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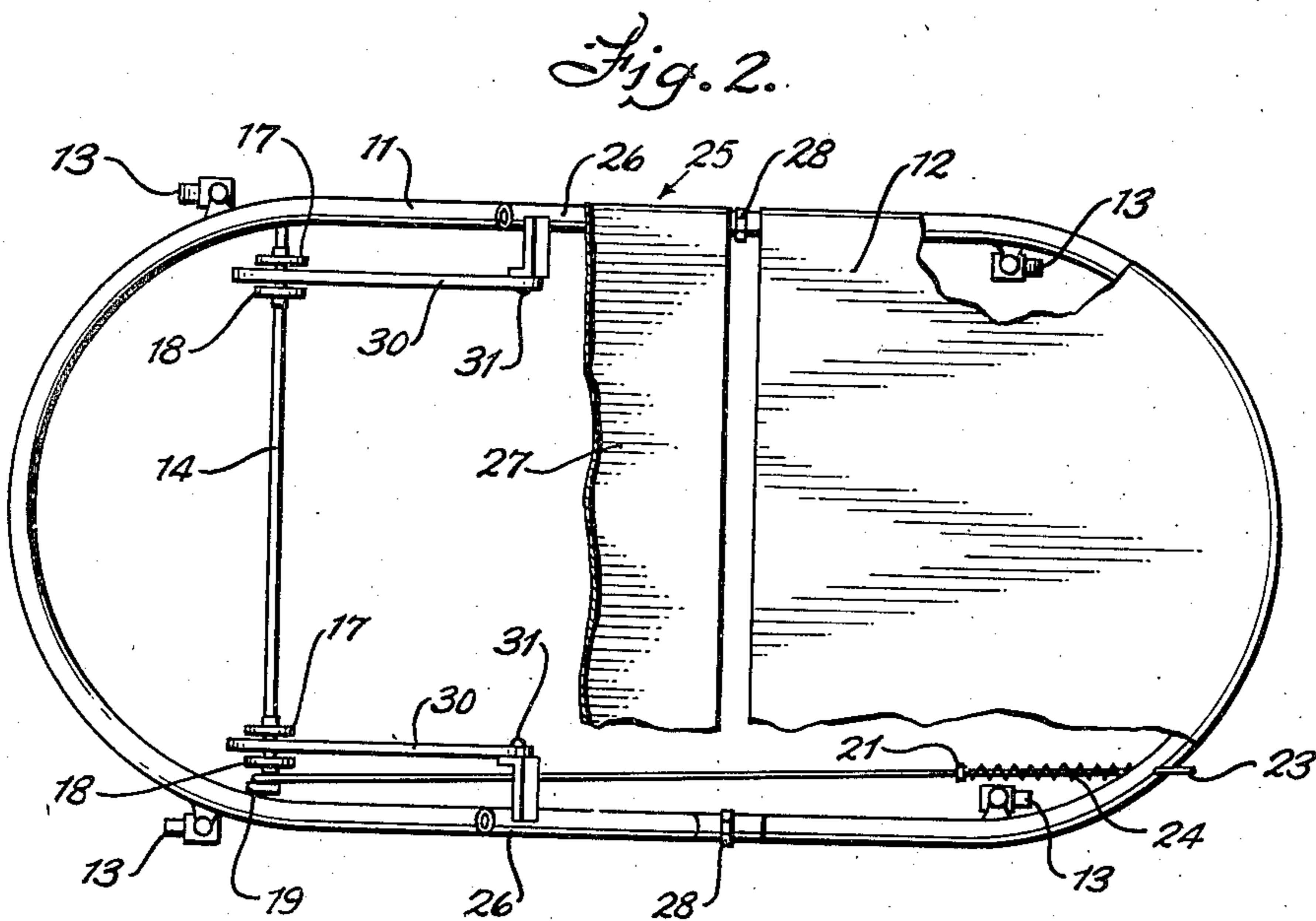
