Feb. 8, 1944. F. KUZELA 2,341,106

POST PULLER AND THE LIKE

Filed March 15, 1943 2 Sheets-Sheet 1

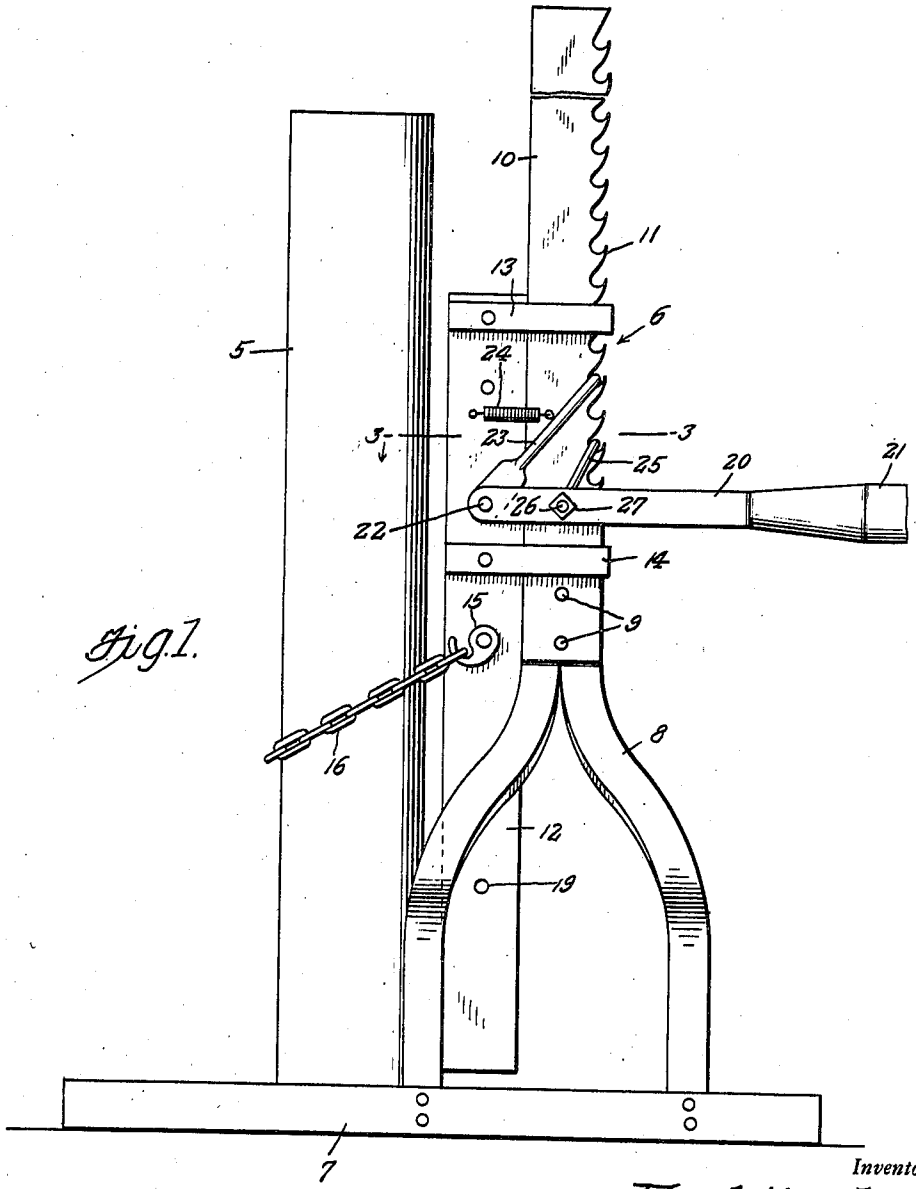


Fig. 1.

