

(No Model.)

2 Sheets—Sheet 1.

J. F. GUTHRIE, Jr.
FLANGE WRENCH.

No. 411,807.

Patented Oct. 1, 1889.

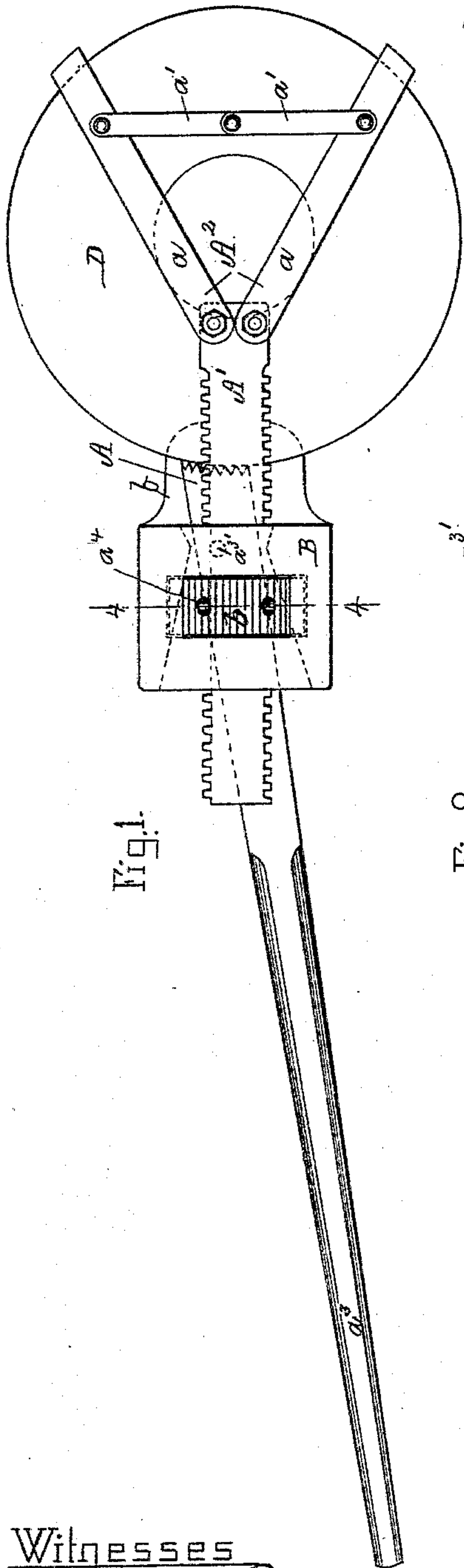


Fig. 1.

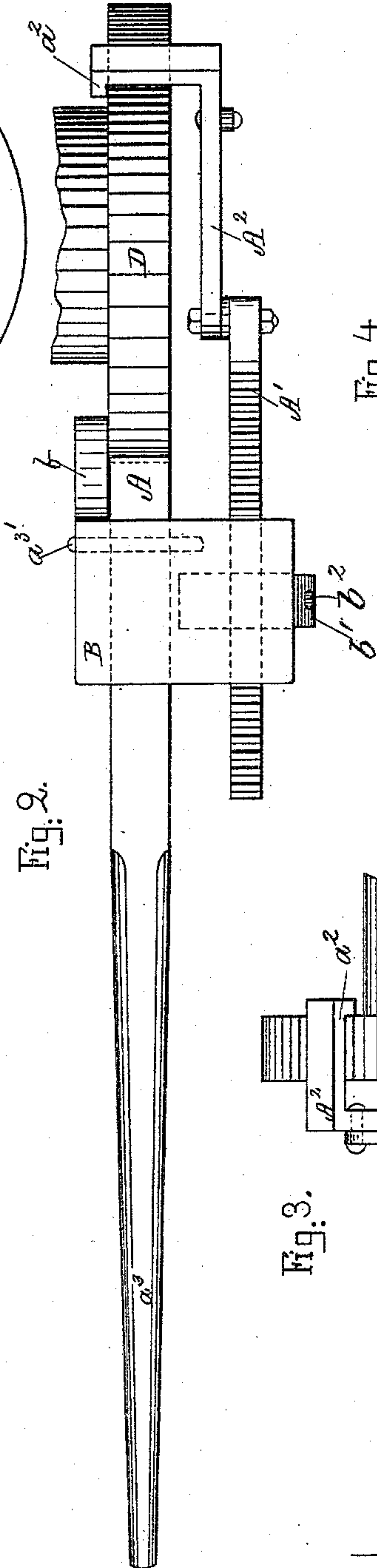


Fig. 2.