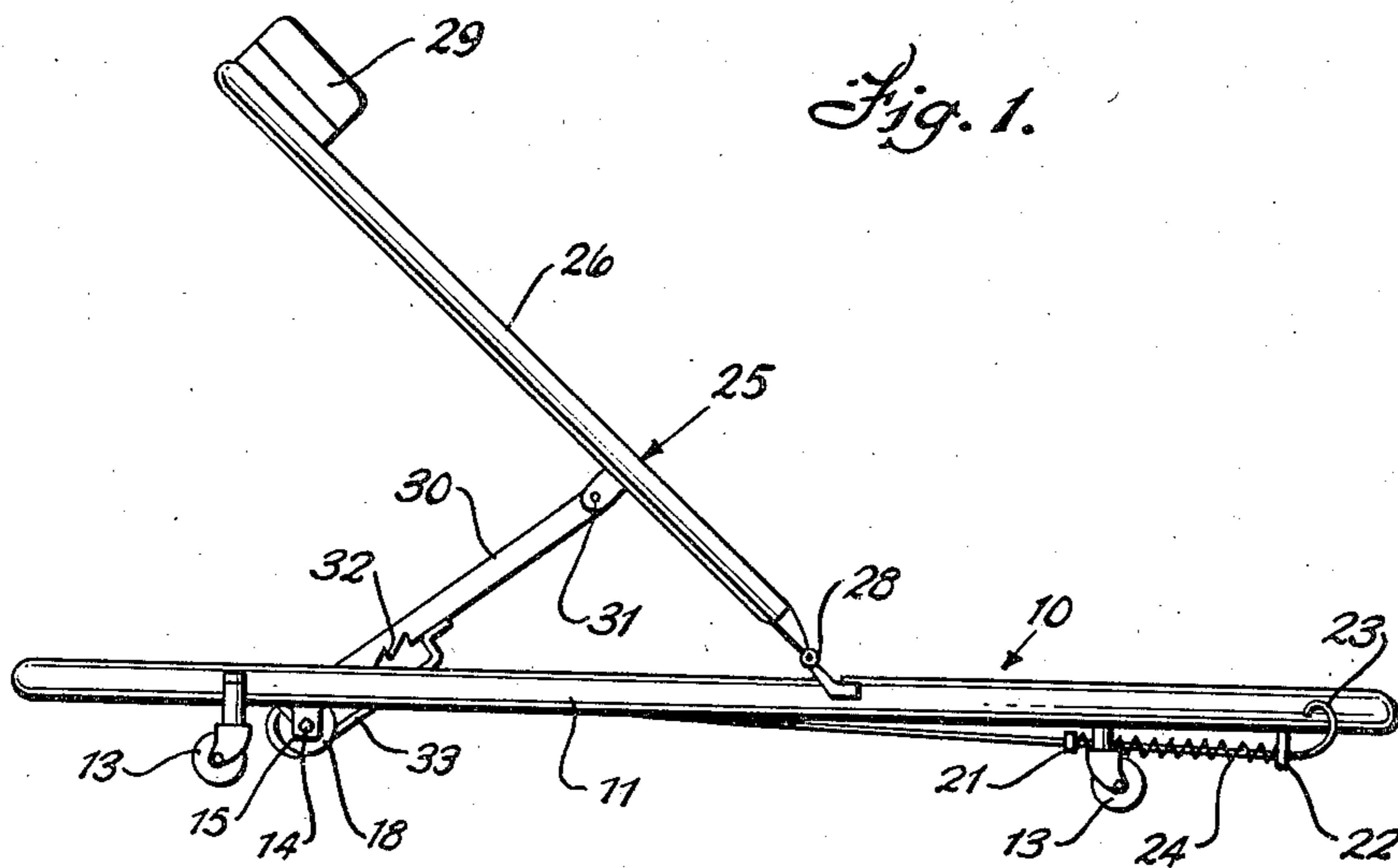
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2,430,662

