

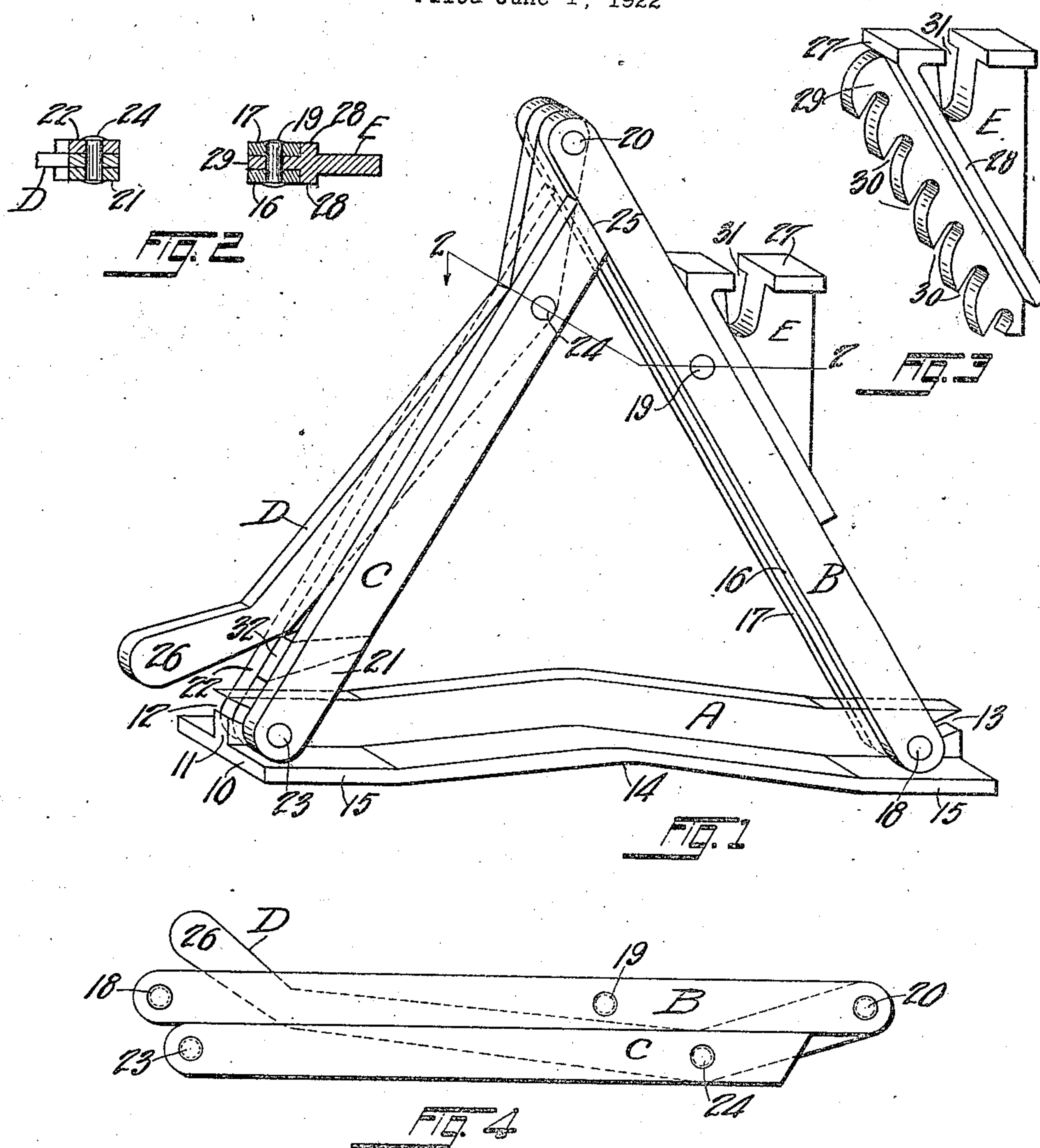
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LIFTING APPARATUS

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LIFTING APPARATUS.

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To all whom it may concern:

Be it known that I, FRANK E. SHEPHERD, a citizen of the United States, residing at North Kingsville, county Ashtabula, and State of Ohio, have invented a new and useful Improvement in Lifting Apparatus, of which the following is a specification.

My invention relates to apparatus for lifting or raising objects or articles.

The object of my invention is an efficient, simple, quick acting, easily adaptable, and easily operatable lifting apparatus.

I attain this object by the mechanism illustrated in the accompanying drawings in which Fig. 1 is a general perspective view of a lifting apparatus well adapted for lifting vehicles; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a perspective view of the adjustable bracket; and Fig. 4 is a side view showing the legs and the operating lever folded up.

Similar reference characters refer to similar parts throughout the views.

The lifting apparatus shown in the accompanying drawings consists, generally speaking, of the base A, the legs B and C, the operating lever D, and the bracket E.

The base A is formed with the horizontal flange 10 and with the upright flange 11 which has the inclined slots 12 and 13 in the ends thereof.

The middle portion 14 of this base A is bent upward for the purpose of permitting the apparatus to rest securely on the ground which has an uneven and hard surface and also permitting this apparatus to rest securely on and not sink into soft ground.

In case of such hard surfaces, the curved portion 14 clears the elevations which may be thereon and permits the flat portions 15 to rest on this surface.

In case of such soft ground, the flat portions 15 rest on this ground and may sink in slightly if, however, the ground is very soft, the flat portions 15 may sink in deeper and not present sufficient bearing surface to this ground to prevent excessive sinking, in which case the curved flanges on the portion 14 presents additional bearing surface to the ground and thereby not only prevents the apparatus from sinking in too deep, but also forms an engagement with the ground which prevents slippage of the apparatus.

