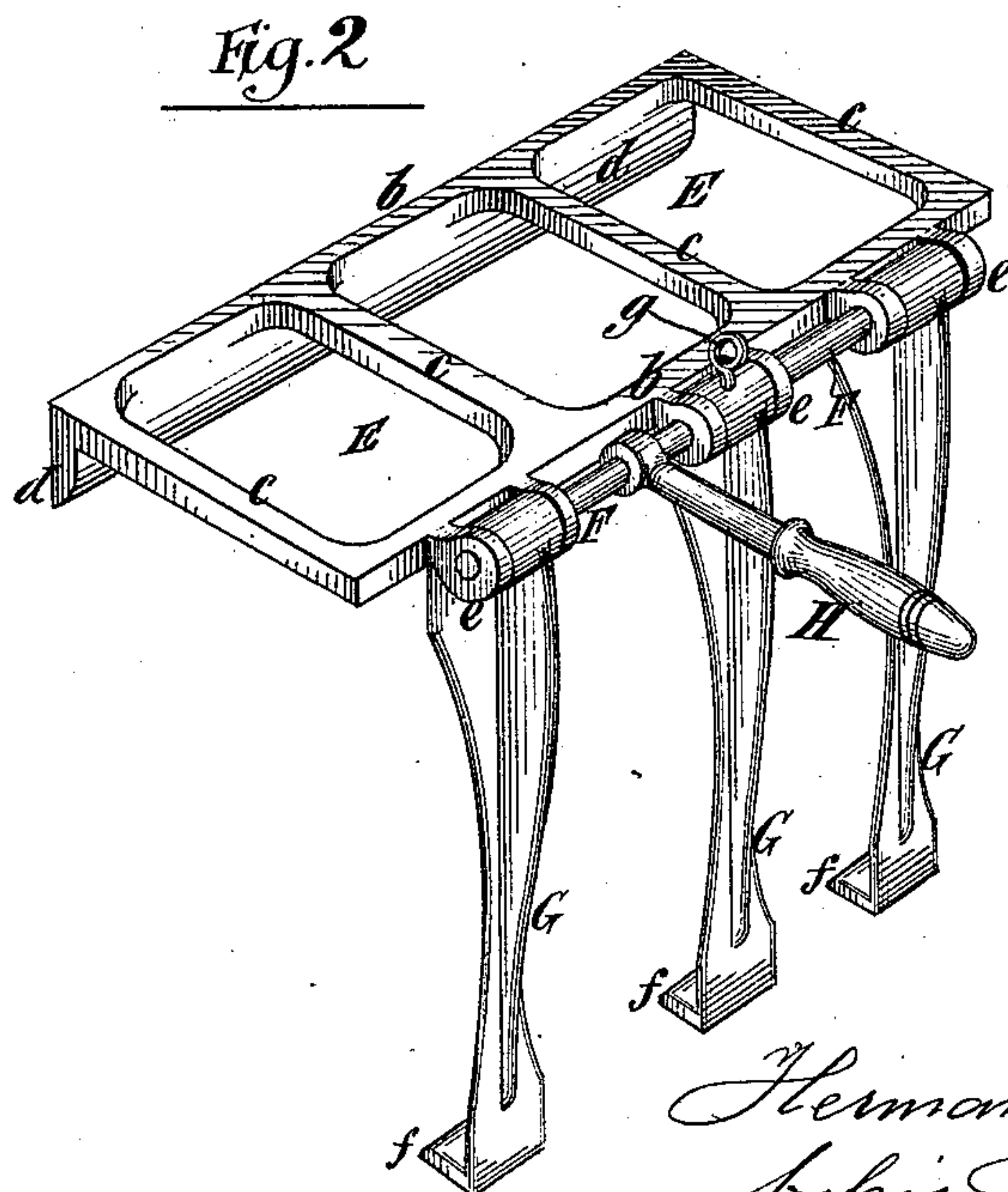
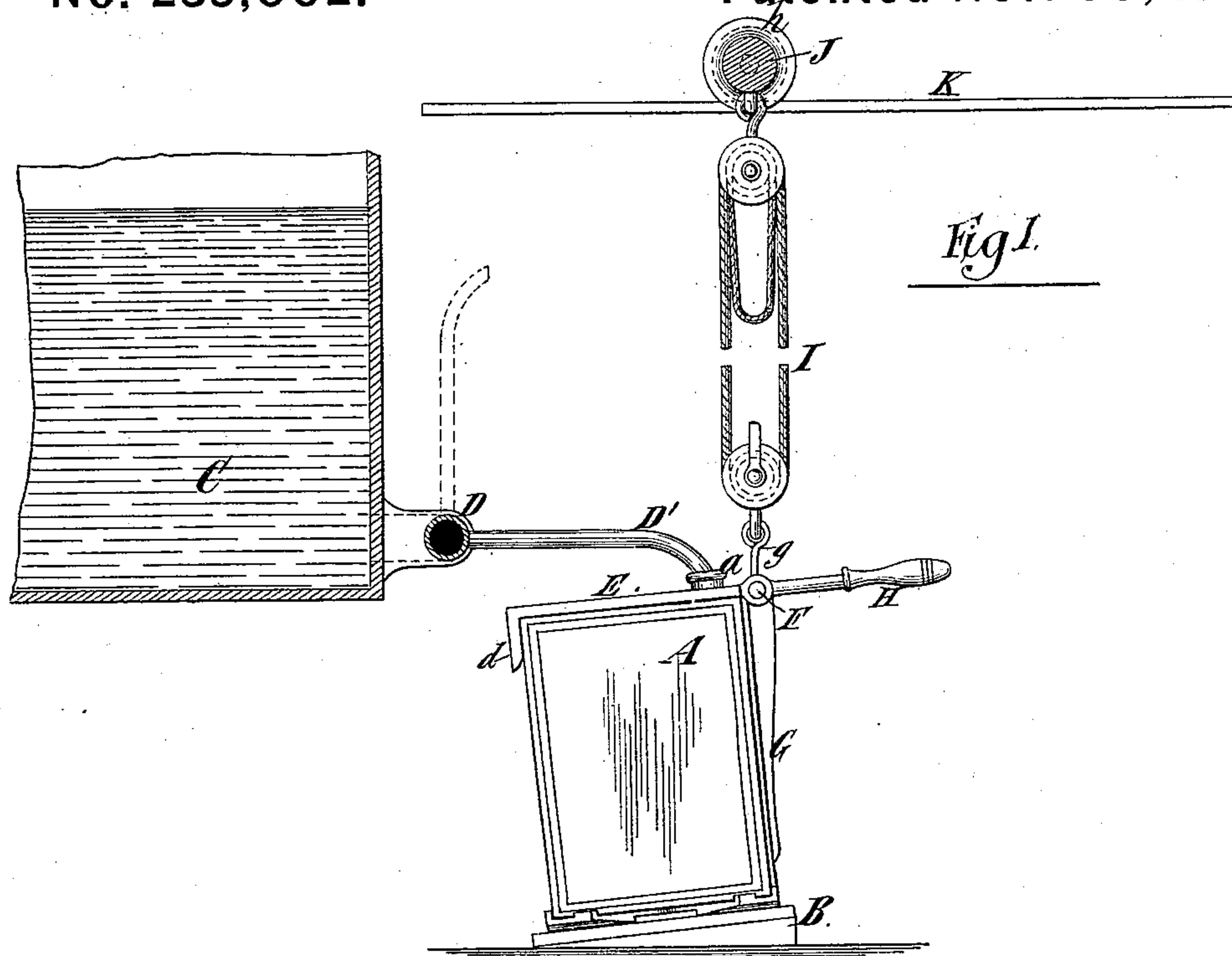