CREEPER

Filed Feb. 7, 1946

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

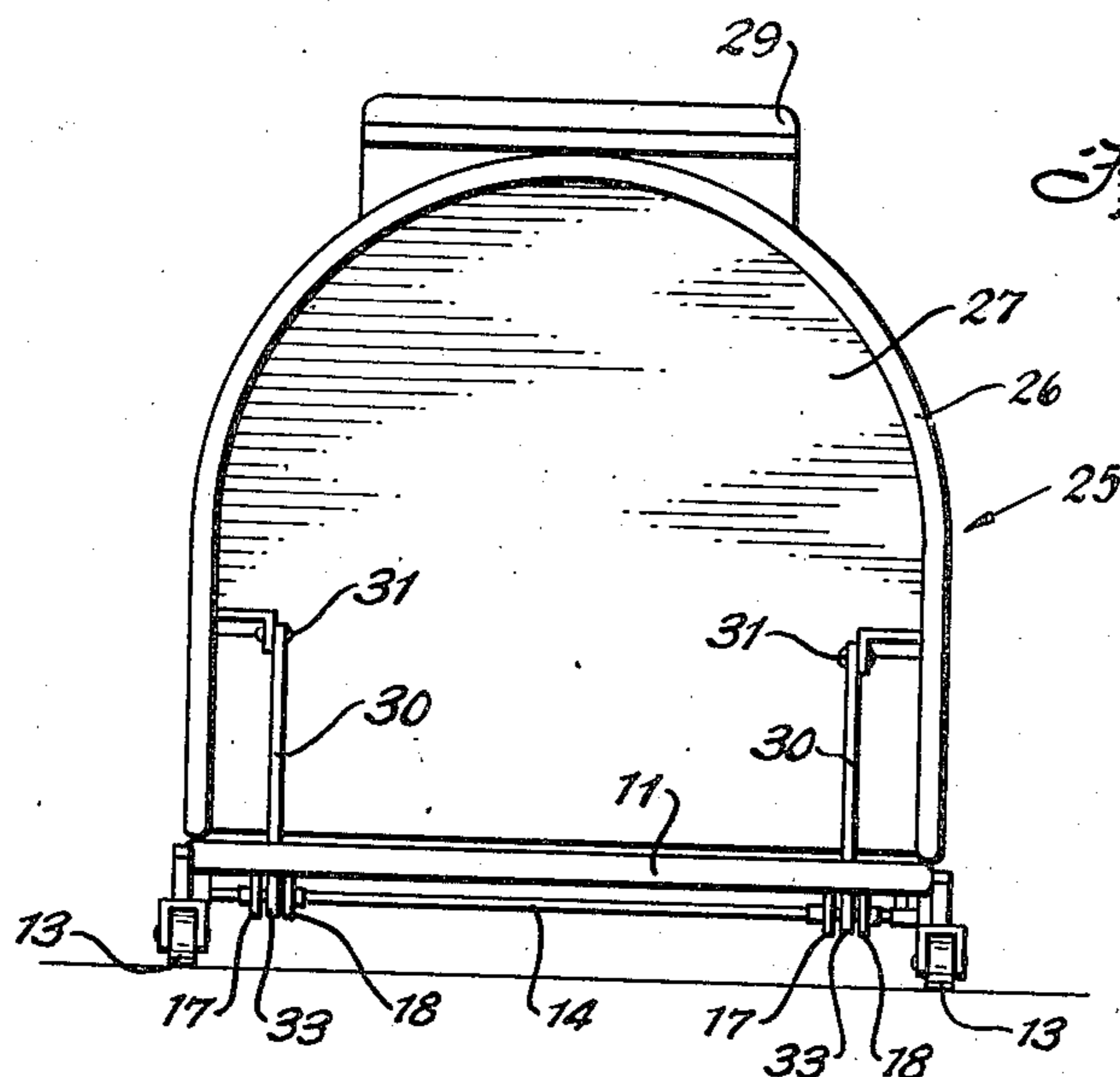


Fig. 3.

Fig. 5.

