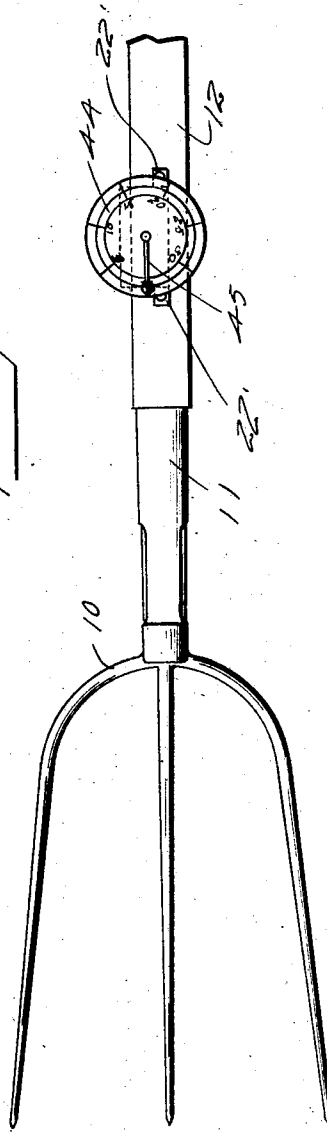


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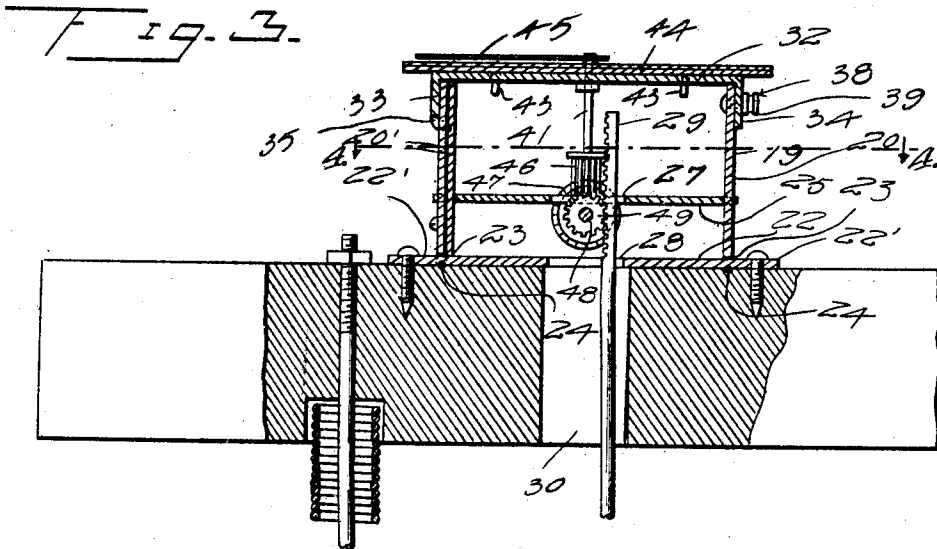
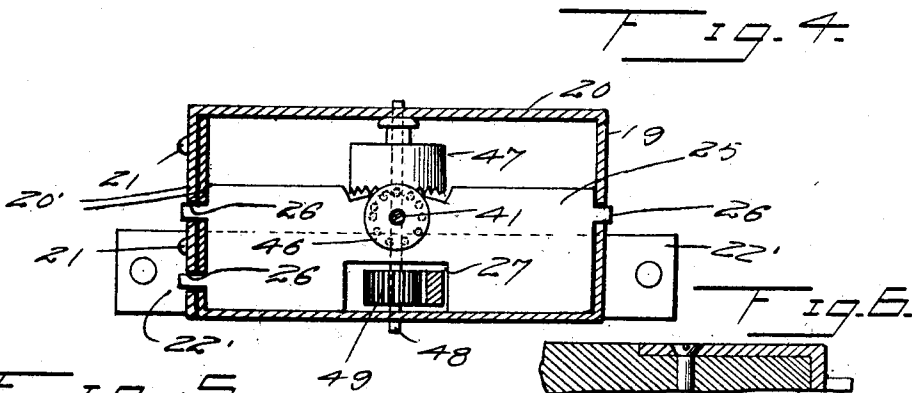
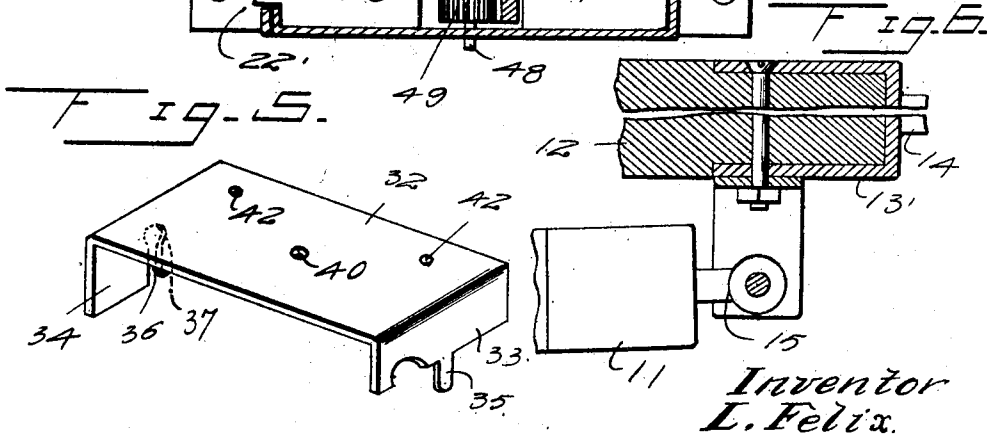
Inventor
L. Felix