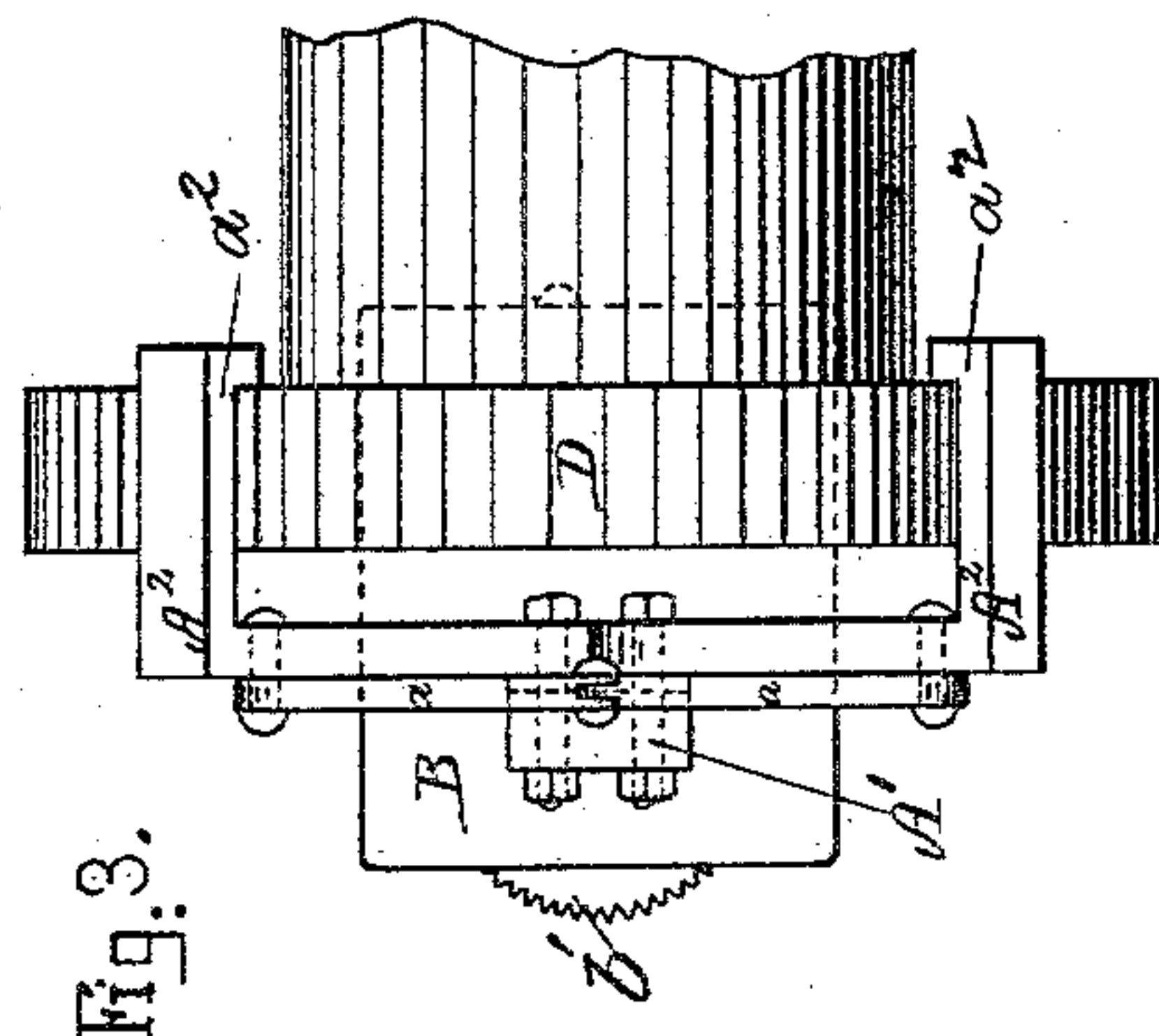


Fig. 3.