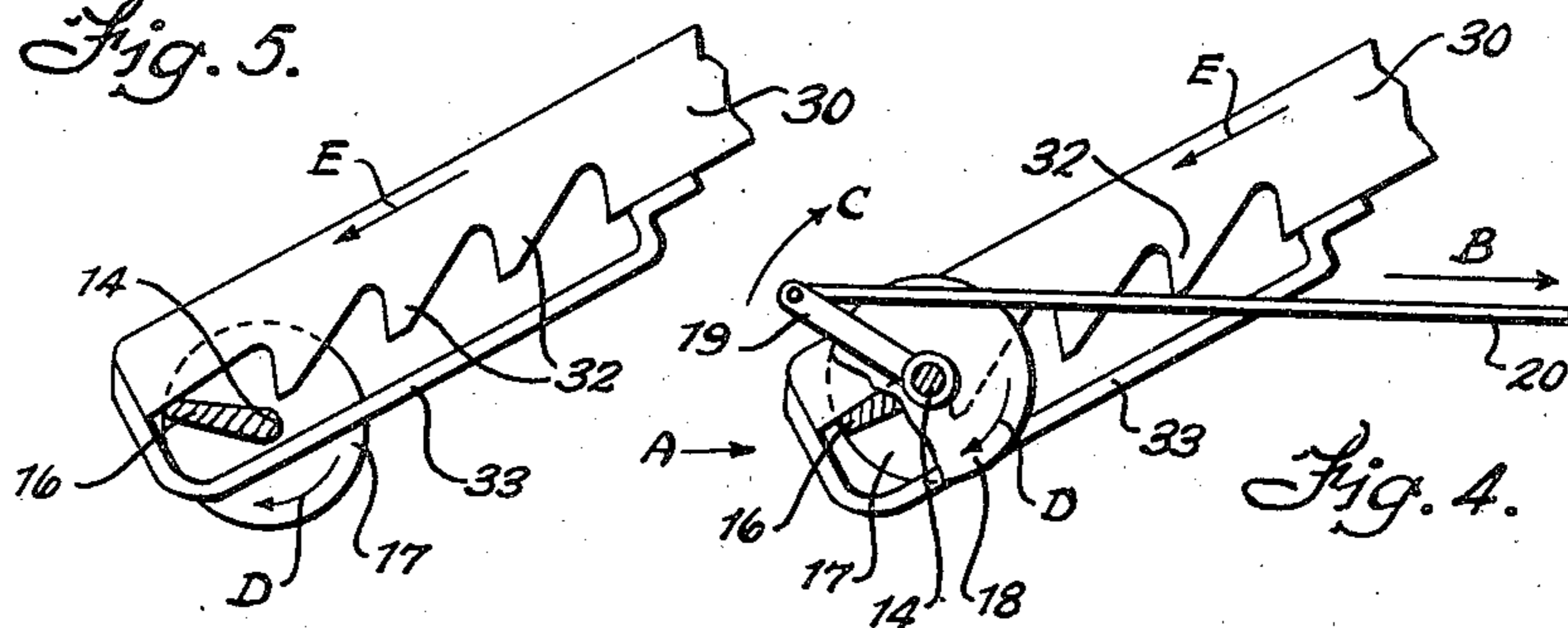


Fig. 4.

Fig. 6.