By *R. Randolph J. May*

1,380,199.

Patented May 31, 1921.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

LOUIS FELIX, OF WARBA, MINNESOTA.

WEIGHING-FORK.

1,380,199.

Specification of Letters Patent.

Patented May 31, 1921.

Application filed November 21, 1919. Serial No. 339,656.

To all whom it may concern:

Be it known that I, LOUIS FELIX, a citizen of the United States, residing at Warba, in the county of Itasca and State of Minnesota, have invented certain new and useful Improvements in Weighing-Forks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improved weighing forks and the principal object of the invention is to provide a device which may be associated with the handle of the fork and which will serve to indicate the weight of material taken up by the fork. It is of course understood that the fork head could be dispensed with and a shovel, scoop or any similar head substituted for the fork head.

Another object of the invention is to so construct this attachment that it may be associated with any conventional construction of fork handle thus making it unnecessary to provide a special construction of fork handle.

Another object of the invention is to provide an improved construction of weighing or indicating device having a set of gears actuating from a ratchet bar or stem connected with the fork.

Another object of the invention is to construct the device that the actuating ratchet will not move out of engagement with the cooperating gear when the fork is in use.

Another object of the invention is to provide a device which is simple in construction and which will be very efficient in operation.

This invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a view showing the improved fork in side elevation.

Fig. 2 is a top plan view of a portion of the fork and attachment.

Fig. 3 is a longitudinal vertical sectional view through the gear housing and supporting bar.

Fig. 4 is a longitudinal sectional view through the gear housing taken on the line 4-4 of Fig. 3.

Fig. 5 is a perspective view of the cover plate for the gear housing.

Fig. 6 is a vertical longitudinal sectional

view through the hinged mounting on the fork handle.

This fork is provided with a fork head 10 which is carried by handles 11 extending beneath the bar 12 of the attachment. The bar carries a hand grip 13, the sleeve 13' of which fits upon the bar 12 and has a clevis 14 connected therewith and serving as a bearing for the socket 15 carried by the handle 11. It will thus be seen that the fork will be pivotally connected with the bar 12 and may have movement toward and away from the bar. A spring 16 is positioned between the fork handle and the free handle of the bar 12 and is connected with the same by the bolts 17 and 18 which extend through the bar and handle respectively. This spring serves to yieldably hold the handle against movement away from the bar.

