

No. 697,579.

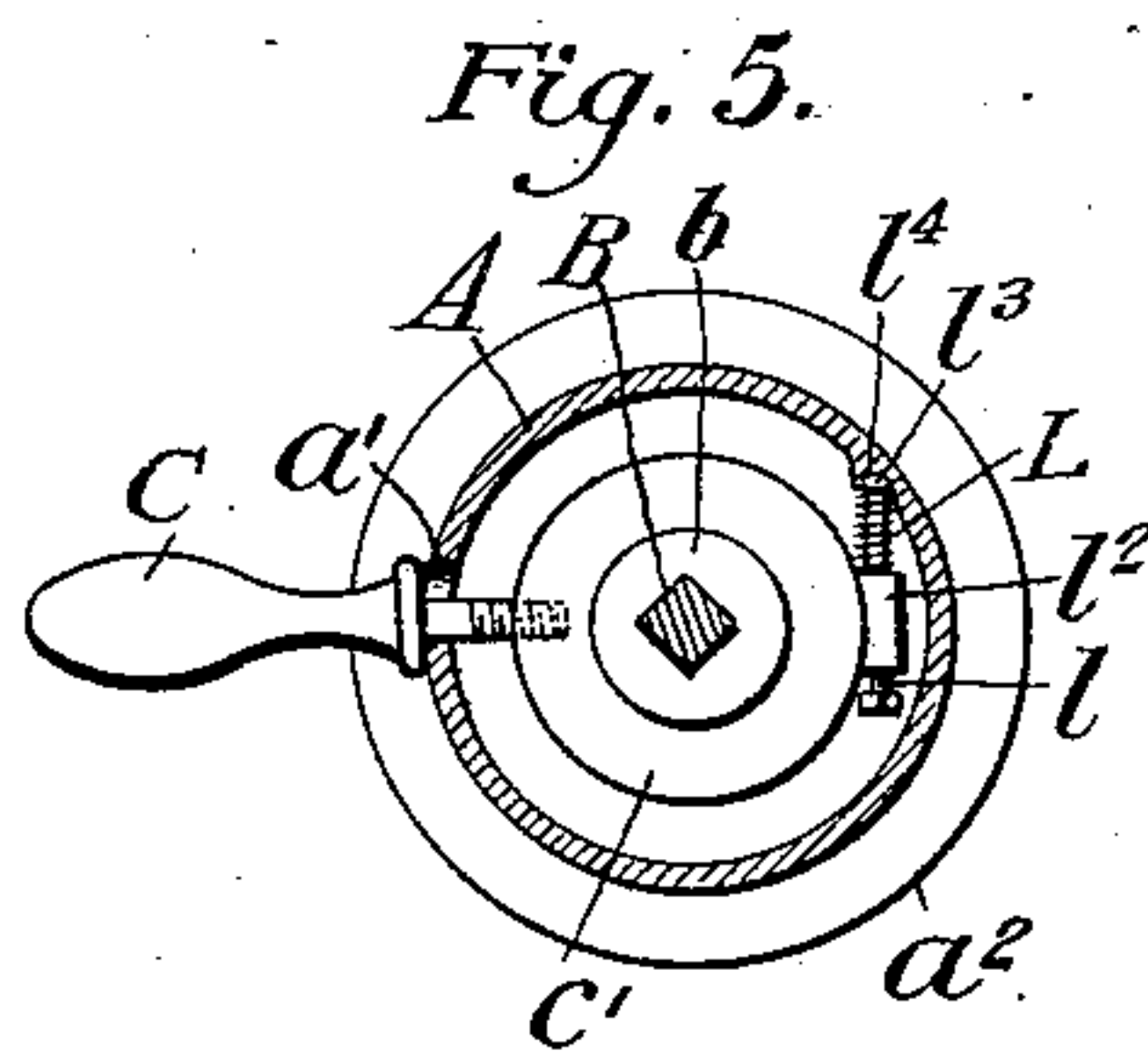