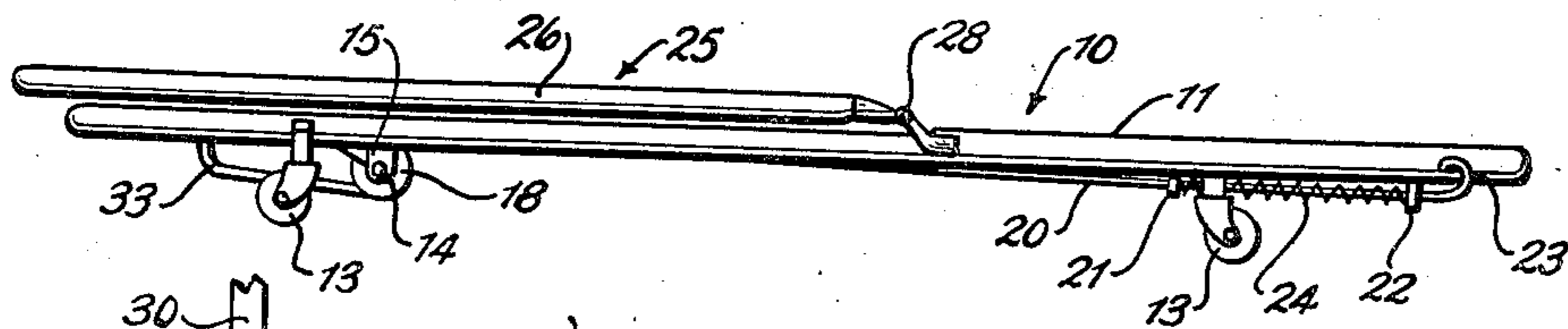
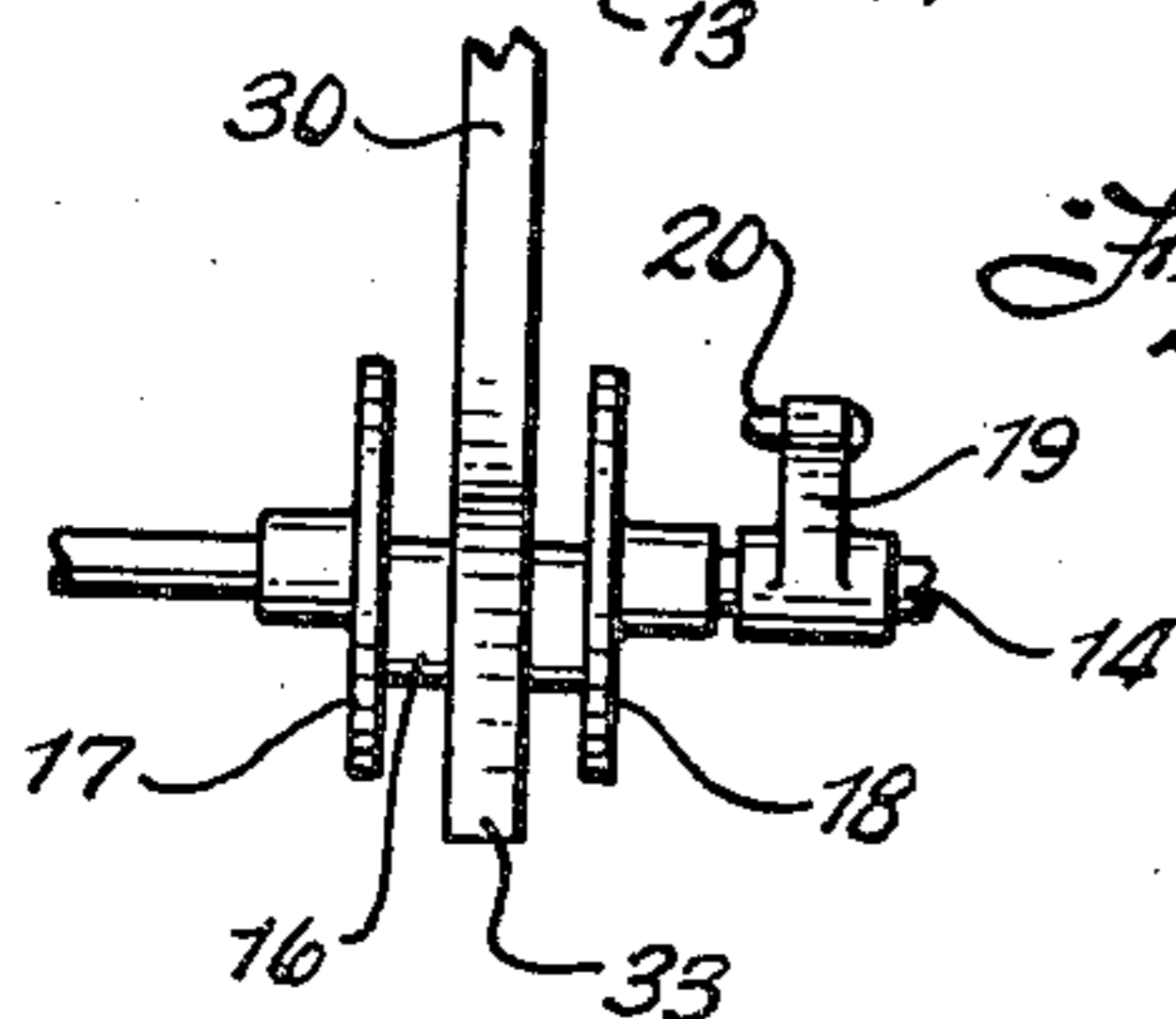


Fig. 7.



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## UNITED STATES PATENT OFFICE

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CREEPER

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4 Claims. (Cl. 280—61.5)

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This invention relates to creepers and has more specific reference to certain new and useful improvements such as, it is believed, serve to enhance the overall utility of such conveyances and at the same time, retain customary provisions and conveniences.

Briefly, and somewhat broadly comprehended, novelty is predicated upon a portable wheeled frame structure which lends itself adaptable to maneuverability around and beneath automobiles and the like, the same embodying a sectional platform and one of the sections being constructed to function as a tiltable back-rest, whereby to permit the user to assume and retain a comfortable working position and to thus facilitate making predetermined adjustments and repairs on automobiles, automobile parts and the like.