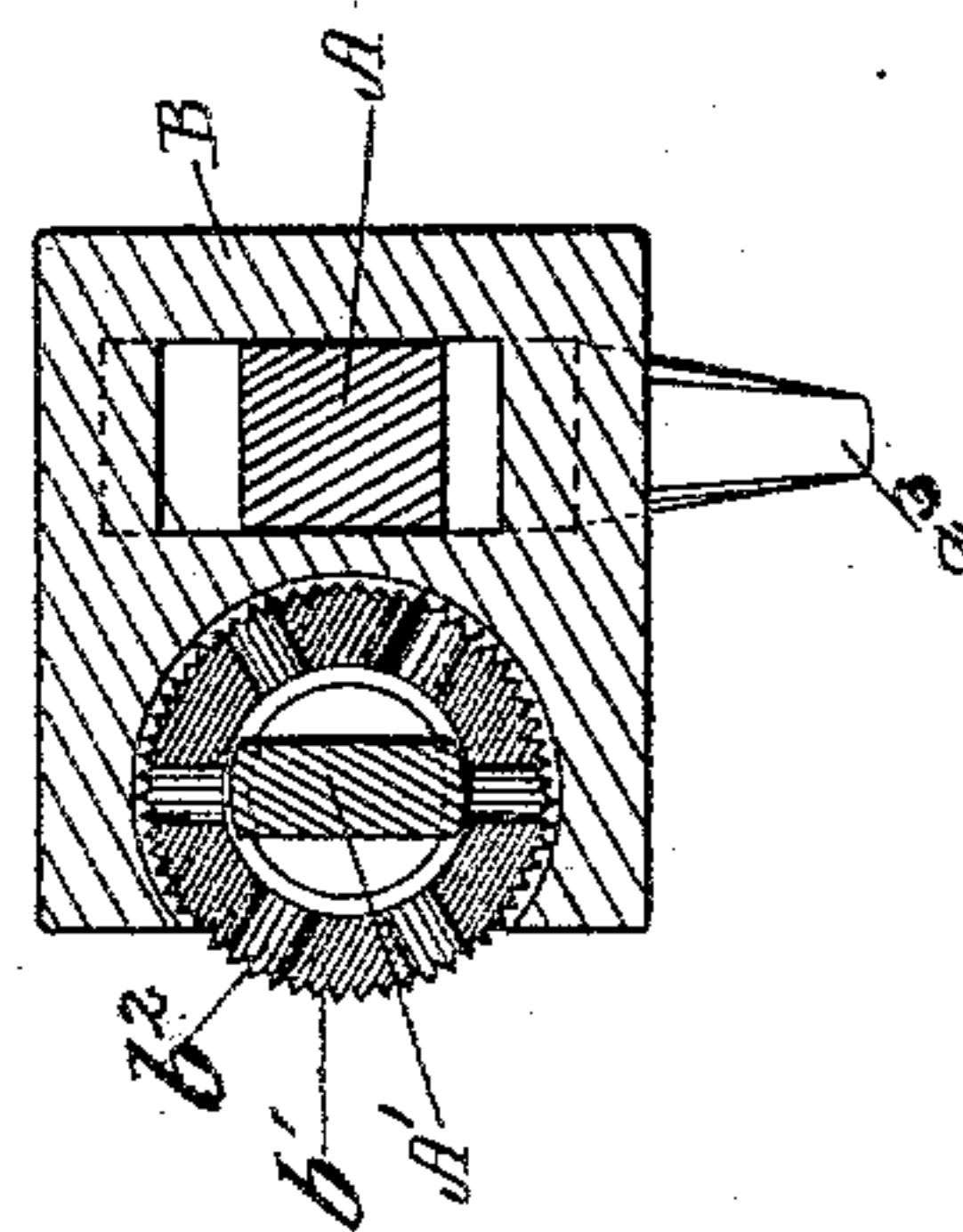


Fig. 4.