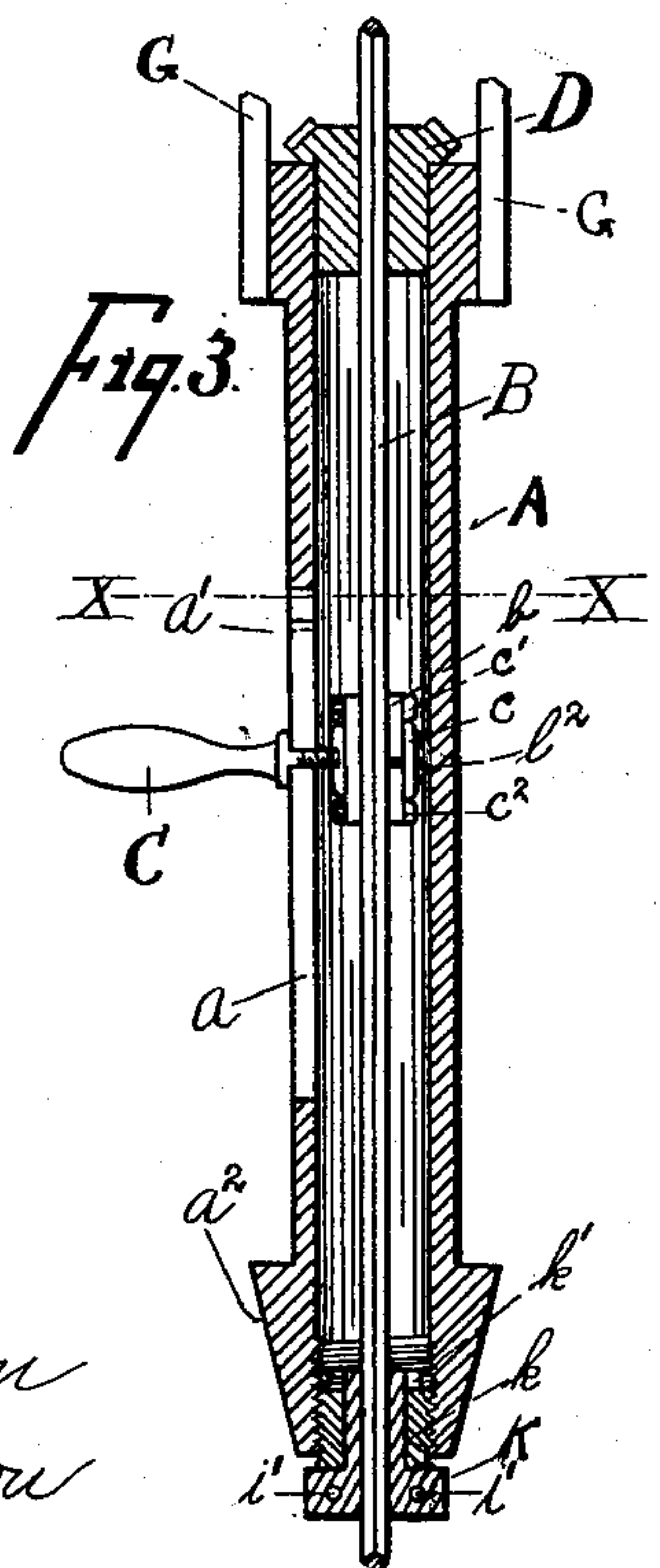
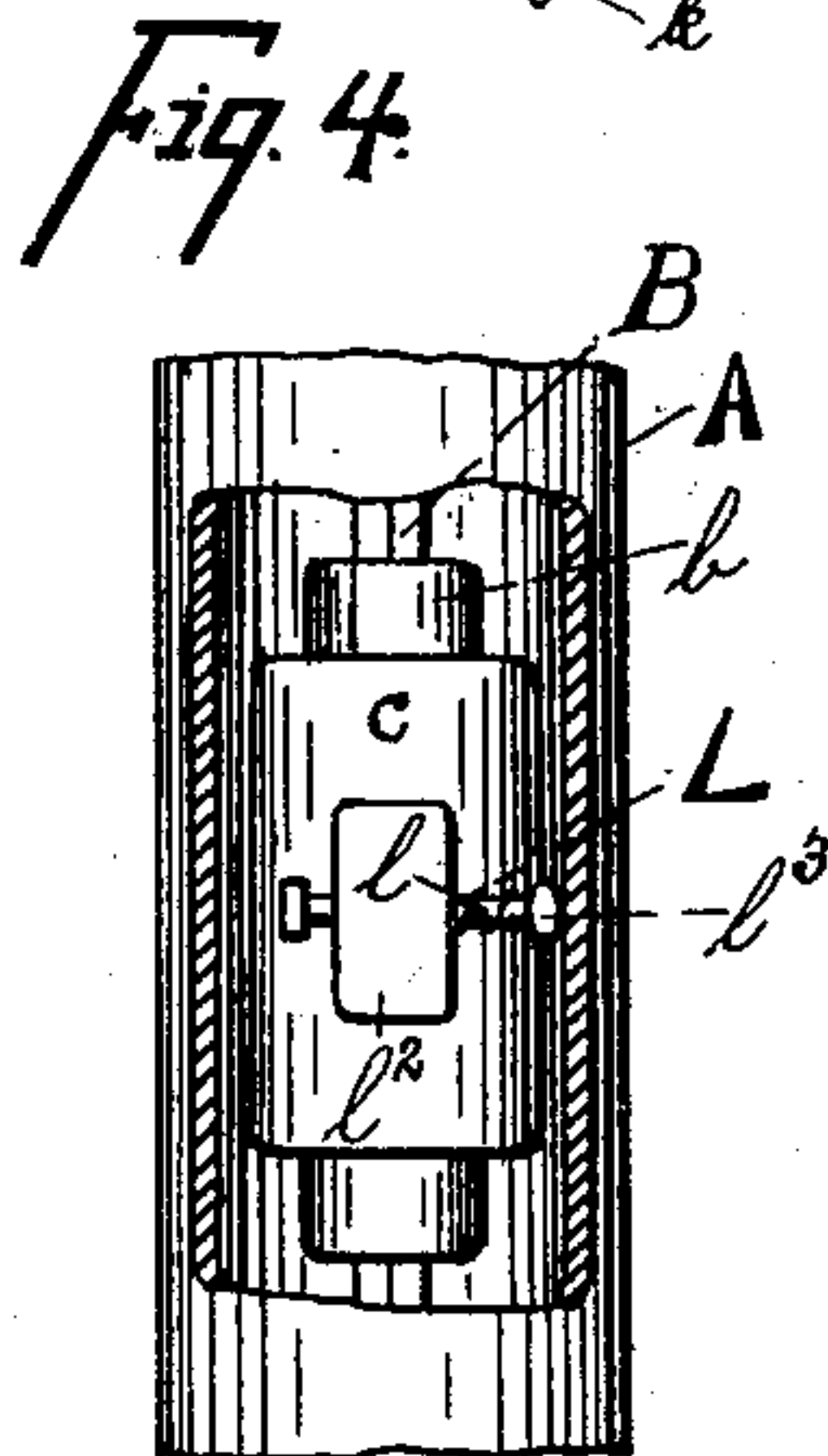