More specifically, novelty is predicated upon a hingedly mounted and liftable and lowerable combination back-rest and head-rest having associated therewith, and with a main creeper or truck frame, reliable and conveniently disposed manually operable means for elevating and lowering said rests.

In carrying out the specific principles of the invention, I have provided simple and expedient mechanical devices carefully chosen and structurally coordinated to make for convenience and compactness of functioning, and at the same time, to promote ease of operation by the user of the creeper.

The phases of the invention with which I am especially and more particularly concerned have to do with the hinged back-rest, having a head-rest; arms being hingedly connected to the frame of the back-rest and said arms having rack teeth and said teeth being cooperable with latch-like detents on a manually controllable rocker shaft.

Other objects, features and advantages of the invention will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a side elevational view of a complete operable creeper constructed in accordance with the principles of the instant invention.

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Figure 2 is a top plan view with portions broken away and shown in section to bring out the construction and arrangement of certain of the details.

Figure 3 is an end view, that is an end view of Figure 1, observing same in a direction from left to right.

Figure 4 is an enlarged fragmentary view, in section and also in elevation showing the rack means at the lower end of one of said arms and the manner in which the rocker shaft detent or latch coacts therewith.

Figure 5 is a view based on Figure 4 and showing the detent rotated and moved to a position to free the rack teeth for purposes of making an adjustment to vary the tilt of the back-rest.

Figure 6 is a view like Figure 1 showing the back-rest swung down to a horizontal or out-of-the-way position.

Figure 7 is a fragmentary elevational view taken in the direction of the arrow A see in Figure 4.

Referring now to the drawings by distinguishing reference numerals, it will be seen that the main frame structure of the creeper is denoted, as a unit, by the numeral 10. It comprises, as seen in Figures 1, 2 and 6, a substantially oval-shaped frame 11. On the right hand end of said frame, I provide a sheet metal or equivalent plate 12 which serves as the stationary section of the structure. This plate 12 occupies approximately one-half, slightly less, of the top area of the overall structure. The frame structure is supported by appropriately arranged, suitably mounted casters 13.

Attention at this stage is directed to a horizontal rocker shaft 14 arranged at the left hand end of the main frame 11, the same being journaled for oscillation in appropriate depending bearings 15 as shown in Figures 1 and 6. This rocker shaft is provided adjacent opposite ends with latch devices. These devices are actually in the form of lugs, the same being denoted by the numerals 16 (see Figures 4, 5 and 6) and said lugs being movable in circular paths around the central axis of said rocker shaft 14. Actually the lug is positioned between a pair of disc-like elements or flanges 17 and 18 of duplicate construction (see Figure 7). There is a rocker arm 19 in one end of the rocker shaft and a push-pull rod or

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wire 20 is connected with said arm and said rod or wire operates through supporting elements 21 and 22 on the under frontal end portion of the main frame 11 (see Figure 6 in particular). The push-pull rod is provided with a finger hook 23 and is surrounded by a coiled spring 24 located between the elements 21 and 22. It follows that by catching hold of the hook 23 and reciprocating or working the rod 20 back and forth, it oscillates the rocker shaft 14 by way of the rocker arm 19. In turn, the latch-lugs 16 are rocked from retaining to releasing positions, as seen in Figures 4 and 5 respectively.

At this point, I desire to introduce the combination back-rest and head-rest means. This structure, as a unit, is denoted by the numeral 25 and comprises a substantially U-shaped frame 26 with a sheet metal cover or plate 27. The free ends of the arms of the U-frame are hingedly attached, as at 28, to the intermediate side members of the frame 11 (see Figures 1, 2 and 6). The plate 27 forms the back-rest proper and the pad 29 forms a suitable head-rest. The back-rest is movable from the horizontal "down" and out-of-the-way position seen in Figure 6 to the elevated or tilted position seen in Figure 1. This is also adjustable to intermediate inclined positions as required by the user. To accomplish this, I provide a pair of stay links or arms. Each arm is denoted by the numeral 30, the same being hinged to a suitable attaching bracket 31, as shown in the drawings. The lower or free end portion of the arm is provided with rack teeth 32. Also, there is a guard of general L-shaped form, and indicated at 33. This is attached to the toothed end of the arm 30 and embraces the rocker shaft. It constitutes the ways and means of operatively connecting the rack equipped end of the arm to the rocker shaft. Moreover, the guard works between the adjacent or coacting disc flanges 17 and 18 as brought out in Figures 4, 5 and 6. It is sufficiently large to allow the engaging and disengaging steps to be accomplished.