Witnesses

Edward S. Beach
John R. Snow

Inventor

James F. Guthrie Jr.
by J. B. Maynard
his Atty

(No Model.)

2 Sheets—Sheet 2.

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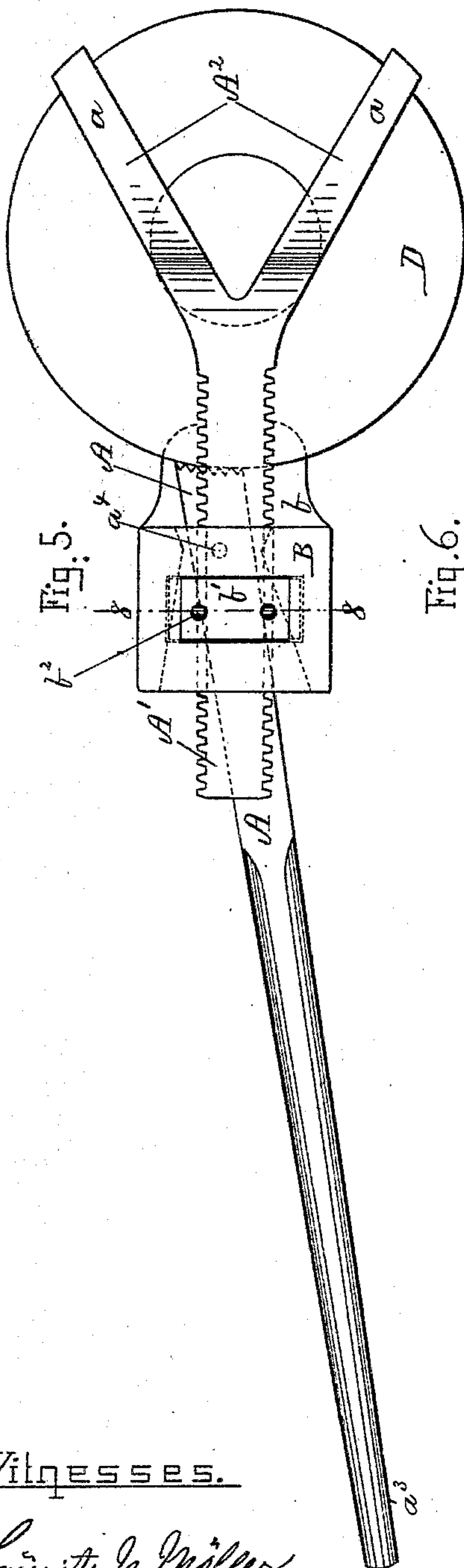


Fig. 5.

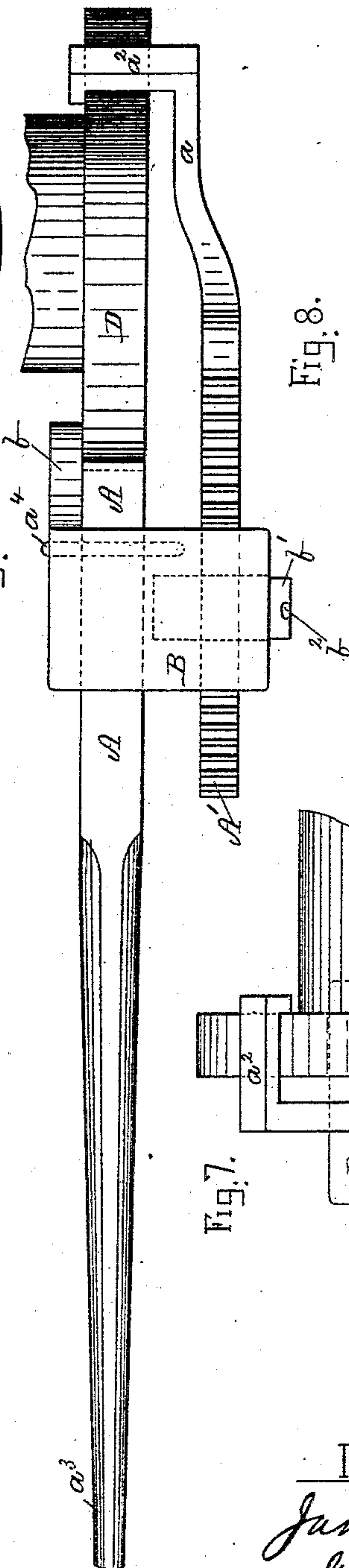


Fig. 6.