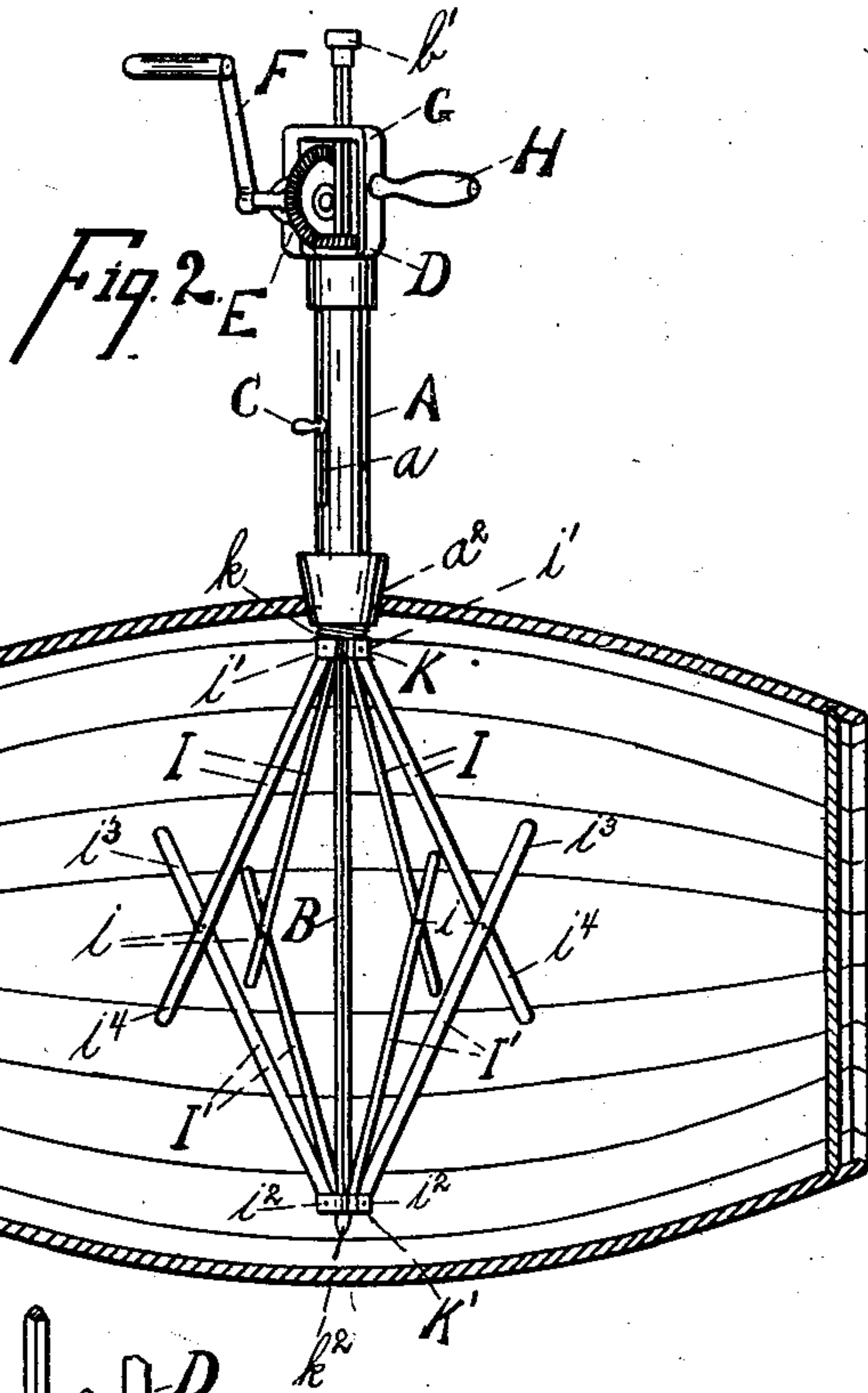
