

**No. 636,445.**

**Patented Nov. 7, 1899.**

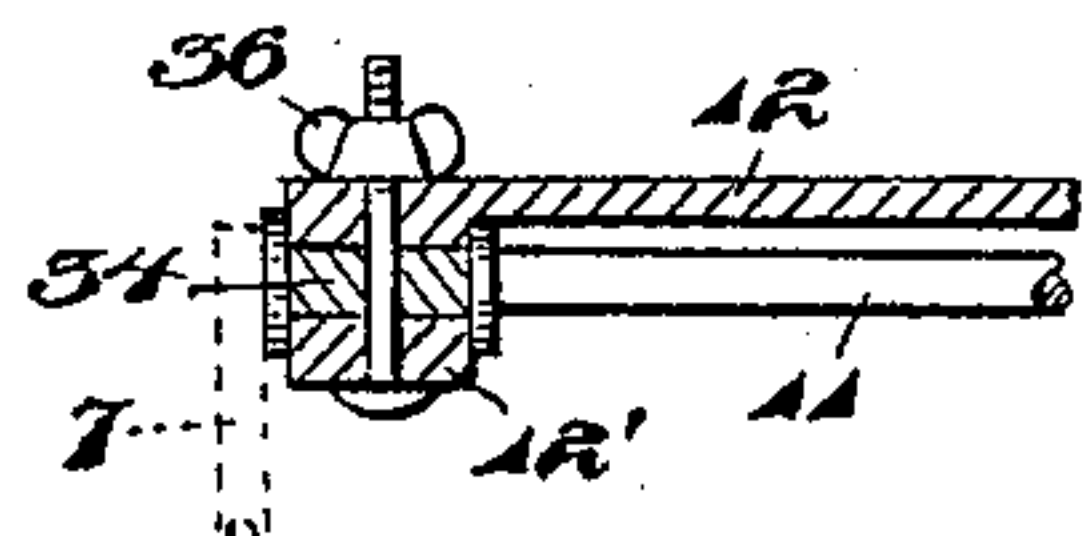