(No Model.)

H. MILLER.
Apparatus for Handling Cans.

No. 235,002.

Patented Nov. 30, 1880.



Witnesses:-

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UNITED STATES PATENT OFFICE.

HERMAN MILLER, OF NEW YORK, N. Y.

APPARATUS FOR HANDLING CANS.

SPECIFICATION forming part of Letters Patent No. 235,002, dated November 30, 1880.

Application filed October 8, 1880. (No model.)

To all whom it may concern:

Be it known that I, HERMAN MILLER, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Apparatus for Handling Cans, of which the following is a specification.

My invention relates more particularly to means for handling cans which contain refined petroleum or kerosene, and which are commonly of rectangular form, holding from one to five gallons. In filling these cans a number, frequently twelve, are placed side by side upon a base, which is slightly inclined so that the filling-mouths of the cans will be the highest, and a pipe having a number of orifices is swung down over the cans and all are filled simultaneously. After filling the cans are sealed, and are lifted, two at a time, by hand and removed from their support.

The object of my invention is to provide a convenient means whereby the whole number of cans may be together lifted and removed from their support and deposited at a little distance, thus effecting a considerable saving of time and labor.

To this end my invention consists in a device of novel form for grasping the cans, comprising a frame about equal in width to the width of the cans, and provided along one edge with a downwardly-projecting flange, a shaft fitted in bearings at the other edge of said frame, and arms which extend downwardly from said shaft and are provided at their lower ends with inwardly-projecting lips or flanges. When this device is applied to a row of cans the frame extends across the tops, and its flange projects slightly downward upon the sides of the cans, while the arms extend downward upon the opposite sides of the cans with the lips or flanges thereof projecting under the bottoms of the cans. If a lifting apparatus—such as a block and fall—be now attached to the device near said shaft the whole number of cans may be lifted and sustained and together carried to a little distance. The block and fall may be suspended from an overhead-traveling carriage, and all the arms may be fixed to said shaft, so that by slightly turning the latter the arms may be all simultaneously moved inward, so that their

lips or flanges will lap under the edges of the cans at the bottom.