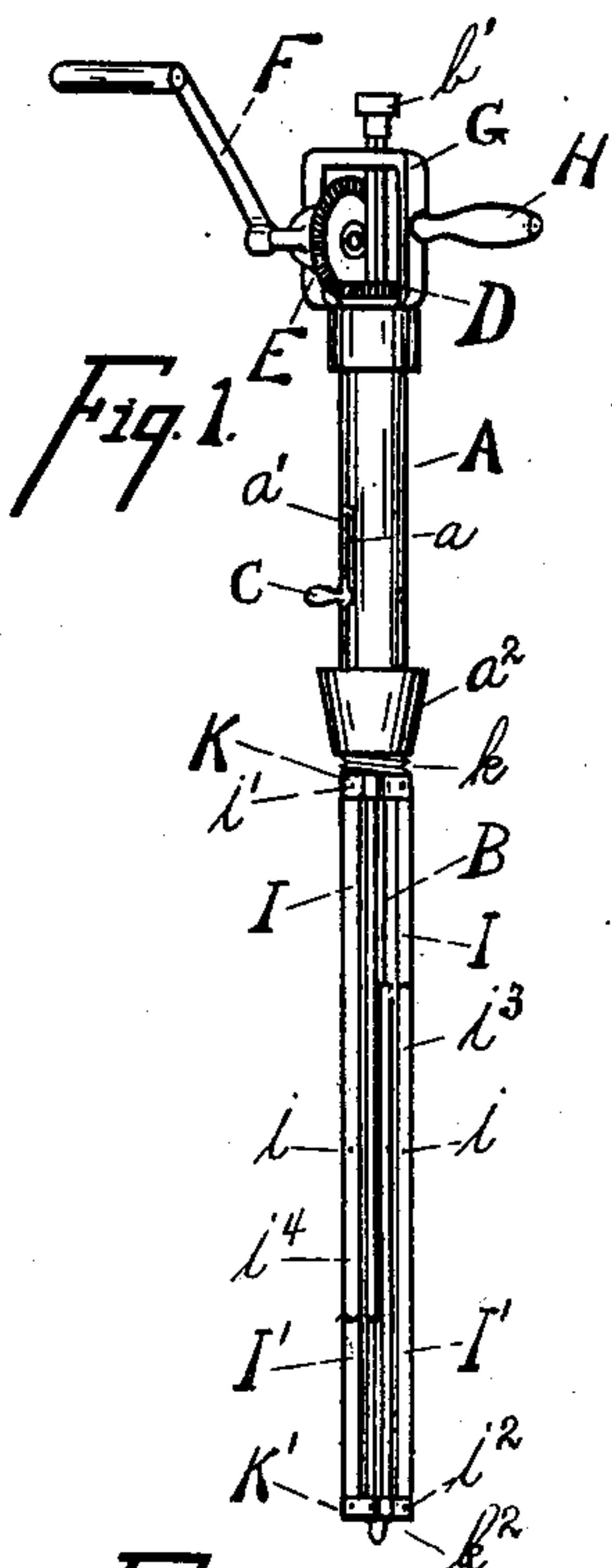
Patented Apr. 15, 1902.