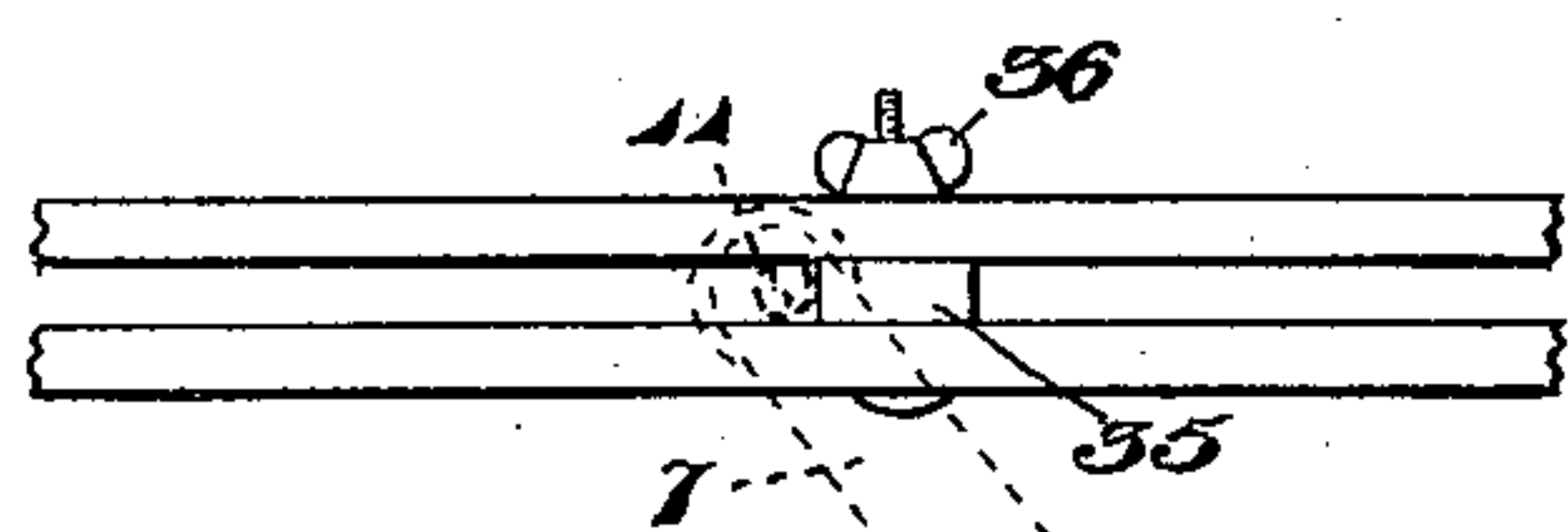
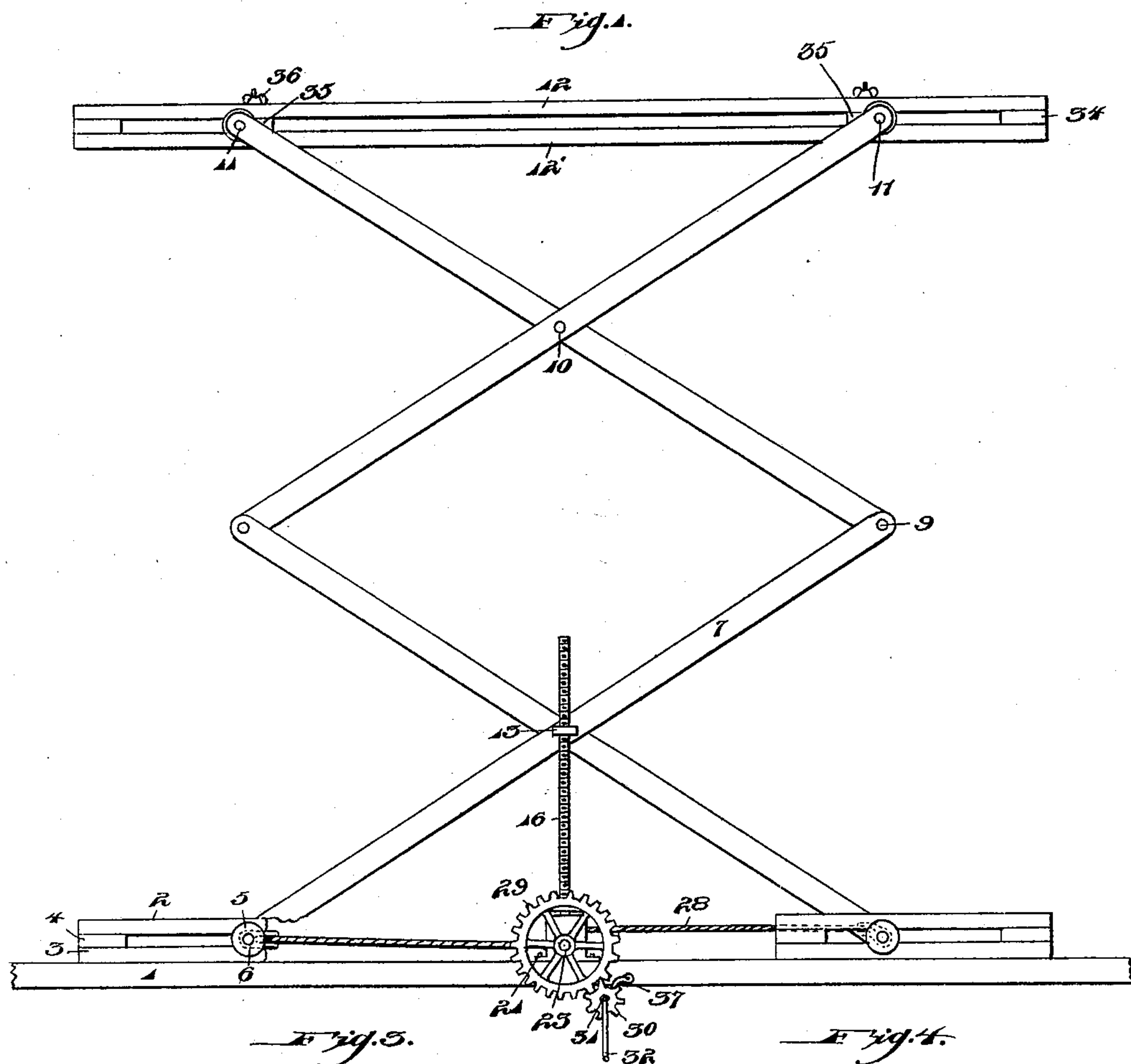
C. B. McCABE & L. GOUGHENOUR.

