

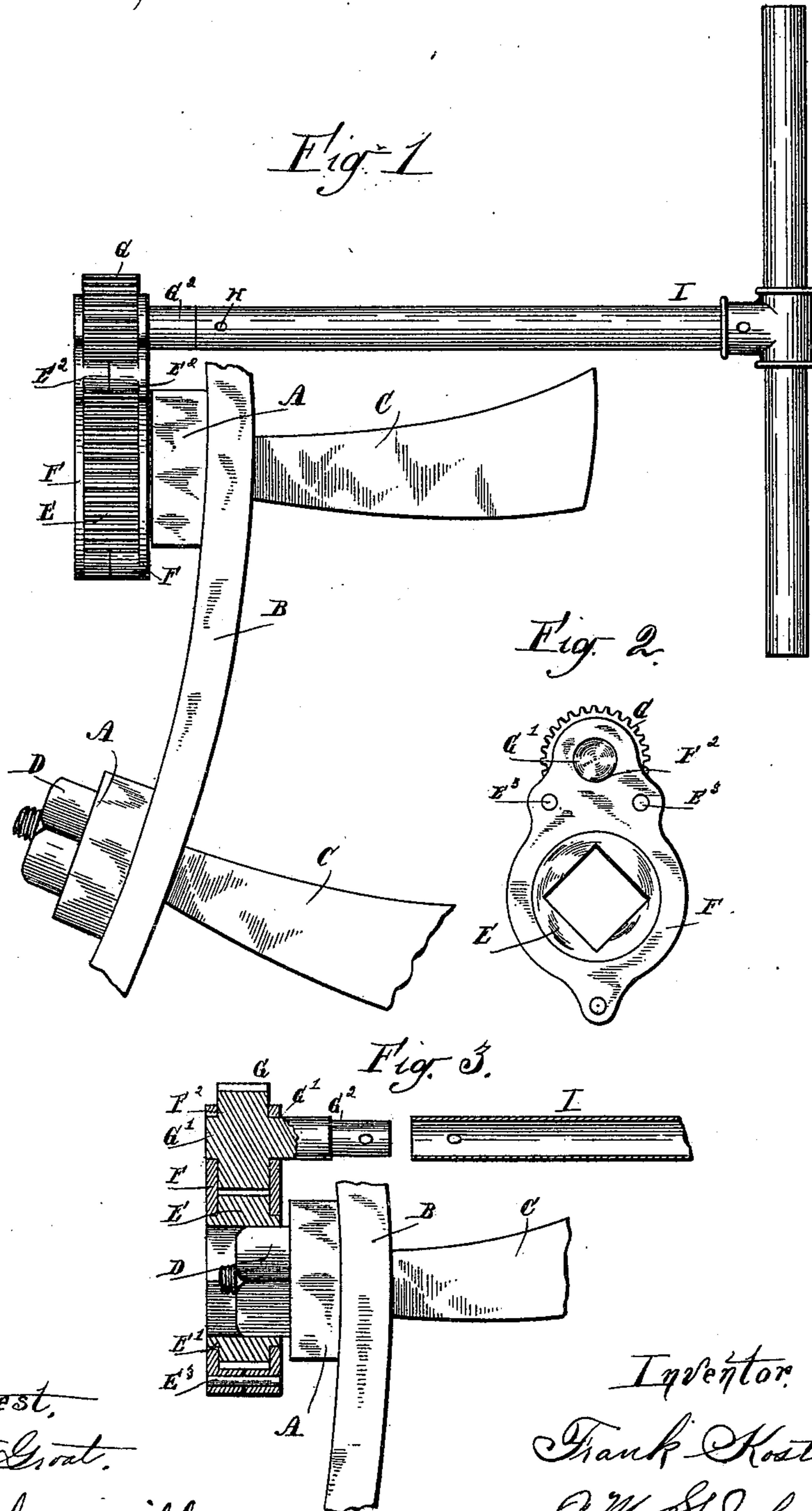
No. 641,782.

Patented Jan. 23, 1900.

F. KOSTLAN.
WRENCH.

(Application filed Feb. 24, 1899.)

(No Model.)



Attest,
J. T. Groat.
A. L. Langill

Inventor.
Frank Kostlan.
By J. M. St. John
Atty.

UNITED STATES PATENT OFFICE.

FRANK KOSTLAN, OF TRAER, IOWA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 641,782, dated January 23, 1900.

Application filed February 24, 1899. Serial No. 706,746. (No model.)

To all whom it may concern:

Be it known that I, FRANK KOSTLAN, a citizen of the United States, residing at Traer, in the county of Tama and State of Iowa, have
5 invented certain new and useful Improvements in Wrenches; 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 apper-
10 tains to make and use the same.

The object of this invention is to produce a wrench adapted to turn nuts in inconvenient places inaccessible by an ordinary wrench and with the operator at the opposite or head
15 end of the bolt.

The essential features of the invention will fully appear in the description and claim following, reference being had to the accompanying drawings, in which—

20 Figure 1 is a side view of a wrench embodying my invention as in use. Fig. 2 is a back view of the same as regards the operator. Fig. 3 is a longitudinal section of the same central and vertical to Fig. 2.

25 This wrench has been designed for use more especially in connection with grain-separator cylinders, though applicable to many other uses. In tightening the nuts on the studs of separator-teeth the monkey-wrench or other
30 wrenches in common use are found to be very inconvenient, since the nuts are inside the cylinder and the bars to which the teeth are secured are in the way. The wrench herein-
35 after to be described enables the operator to reach any nut in a separator-cylinder and while in position in the machine and tighten or loosen it easily and quickly.

Referring now to the drawings, A A designate two of the longitudinal bars of a separator-cylinder, and B a fragment of one of the end rings therefor. Through the cross-bars
40 (and at the ends through the rings as well) project the shanks of the teeth C C, screw-threaded and provided with nuts D. The
45 wrench-socket, which fits one of these nuts, is a gear E, with a square central hole and circu-

lar side bearings E', fitting corresponding holes F' in retaining-plates F. These plates extend upwardly and are provided with bearing-holes F² to take the bearings G' of a pinion G, mesh-
50 ing with the gear. The bearing-plates are held apart a suitable distance by lugs E², through which pass rivets E³, as shown. One bearing of the pinion is extended and forms a shank G², to which is secured, as by a pin
55 H, a T-shaped hand-lever I. This is preferably tubular for lightness and in practice is made of gas-pipe and a T-coupling, as shown.

It will be observed that in the operation of the wrench the operator is at the end of the
60 bolt, (tooth, stud, or whatever it may be;) but the movement of the wrench—that is to say, of the hand-lever—is the same as in the use of an ordinary wrench—to the right to tighten
65 and vice versa to loosen the nuts. This is due to the gearing of the parts, of course, a feature which also admits of the socket being placed behind an interposed bar or the like, as is necessary under circumstances such as
70 are referred to and indicated in the drawings.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The described wrench, comprising the gear E with a straight rectangular hole therein
75 adapted to fit the nut of a threshing-cylinder tooth, and provided with short cylindrical journals concentric with said hole, the pinion G meshing therewith, and having similar journals at each side, and a shank for the attach-
80 ment of a handle, the bearing-plates F F, having flat external faces and inwardly-projecting lugs E², connecting rivets or studs E³, and the T-lever I secured to the shank of the
85 pinion.

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

FRANK KOSTLAN.

Witnesses:

E. O. ELLISON,
M. E. CHAMBERLAIN.