Inventor
Frank Kuzela

By Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

Feb. 8, 1944. F. KUZELA 2,341,106

POST PULLER AND THE LIKE

Filed March 15, 1943 2 Sheets-Sheet 2

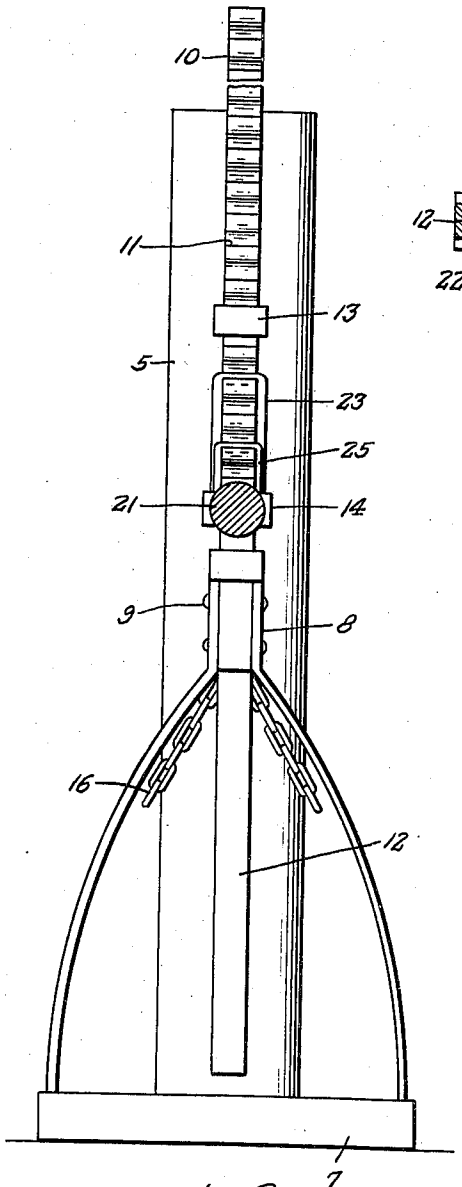


Fig. 2.

Fig. 3.

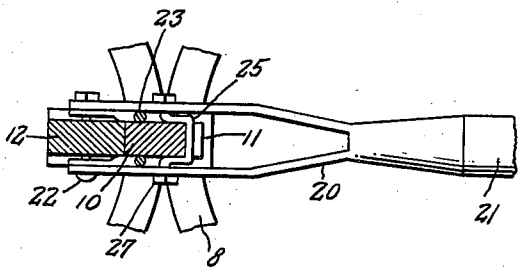
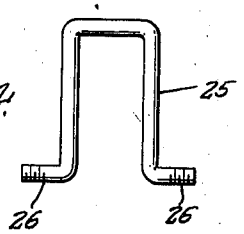


Fig. 4.



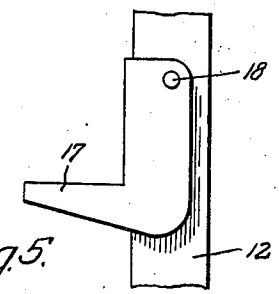


Fig. 5.

Inventor

Frank Kuzela

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Patented Feb. 8, 1944 2,341,106

UNITED STATES PATENT OFFICE

2,341,106

POST PULLER AND THE LIKE

Frank Kuzela, Tyndall, S. Dak.

Application March 15, 1943, Serial No. 479,272

3 Claims. (Cl. 254—108)

This invention relates to new and useful improvements in mechanical jacks and more particularly to a jack especially adapted for pulling posts and like structures.

The principal object of the present invention is to provide a jack or lifting implement whereby various items such as posts, automobiles and other heavy and resistable objects can be lifted conveniently by direct manual effort.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawings:

Figure 1 represents a side elevational view of the jack applied to a post.

Figure 2 is a side elevational view of the jack shown applied to a post, the operating arm in section.

Figure 3 is a fragmentary sectional view taken substantially on the line 3—3 of Figure 1.

Figure 4 is an elevational view of one of the pawls.