## PORTABLE ELEVATOR.

(Application filed Jan. 30, 1899.)

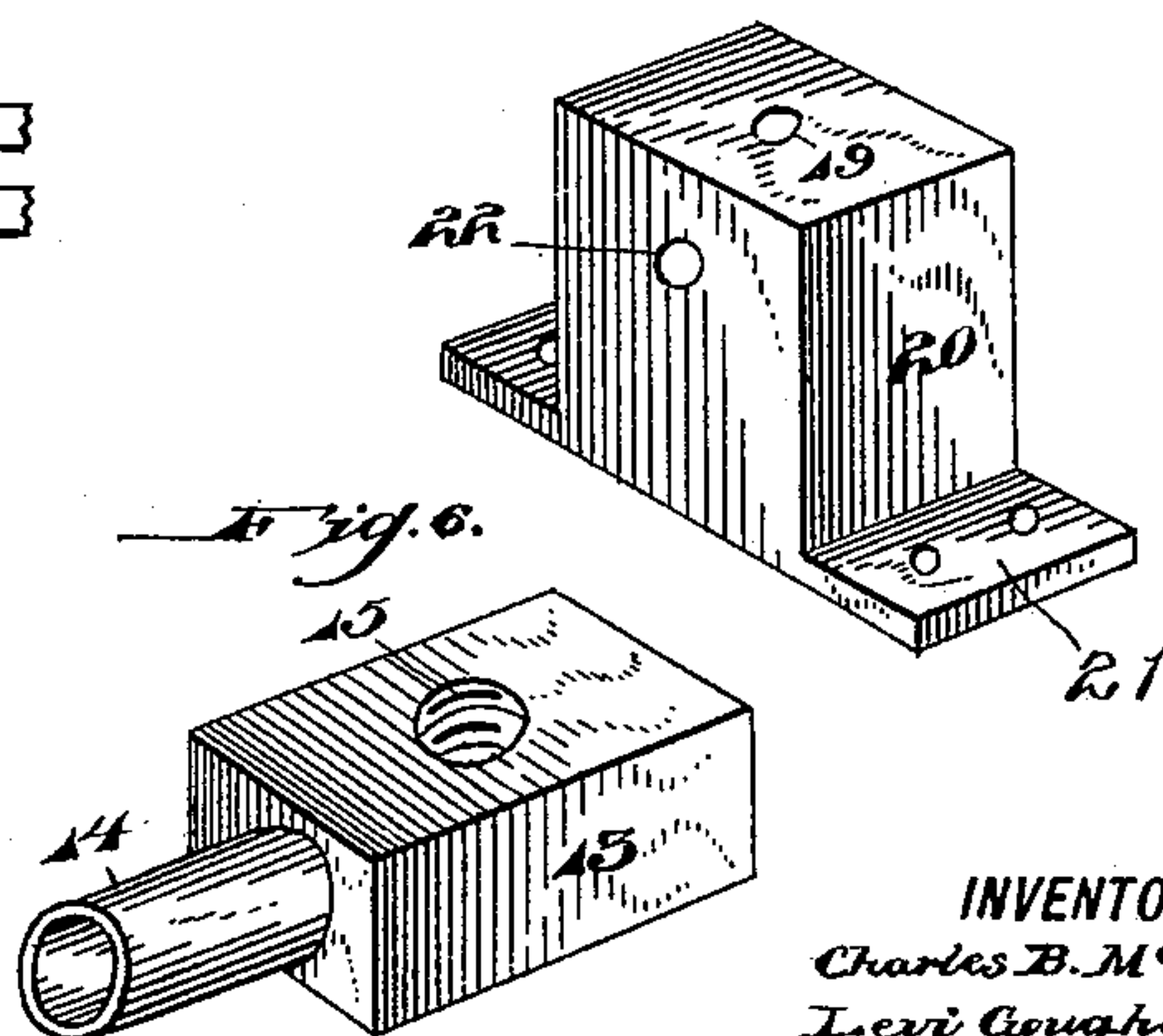
(No Model.)