H. C. WEHMEIER & W. J. DAUBENBIS.

DEVICE FOR MIXING LIQUIDS, PARTIAL LIQUIDS, OR THE LIKE.

(Application filed Dec. 2, 1901.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

HERMAN C. WEHMEIER AND WILLIAM J. DAUBENBIS, OF CINCINNATI, OHIO.

DEVICE FOR MIXING LIQUIDS, PARTIAL LIQUIDS, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 697,579, dated April 15, 1902.

Application filed December 2, 1901. Serial No. 84,395. (No model.)

*To all whom it may concern:*

Be it known that we, HERMAN C. WEHMEIER and WILLIAM J. DAUBENBIS, citizens of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have jointly invented certain new and useful Improvements in Devices for Mixing Liquids or Partial Liquids or the Like, of which the following is a specification.

It is the object of our invention to provide a device for mixing or blending liquors, liquids, partial liquids, or the like while contained in their barrel or other receptacle of economical, simple, strong, and durable construction and easy and effective manipulation and adapted to be inserted in the bung-hole or other aperture of the barrel or receptacle for the mixing operation; and the invention consists in the parts and in the construction, arrangement, and combinations of parts hereinafter more fully described and claimed.

In the drawings, Figure 1 is a perspective view of our improved device in closed position. Fig. 2 is a similar view of the same in operative position inserted in the bung-hole of a barrel, the barrel being shown in central longitudinal section. Fig. 3 is an enlarged detail, in central longitudinal section, illustrating the shifting mechanism for throwing the blades into operative position. Fig. 4 is a side view of a detail, showing the automatic locking device for the shifting mechanism. Fig. 5 is a horizontal section taken on the line  $xx$  of Fig. 3, showing the automatic locking device for the shifting mechanism.

A represents the shank, in which a squared or splined shaft B is adapted to be moved longitudinally by means of having a handle C secured to a collar  $c$  on a sleeve  $b$  firmly secured to the shaft B, with collars  $c'$  and  $c^2$  at either side of the collar  $c$  for retaining the latter on the sleeve  $b$  while permitting the sleeve to rotate within the collar  $c$ . The handle C takes through and is longitudinally movable in a slot  $a$ , having a catch or seat  $a'$  in its upper end for holding the shaft B in elevated position and the blades in expanded relation. The shaft B is rotated through a bevel-gear D, through which the shaft B may slide longitudinally, but being splined thereto or of angled cross-section it is rotated by the gear

D when the latter is rotated. The gear D is operated by the gear E, to the shaft of which a crank F is secured. A yoke G spans the gears and has a handle H for firmly holding the device when inserted in the barrel and the crank is being turned.

The shank A has a conical or wedge-shaped part  $a^2$  at its lower end adapted to be inserted into and be seated in the bung-hole of a barrel, it being made conical to readily seat and fit bung-holes of different diameters, and serving as a bung or closure for the barrel to prevent spilling of the contents when the device is being operated.

$I I'$  are blades pivoted together, as at  $i$ . The blades are pivoted at their tops to a piece K, as at  $i'$ . The piece K is journaled in a bearing  $k$ , screwing into the lower end of the shank A, and is held in place by a collar  $k'$ . The blades  $I'$  are pivoted at their bottom, as at  $i^2$ , to a piece  $K'$ , which piece  $K'$  is firmly secured to the lower end of the shaft B. The piece  $K'$  may be provided with a foot  $k^2$ . When the piece  $K'$  or the shaft B is raised, the blades  $I I'$  are caused to spread at their middle, and when the shaft B is turned by the crank F the blades are caused to revolve, thereby agitating the contents of the barrel or receptacle and also preventing spilling of the contents through the bung-hole by reason of having the bung-hole closed by the conical part  $a^2$ . The blades  $I I'$  may be provided with wings  $i^3 i^4$  for providing additional surface for agitation, the wings also closing when the blades are closed for inserting the same into or taking the same from the barrel.