Figure 5 is a fragmentary side elevational view showing a modified lifting element.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 denotes a post to be pulled. Numeral 6 generally refers to the improved jack and this includes a base frame 7 from which rises a multi-legged stand 8 secured at its upper portion by elements 9 to a vertically disposed toothed bar 10, this bar having pocketed teeth 11 along one edge thereof.

Numeral 12 denotes a slide having guides 13, 14 adjacent the upper portion thereof for embracing the bar 10. Hook members 15 are provided on the slide 12 for engaging a chain or like element 16 which, of course, will be disposed around the post 5 or other structure to be lifted.

In place of the chain 16, a swingable foot structure 17 may be employed at the lower portion of the slide 12 by disposing a suitable securing element 18 through the foot structure 17 and through an opening 19 in the lower portion of the slide.

A lever 20 having an elongated handle 21 has a forked portion, the legs of which straddle the bar 10 and slide 12. A bolt 22 extends through the free end portions of the forked portion of the lever 20 and through the upper portion of the slide 12, also passing through the leg portions of a U-shaped pawl 23, the bight portion of which is adapted to engage the teeth 11 of the bar 10. One or more springs 24 are interposed between the pawl 23 and an anchor on the slide 12 in order to hold the pawl 23 firmly against the toothed edge of the bar 10.

A second U-shaped pawl 25 has laterally disposed end portions 26, 26 which are disposed through openings in the leg portions of the lever 20 and equipped with nuts 27 to prevent displacement thereof.

In the operation of the device, it can be seen that when the chain 16 is in place on a post or other structure 5, the jack is ready for operation. By pushing downwardly on the handle 21, the slide 12 will be lifted as well as the pawl 23 due to the action of the spring 24, the pawl as it elevates to the next overlying tooth 11 will snap into the tooth for holding the slide 12 and the object 5 at this new elevation, while the fulcrum pawl 25 is elevated to the next overlying tooth by moving the handle 21 in the opposite direction. This operation is repeated as long as lifting action is necessary.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as clamed hereinafter.

Having described the invention, what is claimed as new is:

1. A jack of the character described comprising a base structure, a bar rising from the base structure and provided with pocketed teeth along the rear edge portion thereof, a vertical slide extending along the front edge of said bar, means on the slide for engaging work, a swingable lever having a handle and forks extending forwardly therefrom, a U-shaped front pawl straddling the bar and slide with front ends of its arms disposed between the slide and front ends of the forks, a pin passing through the slide and overlapped portions of the pawl and forks and pivotally mounting the pawl and the lever, and a rear U-shaped pawl straddling the bar and pivoted to the arms of the lever.

2. A jack of the character described comprising a base structure, a bar rising from the base structure and provided with pocketed teeth along its rear edge portion, a vertical slide at the front of the bar, guide means between the slide and the bar, means on the slide for gripping work, a vertically swingable lever having forks pivoted to the bar and a rearwardly extending handle, said forks extending forwardly at opposite sides of the slide and pivotally connected to the slide, and front and rear pawls straddling the bar and cooperative with the teeth of the bar, the front

pawl being pivotally mounted at the pivotal mountings for front ends of the arms and being substantially longer than the rear pawl and operating in teeth above the rear pawl.

3. A jack of the character described comprising a base structure, a bar rising from the base structure and provided with pocketed teeth along the rear edge face thereof, a vertical slide disposed against the front edge face of said bar, guide means carried by the slide and engaged about the bar, means on the slide for engaging about and gripping work, a swingable lever having a handle extending rearwardly from the bar, said lever being pivotally carried by said bar and pivotally connected to the slide, front and rear U-shaped pawls on the lever pivoted thereto and straddling the bar for engaging teeth of the bar, the front pawl being substantially longer than the rear pawl and operating in teeth above the rear pawl, and a spring yieldably holding the front pawl in a tooth-engaging position.

FRANK KUZELA.