**2 Sheets—Sheet 1.**



**WITNESSES:**

J. P. Appleman.  
A. Haymaker.



**INVENTORS**

Charles B. McCabe  
Levi Goughenour

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*H. C. Everett & Co.*  
ATTORNEYS.

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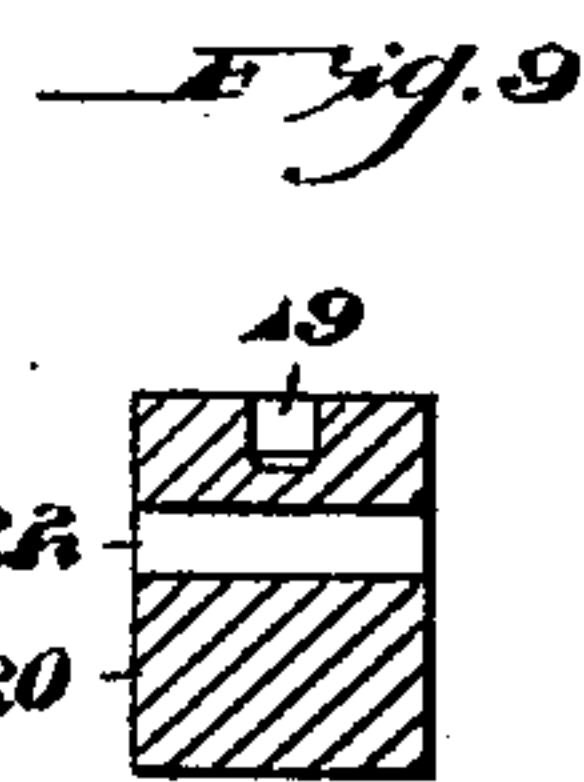
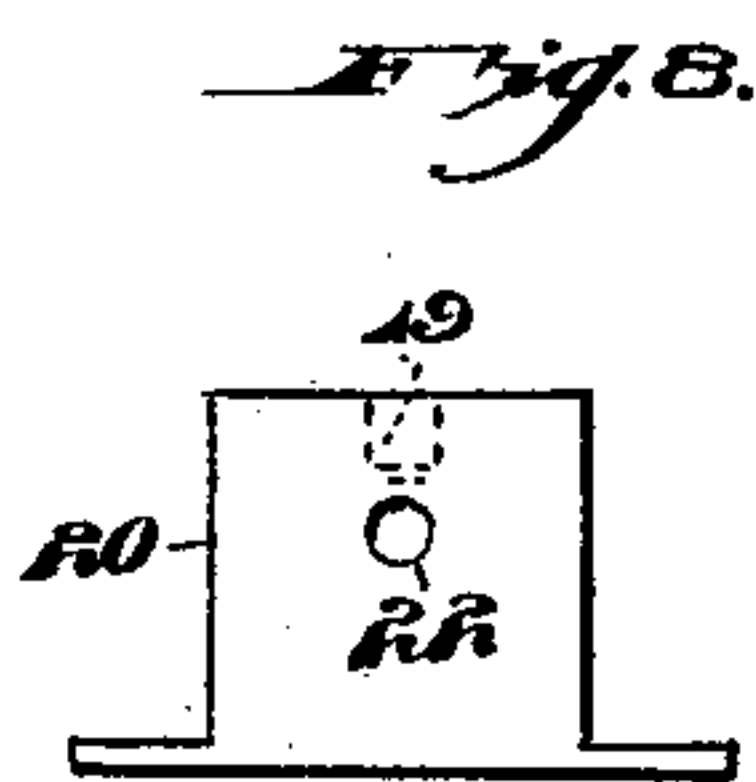