The leg B is made of two bars 16 and 17 which are spaced apart and held in such spaced position by the pins 18 and 19 which

are riveted over on the outside of the bars. The inclined slot 13 being sufficiently wide to admit the pin 18. On the upper end, the bars 16 and 17 have the pin 20 which is riveted over on the outside of the bars.

The leg C is made of two bars 21 and 22 which are spaced apart and held in such spaced position by the pins 23 and 24 which are riveted over on the outside of these bars. The inclined slot 12 being sufficiently wide to admit the pin 23. The upper ends of the bars 21 and 22 are inclined for the purpose of providing an abutment 25 for the bars 16 and 17 when a load is resting on the apparatus and when the apparatus is in uppermost position as seen in Fig. 1.

An additional spacer 32 is provided between the bars 21 and 22, similar spacers may be introduced at other points if found necessary or convenient.

The operating lever D is fulcrumed on the pin 24 and on the pin 20, has the handle 26, and is disposed between the bars 21 and 22 of the leg C.

The bracket E, shown in detail in Fig. 3, has the flat horizontal portion 27 upon which the article or object to be lifted may rest; and also has the inclined flange portions 28 which rest upon the edges of the bars 16 and 17, and also has the portion 29 which is adapted to enter between the bars 16 and 17 and which has the openings 30 adapted to slip over and engage the pin 19. The slot 31 being provided to clear truss rods on the bottom of vehicle axles or other obstructions.

This apparatus may be closed into compact form by swivelling the leg B over the top and down over the lever D and against the leg C as seen in Fig. 4. The base A, as well as the bracket E being detached therefrom as separate units.

The use and operation of this apparatus is as follows: When it is desired to use this apparatus, beginning with the compact form shown in Fig. 4, swing the leg B over the upper end of the leg C until both legs form a sort of a triangle, then set the base A on the ground and slide the pin 18 into the slot 13 and the pin 23 into the slot 12; then raise the end 26 of the lever D up as far as it will go which movement causes the lower end of the leg C to pivot on the pin 23 and causes the upper end to move outward and upward, and the upper ends of both legs being connected by the lever D, also causes the lower end of the leg B to pivot on the pin 18 and

causes the upper end of the leg B to move inward and downward.

Now place the bracket E on the leg B to such a height that the face 27 is close up under the object to be lifted, using for this purpose whichever of the slots 30 is nearest to the pin 19 (for different heights a different slot is used).

Now push the end 26 of the lever D downward; this movement causes the upper end of the leg B, and consequently the bracket E, to move outward and upward (pivot on pin 18) and also causes the upper end of the leg C to move inward and downward (pivot on pin 23). When the end 26 is so pushed down to the end of its travel, the object is lifted and the abutment 25 is established, there is no need for a further lock since the load itself acts against this abutment and locks the apparatus, the legs can not disengage from the base as long as this load is on the apparatus since the slots 12 and 13 are inclined.

When it is desired to lower the object, a forceful pull upward on the end 26 of the lever D causes the upper end of the leg C to move outward and release the lock whereupon the object can be lowered by means of the lever D.

Having described my invention,

I claim:—

1. A lifting apparatus comprising a base, a leg pivoted to one end of said base, a second leg pivoted to the other end of said base, and the upper end thereof adapted to abut the first said leg when extended, means on one of said legs to engage an article to be lifted, and an operating lever pivoted to and connecting the other ends of both of said legs.

2. A lifting apparatus comprising a base provided with an inclined slot in each end; a leg having a pivot pin in one of its ends and adapted to engage one of said inclined slots, a second leg having a pivot pin in one of its ends and adapted to engage the other of said inclined slots, means on the first said leg to engage an article to be lifted, and an operating lever pivoted to and connecting the other ends of both of said legs.

3. A lifting apparatus comprising a base provided with an inclined slot in each end and having its middle portion curved upward, a leg having a pivot pin on one of its ends and adapted to engage one of said inclined slots, a second leg having a pivot pin on one of its ends and adapted to engage the

other of said inclined slots, a bracket adapted to be attached to the first said leg in different positions, and an operating lever pivoted to and connecting the other ends of both of said legs.

4. A lifting apparatus comprising a base provided with an inclined slot in each end, a leg having a pivot pin in one of its ends and adapted to engage one of said inclined slots and also having a support pin intermediate its ends, a second leg having a pivot pin in one of its ends and adapted to engage the other of said inclined slots, a bracket adapted to engage an article to be lifted and having a series of slots each adapted to engage said support pin, and an operating lever pivoted to and connecting the other ends of both of said legs.

5. A lifting apparatus comprising a base, a leg mounted on said base and composed of two bars spaced apart and provided with a support pin, a bracket adapted to engage an article to be lifted and having a flange portion adapted to rest against the edges of said two bars and having a flange portion adapted to enter the space between said two bars and provided with slots each of which is adapted to engage said support pin, and means for operating said leg to lift or lower said article.

6. A lifting apparatus comprising a base having an inclined slot in each end and having its middle portion curved upward, a leg composed of two bars spaced apart and provided with a pivot pin in one of its ends and adapted to engage one of said inclined slots and with a second pivot pin in its other end and with a support pin intermediate its ends, a second leg composed of two bars spaced apart and provided with a pivot pin in one of its ends and adapted to engage the other of said inclined slots and with a spacing block between these two bars and with a second pivot pin near its other end and with an abutment face on its other end, an operating lever fulcrumed on both of said second pivot pins and disposed substantially between said two bars of said legs, and a bracket adapted to engage an article to be lifted and having a flange portion adapted to rest against the edges of said two bars of the first said leg and having a flange portion adapted to enter the space between said bars of the first said leg and provided with slots each of which is adapted to engage said support pin.

FRANK E. SHEPHERD.