The shaft B may be raised and depressed by the handle C, or, if desired, the top of the shaft may be provided with a knob  $b'$ , by means of which it may be raised, and automatic engagement between the handle C and catch  $a'$  may be caused by having a spring L take between the inner wall of the shank A and the collar  $c$  for normally pressing the collar about its axis toward the catch  $a'$ . The spring L takes about a slidable pin  $l$ , sliding in an aperture in a lug  $l^2$  on the collar  $c$ , with a knob  $l^3$  making contact with the inner wall of the shank A, if desired, in a channel  $l^4$  and with the spring contacting with the knob and lug. Our device provides exceptionally



strong, simple, and effective means for effecting the objects intended.

We claim—

1. In a mixing device of the character described, the combination of a shank with a bung-shaped lower end, and a gear D at its upper end, a central longitudinally-slidable operating-shaft splined within and to said gear and slidable longitudinally of the shank and gear, an upper pivot-piece for blades surrounding and splined to said operating-shaft and caused to positively rotate therewith, with the operating-shaft slidable longitudinally therethrough, a bearing for and surrounding the pivot-piece located within the bung-shaped lower end, a lower pivot-piece for blades at the lower end of the shaft, a series of blades pivoted to said upper pivot-piece, a series of blades pivoted to said lower pivot-piece and pivots between the two series of blades, for forming two inter-pivoted series of blades arranged in upward extension positively driven from top and bottom, all substantially as and for the purpose specified.
2. In a mixing device of the character described, the combination of the shank A having the bung-shaped lower end  $a^2$  and the gear D, gear E and crank F at its upper end, the shaft B, the pivot-piece K, the pivot-piece K' secured to the lower end of the shaft, two series of blades I and I' pivoted together in upward extension, with pivots between the blades I and the pivot-piece K and pivots between the blades I' and the pivot-piece K', with the shaft B splined to and slidable longitudinally through the gear D and pivot-piece K and constructed and arranged for securing the pivot-pieces K and K' against rotary motion to the shaft B for imparting direct power at the top and bottom of the series of blades, the bearing  $k'$  in the bung-shaped lower end  $a^2$  for the pivot-piece K, the sleeve  $b$  secured to shaft B, the collar  $c$  taking about the sleeve and secured against longitudinal movement thereon, the handle C on the collar  $c$ , the slot  $a$  in which the handle freely slides extending through the side of the shank A, and the catch  $a'$  extending through the

side of the shank A connecting with the slot  $a$  for receiving the handle from the slot and maintaining the shaft B in elevated position and the blades I I' in spread relation, all constructed and arranged substantially as and for the purpose specified.

3. In a mixing device of the character described, the combination of the shank A having the bung-shaped lower end  $a^2$  and the gear D, gear E and crank F at its upper end, the shaft B, the pivot-piece K, the pivot-piece K' secured to the lower end of the shaft, two series of blades I and I' pivoted together in upward extension, with pivots between the blades I and the pivot-piece K and pivots between the blades I' and the pivot-piece K', with the shaft B splined to and slidable longitudinally through the gear D and pivot-piece K and constructed and arranged for securing the pivot-pieces K and K' against rotary motion to the shaft B for imparting direct power at the top and bottom of the series of blades, the bearing  $k'$  in the bung-shaped lower end  $a^2$  for the pivot-piece K, the sleeve  $b$  secured to shaft B, the collar  $c$  taking about the sleeve and secured against longitudinal movement thereon, the handle C on the collar  $c$ , the slot  $a$  in which the handle freely slides extending through the side of the shank A, and the catch  $a'$  extending through the side of the shank A connecting with the slot  $a$  for receiving the handle from the slot and maintaining the shaft B in elevated position and the blades I I' in spread relation, the pin  $l$  and knob  $l^3$  for taking against the inner wall of the shank A and the spring L for urging the collar  $c$  about its axis and the handle C into its catch  $a'$  all constructed and arranged substantially as and for the purpose specified.

In testimony whereof we have signed our names hereto in the presence of two subscribing witnesses.

HERMAN C. WEHMEIER.  
WILLIAM J. DAUBENBIS.

Witnesses:

WILLIAM F. HART,  
A. F. HERBSLEB.