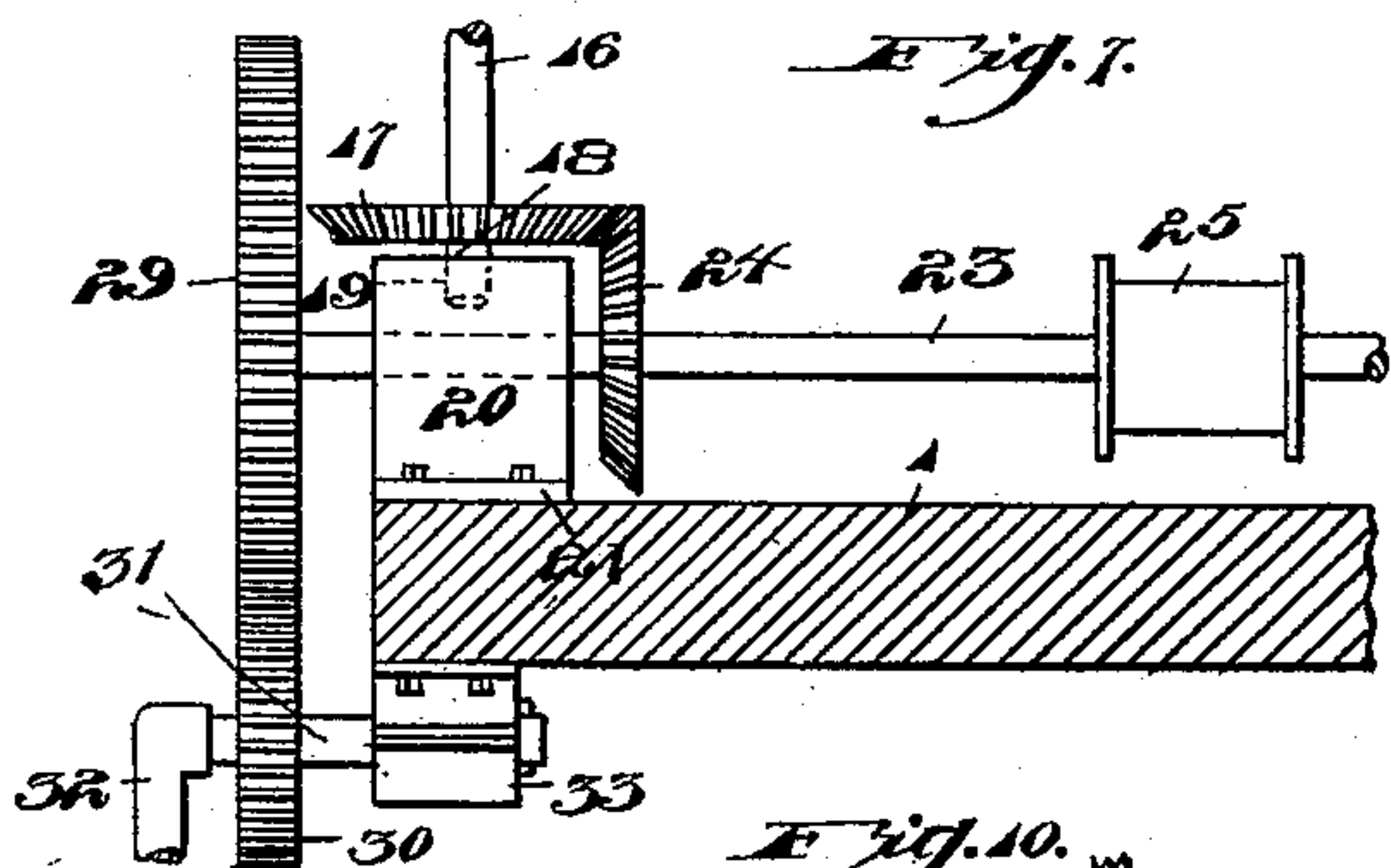
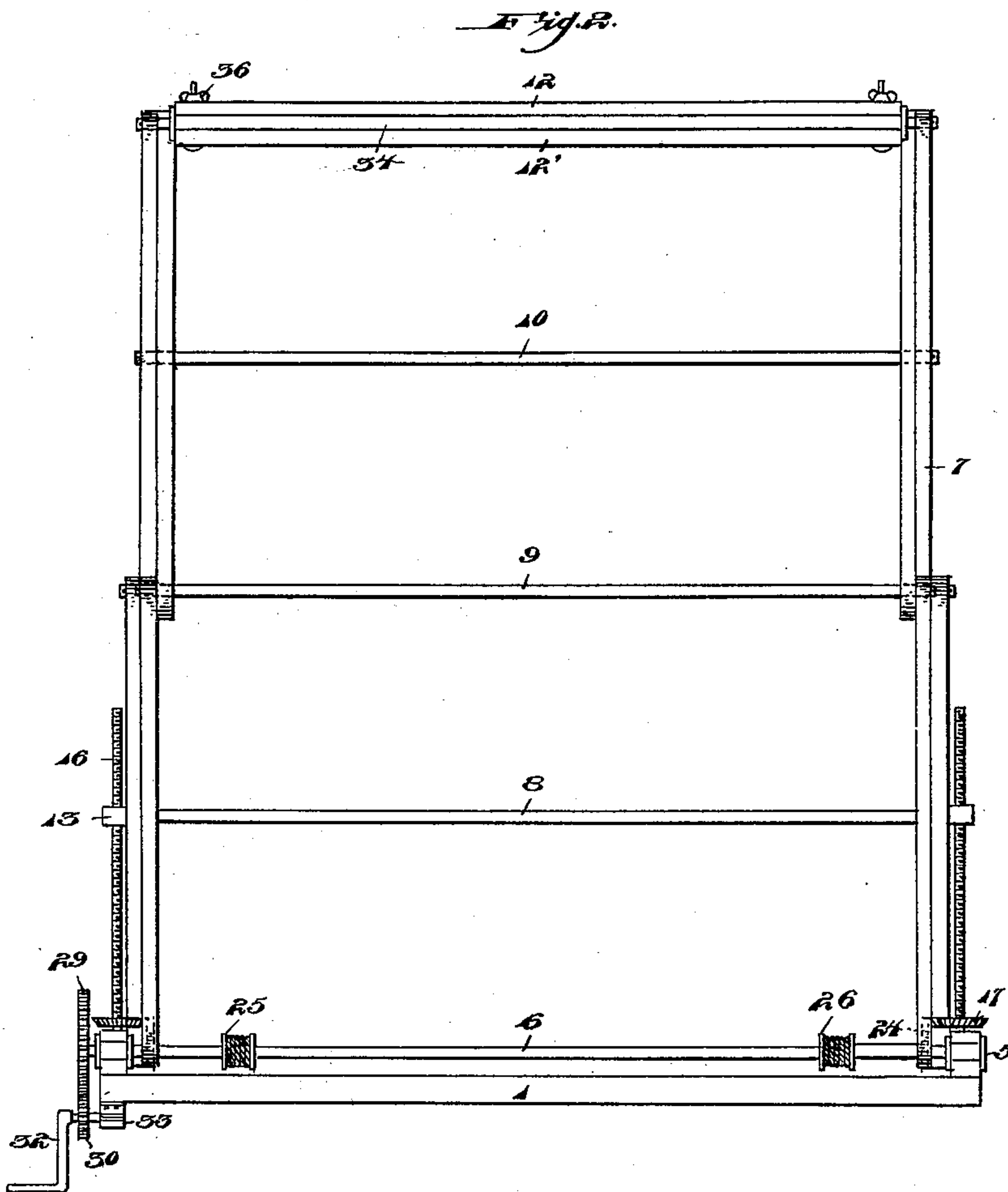
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2 Sheets—Sheet 2.