In the accompanying drawings, Figure 1 represents an end view of a row of cans with my handling device suspended by a block and fall and applied thereto, and also an end view of a filling-tank and appurtenances; and Fig. 2 represents a perspective view of the holding device upon a larger scale.

Similar letters of reference designate corresponding parts.

A designates the tin cans, which are shown as of rectangular form, and of which a number—twelve, for instance—are arranged upon a base or support, B, which is slightly inclined or slanting, so that the filling-mouths *a* of the cans will be highest. This base or support may be an inclined board or plank, or it may consist of a series of skeleton metal frames or crosses, one for each can, and each having upturned lips or ears, which receive the can between them and properly center all the cans.

C designates a tank, from which the oil to fill the cans is drawn, and which communicates with a pipe, D, extending along the front thereof. The connection between the tank and pipe is such that the latter may be partly turned, and said pipe is furnished with a series of filling-tubes, D', equal in number to the cans, and which by the partial turning of the pipe D are brought down over or into the filling-mouths *a* of the cans, the said filling-tubes being the same distance apart as the filling-mouths *a* of the several cans. All these features are old, and form no part of my present invention. After the cans are filled the pipe D is turned to raise the filling-tubes D' all out of the way, and the cans are sealed by soldering. Ordinarily the cans are now lifted by hand, two at a time, and carried to a little distance.

The construction of my improved device by which the cans may be all lifted and moved together is best shown in Fig. 2, while its manner of application to the cans is best shown in Fig. 1. The device as here shown is for lifting three cans only.

E designates a frame, which, for sake of lightness, is made of skeleton form, and is composed of two longitudinal bars, *b*, and several cross-bars, *c*, the frame being slightly larger

in width than the width of the cans, and in length about equal to the length of the row of cans. At one side this frame is provided with a downwardly-projecting flange, *d*, and at the other side with lugs *e*, in which are bearings for a longitudinal shaft, *F*. For the sake of lightness, cheapness, and strength the frame may be formed of a single piece by casting.

Upon the shaft *F* are pivoted a number of downwardly-extending arms, *G*, somewhat greater in length than the depth or height of the cans, and provided at their lower ends with inwardly-projecting lips or flanges *f*. The arms *G* are preferably all fixed to the shaft *F*, so that by slightly turning the latter all of said arms are moved simultaneously inward or outward, and *H* designates a handle by which said shaft may be turned. If desirable the lower ends of the arms *G* might be connected by a bar to increase strength.

The construction of the device being clearly understood, the mode of applying it will now be described.

After the cans are sealed, as aforesaid, the frame *E* is placed upon the tops of the cans with its flange *d* projecting down the sides of the cans. By turning the shaft *F* the arms *G* are all swung inward, so that the lips or flanges *f* project under the bottoms of the cans. If a lifting power be now applied to a hook, *g*, or other suspension device attached near the shaft *F*, or, as here shown, to the shaft, the projecting flange *d* and the lips or flanges *f* will grasp the cans and cause them to be lifted together. The cans thus suspended or held are carried to a little distance and deposited, and by turning the shaft *F* slightly the arms *G* may be swung outward to disengage the lips or flanges *f* from the bottoms of the cans, whereupon the device may be easily removed.

As the weight of twelve large cans is very considerable, I may employ a block and fall, *I*, for lifting them; and to provide for conveniently moving them away from the place

of filling I may suspend the block and fall from a carriage, *J*, provided with wheels *h*, which run upon tracks or ways *K* in a manner common in overhead travelers.

By my invention I effect a saving of time in the handling of cans, and as oil is packed for market in these cans in enormous quantities, this saving is of material advantage to the oil refiner and packer.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a frame having along one edge a downwardly-projecting flange, a shaft mounted in bearings at the other edge thereof, and arms extending downwardly from said shaft, and each constructed with an inwardly-projecting lip or flange, substantially as and for the purpose specified.

2. The combination of a frame having along one edge a downwardly-projecting flange, a shaft mounted in bearings at the other edge thereof, and a series of arms extending downwardly from said shaft, each having an inwardly-projecting lip or flange, and all fixed to said shaft so as to be moved in unison by the turning of said shaft, substantially as and for the purpose specified.

3. A frame, *E*, composed of bars *b* and *c*, and having a flange, *d*, at one edge, and bearings *e* at the other edge, a shaft, *F*, arms *G*, fixed upon said shaft, and having lips or flanges *f*, and a handle, *H*, all substantially as and for the purpose specified.

4. The combination, with a holding device, of the kind herein described, of a block and fall from which said device is suspended and an overhead-traveling carriage by which said block and fall is supported, substantially as and for the purpose specified.

HERMAN MILLER.

Witnesses:

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