To be more specific, the guard equipped rack ends of the arms 30 coact with the respective latches 16. As each arrangement is the same, I have shown a single adaptation of this structural assembly in Figures 4, 5 and 7. From these figures, it is obvious that said arms serve as pivoted stays and that by arranging the rocker shaft 14 in the position seen in Figure 4, the latch 16 engages the rack teeth and this affords a temporary locking connection between the rocker shaft and arms. However, by actuating the push-pull rod in the direction of the arrow B (see Figure 4) the rocker arm travels in the direction of the arrow C and the rocker shaft is rotated to move the disc-like flanges rearwardly, that is in the direction of the arrow D. This, obviously, swings the latch 16, which also has the function of a disengaging cam, around to the position seen in Figure 5. While in this position, the rack teeth are lifted to a position where they can slide back and forth over said latch in order to make an adjustment. For example, with the rack teeth disengaged as shown in Figure 5, the arm 30 can be shifted downwardly in the direction of the arrow E to thus lower the tilt of the back-rest. In the drawings, the back-rest is shown in its uppermost tilted position, but it may occupy intermediate positions by proper adjustment of the latch and rack teeth assemblies with relation to each other; or the back-rest can be swung completely down to the level position seen in Figure 6. It follows that the back-rest coacts with the frame struc-

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ture forming a sort of a platform thus providing the aforementioned sectional platform with one of the sections forming a back-rest and being tiltable up and down as guided and regulated by the adjusting means detailed in Figures 4, 5 and 6. It is the latter structure which seems to constitute the essence of the invention in the instant case.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

I claim:

1. In a creeper of the class described, a wheel supported frame, a rocker shaft thereon, lugs laterally mounted on and carried by said rocker shaft at opposite ends of said rocker shaft, confining parallel disc-flanges on said rocker shaft coacting with the respective lugs and forming guide and assembling members, a back-rest hinged on said frame structure, arms hingedly connected to said back-rest and provided with rack teeth and guards coacting with the rack teeth, said guarded rack teeth being movable between said disc-flanges and being engageable with said lugs.

2. An automobile mechanic's creeper of the class described comprising a wheel supported frame structure including a hinged section forming a back-rest, a rocker shaft mounted for operation on said frame structure including a rocker arm situated within the surrounding confines of said frame structure, a remote control hand operated push-pull rod slidably mounted on the frame structure and connected at one end to said rocker-actuated arm for actuating same, and adjustment means between the rocker shaft and back-rest including pivoted stay-links carried by the back-rest, latch-lugs on the rocker shaft, and rack teeth on the free ends of the stay-links engageable with said lugs, and fixedly mounted guards on said free ends slidably looped around said rocker shaft and spaced from said rack teeth in the manner shown and described.

3. An automobile mechanic's creeper of the class described comprising a horizontally disposed mobile frame structure including a centrally hinged section forming a head and back-rest, an oscillatory horizontally and transversely disposed rocker shaft mounted in bearings on said frame directly beneath said back-rest, said rocker shaft being provided with an actuating rocker arm and further provided with a rigid radially projecting latch-lug, a folding stay-link having one end hingedly connected with the back-rest, the opposite lower end thereof terminating in an elongated assembling guard-loop, said guard-loop slidably embracing said rocker shaft and being provided along one longitudinal edge portion with rack teeth, said guard-loop and rack teeth cooperating with said lug and said lug being locatable, by way of oscillation of the rocker shaft, for selective coaction with said rack teeth, and a remote-controlled hand-operated push-pull rod slidably mounted on said frame and pivotally and operatively connected with said rocker arm.

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4. The structure specified in claim 3, together with a pair of spaced parallel confining discs rigidly mounted on said rocker shaft on opposite sides of and connected to said latch-lug, the guard-loop end of said stay-link being disposed and confined for operation between said discs.

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