WITNESSES:  
*J. P. Appleman,*  
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*Fig. 10.*

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# UNITED STATES PATENT OFFICE.

CHARLES B. McCABE AND LEVI GOUGHENOUR, OF BRADDOCK,  
PENNSYLVANIA.

## PORTABLE ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 636,445, dated November 7, 1899.

Application filed January 30, 1899. Serial No. 703,823. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES B. McCABE and LEVI GOUGHENOUR, citizens of the United States of America, residing at Braddock, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Portable Elevators, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to certain new and useful improvements in portable elevators.

The object of our invention is to construct an elevator of this character carrying a working platform, the said working platform adapted to be elevated to allow the workmen operating upon various objects at an elevation.

A further object of our invention is to construct an elevator of this class which can be elevated and lowered and when lowered the parts thereof folded in a compact position, so the same can be moved or carried to any position desired without inconvenience.

Our invention finally consists in the novel combination and arrangement of parts hereinafter more fully described, and particularly pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views thereof, and in which—

Figure 1 is a side view of our improved device when extended. Fig. 2 is an end view thereof when extended. Fig. 3 is a side view of a portion of the working platform, showing the stop or adjusting block to arrest the inward movement of one of the upper ends of the lazy-tongs. Fig. 4 is a perspective view of the bearing-block for the elevating-screw and operating-shaft. Fig. 5 is a cross-sectional view of the adjusting-block arranged in the working platform. Fig. 6 is a perspective view of the guide or supporting-block for the elevating-screw. Fig. 7 is a sectional view of the supporting-platform, showing the operating means attached thereto for elevating and lowering the lazy-tongs. Fig. 8 is a side view of the bearing-block for the elevating-screw and the operating-shaft. Fig. 9 is a

cross-sectional view thereof. Fig. 10 is a longitudinal sectional view of a portion of the supporting-platform, showing in section a friction-roller for the lower brace-rod of the lazy-tongs.

Referring to the drawings by reference-numerals, 1 indicates a supporting-platform upon which various parts of our improved portable elevator are mounted. This platform may be of any desirable shape.

Mounted upon the supporting-platform 1, on each side thereof and at each end thereof, are the guides or supporting-frames for the lower portion of the lazy-tongs. These guides or frames are formed of an upper and lower horizontal bar or rod 2 3, spaced apart by means of the blocks 4. This allows of an opening, in which the friction-rollers 5 operate. These friction-rollers are mounted on the lower brace-rod 6 of the lazy-tongs 7. It will be observed that these brace-rods extend outwardly on each side of the lazy-tongs to allow of the mounting of the friction-rollers 5 thereon. These friction-rollers also act as a bearing. Furthermore, by extending the brace-rods 6 outwardly on each side of the lazy-tongs allows for its operation in the guide or supporting-frame when the tongs are elevated or lowered.

The lazy-tongs 7 have the additional brace-rods 8 9 10 and the upper brace-rods 11, which are adapted to support the working platform 12. These rods are pivotally connected to the lazy-tongs to allow of the same being elevated and lowered. The brace-rod 8 has secured to each end thereof the guide or supporting-block 13 by means of the hollow extension 14, in which the ends of the brace-rod 8 engage. The guide or supporting-block is formed with a screw-threaded aperture 15, through which the elevating-screw 16 operates. This elevating-screw may be of any length desired, and it has formed integral directly above its lower end the gear-wheel 17 for operating the same. The downwardly-extending portion 18, beneath the gear-wheel 17, is supported in the aperture 19, formed in the bearing-block 20. This bearing-block 20 is supported to the platform 1 by any suitable means, as at 21, and this block 20 is also provided with a horizontal aperture 22 for supporting the op-



erating-shaft 23. It will of course be observed that on each side of the platform 1 the bearing-block 20 is secured thereto for supporting the shaft as well as the elevating-screw.

