two subscribing witnesses.

CALVIN W. WELLMAN.

Witnesses:

WILBER A. OWEN,

W. H. A. READ.