The scale mechanism or weight indicating device is carried by the free end portion of the bar 12 and is constructed as shown clearly in Figs. 3 and 4. This indicating device is provided with a housing 19 which is provided with a removably mounted wall 20 having interturned end portions 20' secured by the medium of bolts or any other suitable fastener 21. A strip 22 extends through the lower portion of the housing and extends through the end walls of the housing, securing pins 24 being provided and passing through the strip 22 to secure the strip in the notches. This strip 22 extends beyond the housing to provide ears 22' having openings formed therein through which screws or other fasteners may be passed to connect the housing with the bar 12. A supporting plate 25 is positioned in the housing and is provided with pins 26 which extend through openings formed in the walls of the housing and hold the plate in position. This plate is provided with an opening or cut out 27 which is positioned above an opening 28 formed in the strip 22 thus permitting the rack bar 29 to extend into the housing through the plate or strip 22 and 25. This rack bar extends through an opening 30 formed in the bar 12 and is provided at its lower end with a supporting plate or foot 31 through which a fastener is passed to connect this rack bar with the handle 11.

The cover 32 which fits upon the upper end of the housing is provided with depend-

ing end flanges 33 and 34, the flange 33 being provided with a curved pin 35 which extends through an opening formed in one end wall of the housing and the flange 34 being provided with a slot 36 having an enlarged inner end portion 37 for receiving the securing pin or ratchet pin 38 which is rotatably mounted in the second end wall of the housing. This pin will be turned so that the reduced portion between the head 39 and the wall of the housing passes through the slot 36 into the enlarged inner end portion and is then turned at right angle to its former position so that the pin may not pass out of the slot. Therefore the cover will be securely but releasably held in place. This cover is provided with an opening 40 through which the shaft 41 extends and is provided with openings 42 which are positioned upon opposite sides of the opening 40 and receive the pins 43 carried by the dials 44. This shaft extends through the cover and dial and has its upper end portion squared and carries a pointer 45 which coöperates with the dial to indicate the weight of the material carried by the fork. The shaft 41 has its lower end portion rotatably mounted in the plate 25 and carries a gear 46 which meshes with a gear 47 carried by the shaft 48. This shaft 48 extends transversely through the housing beneath the plate 25 and in addition to the gear 47 carries a gear 49 which is engaged by the teeth of the ratchet bar 29. When this device is in use the hand grip 13 will be grasped in one hand and the bar 12 will be grasped with the second at a point adjacent the weighing device. The material to be handled will be picked up by the fork and the weight of this material will cause the handle to swing upon its pivot and move away from the bar 12. This will cause the ratchet bar 29 to rotate the shaft 48 through the medium of the gear 49 and rotary movement will be transferred to the shaft 41 through the medium of the gears 47 and 46. The shaft 41 will rotate until the handle has moved downwardly against the tension of the spring as far as the weight of the material will carry it and the pointer will indicate upon the dial the

weight of the material picked up. When the material is thrown from the fork the spring will return the handle to the normal position and the pointer will be returned to the zero mark upon the dial. By proper adjustment of the spring the pointer may be retained at the zero when the fork is emptied.

What I claim is:

1. In a weighing attachment of the character described a housing having side and end walls, a cover for the housing, a dial carried by the cover, a supporting plate extending through the housing, a shaft rotatably supported by the plate and extending through the cover and dial, a pointer carried by the upper end portion of the shaft for coöperating with the dial, a driving shaft rotatably mounted in the housing and having gear connection with the first mentioned shaft, a handle, a rack connected with said handle and extended into said housing, and a gear carried by the driving shaft and meshing with the rack.

2. A weighing attachment of the character described comprising a housing open at its upper end having one wall provided with an opening adjacent the upper end, a rotatably mounted latching pin positioned in the opposite wall and having its outer end portion cut away from opposite sides, a cover fitting upon the upper open end of the housing and having depending end flanges, one of the flanges being provided with a keyhole opening for receiving the latching pin, a pin extending from the second flange for extending through the opening formed in the wall of the housing, a dial carried by the cover, a shaft rotatably mounted in the housing and extending through the cover and dial, a pointer carried by the outer end portion of the shaft, actuating means for imparting rotary movement to the shaft.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS FELIX.

Witnesses:

A. ORBBEKE,
ERIK E. DAHL.