5 Mounted upon the operating-shaft 23 is a gear-wheel 24, which meshes with the gear-wheel 17, formed integral with the operating-shaft. The operating-shaft 23 is also provided with a pair of drums 25 26, upon which  
10 the elevating and lowering cables 27 28 are adapted to wind. These cables are connected to the lower brace-rods 6.

29 indicates a sprocket-wheel mounted on one end of the operating-shaft 23, and it  
15 meshes with a gear-wheel 30, mounted on the auxiliary shaft 31, which is operated by means of the crank-handle 32. The inner end of the shaft 31 is journaled in a keeper 33, which is connected to the underneath face of the  
20 platform 1 at one end thereof.

The working platform is formed of an upper and lower section 12 12', which are connected together and suitably spaced apart by means of an elongated strip of material 34.  
25 The spacing of these two sections of the platform allows for the operation of the stop or adjusting blocks 35, which are held in the desired position by means of the set-screws 36.

37 indicates a pawl secured to one side of  
30 the platform, which is adapted to operate against the gear-wheel 30 to lock the same in position when the working platform is elevated to the desired height.

The operation of our improved device is as  
35 follows: By operating the crank 32 it will revolve the gear-wheel 30, which meshes with the gear-wheel 29 and revolves the same, as well as the operating-shaft 23. The gear-wheel 24, which is mounted on the operating-  
40 shaft 23, meshing with the gear-wheel 18, will revolve the elevating-screw 16, thereby raising the lazy-tongs to which the working platform is secured to its upper end. At the same time the elevating-ropes 27 28 will wind  
45 upon the drums 25 26, which will materially assist in the elevating operation of the lazy-tongs. When the desired position of the working platform has been attained, the pawl is brought into contact with the gear-wheel  
50 30, thereby locking the same and preventing the lazy-tongs from collapsing. When the device is desired to be lowered, the pawl is released and the weight of the working platform will fold the lazy-tongs in a compact  
55 position.

It will be noted that various changes may be made in the details of construction with-

out departing from the general spirit of our invention.

Having thus fully described our invention, 60 what we claim as new, and desire to secure by Letters Patent, is—

1. In combination, a supporting-platform, guides or supporting-frames mounted on the said platform, lazy-tongs having the lower part 65 thereof operating in the said guides, a working platform formed of an upper and lower section suitably spaced apart adapted to be supported by the upper part of the said lazy-tongs, a pair of bearing-blocks mounted on the 70 said supporting-platform, an upright elevating-screw supported by the said blocks and suitably connected to the lazy-tongs, a gear-wheel mounted on the said elevating-screw, an operating-shaft mounted in the said bear- 75 ing-blocks, a gear-wheel mounted on the said shaft adapted to mesh with the gear-wheel secured to the elevating-screw, drums mounted on the said shaft, elevating-ropes connected to the said lazy-tongs adapted to wind upon the 80 said drums, and means for operating the said shaft thereby elevating and lowering the said lazy-tongs, substantially as set forth.

2. In combination, a supporting-platform, guides or supporting-frames mounted on the 85 said platform, lazy-tongs having the lower part thereof operating in the said guides, a working platform formed of an upper and lower section suitably spaced apart adapted to be supported by the upper part of the said 90 lazy-tongs, stops secured in the working platform to limit the upward movement of the said lazy-tongs, a pair of bearing-blocks mounted on the supporting-platform, an upright elevating-screw supported by the said blocks and 95 suitably connected to the lazy-tongs, a gear-wheel mounted on the said elevating-screw, an operating-shaft mounted in the said bearing-blocks, a gear-wheel mounted on the said shaft adapted to mesh with the gear-wheel se- 100 cured to the elevating-screw, drums mounted on the said shaft, elevating-ropes connected to the said lazy-tongs adapted to wind upon the said drums, and means for operating the said shaft thereby elevating and lowering the 105 said lazy-tongs, substantially as set forth.

In testimony whereof we affix our signatures in the presence of two witnesses.

CHARLES B. McCABE.  
LEVI GOUGHENOUR.

Witnesses:

JOSEPH L. CAMPBELL,  
JOHN N. KINES.