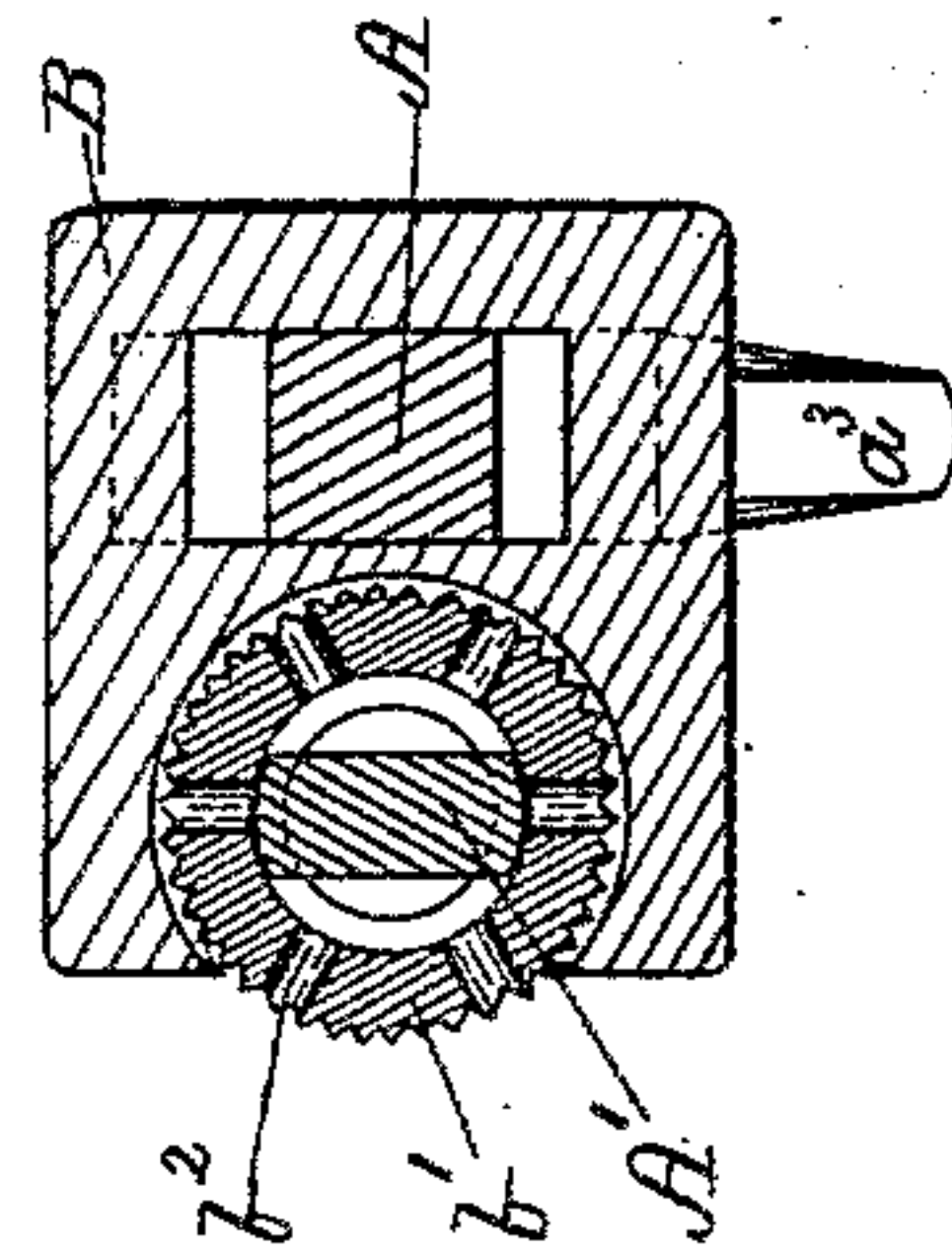


Fig. 8.

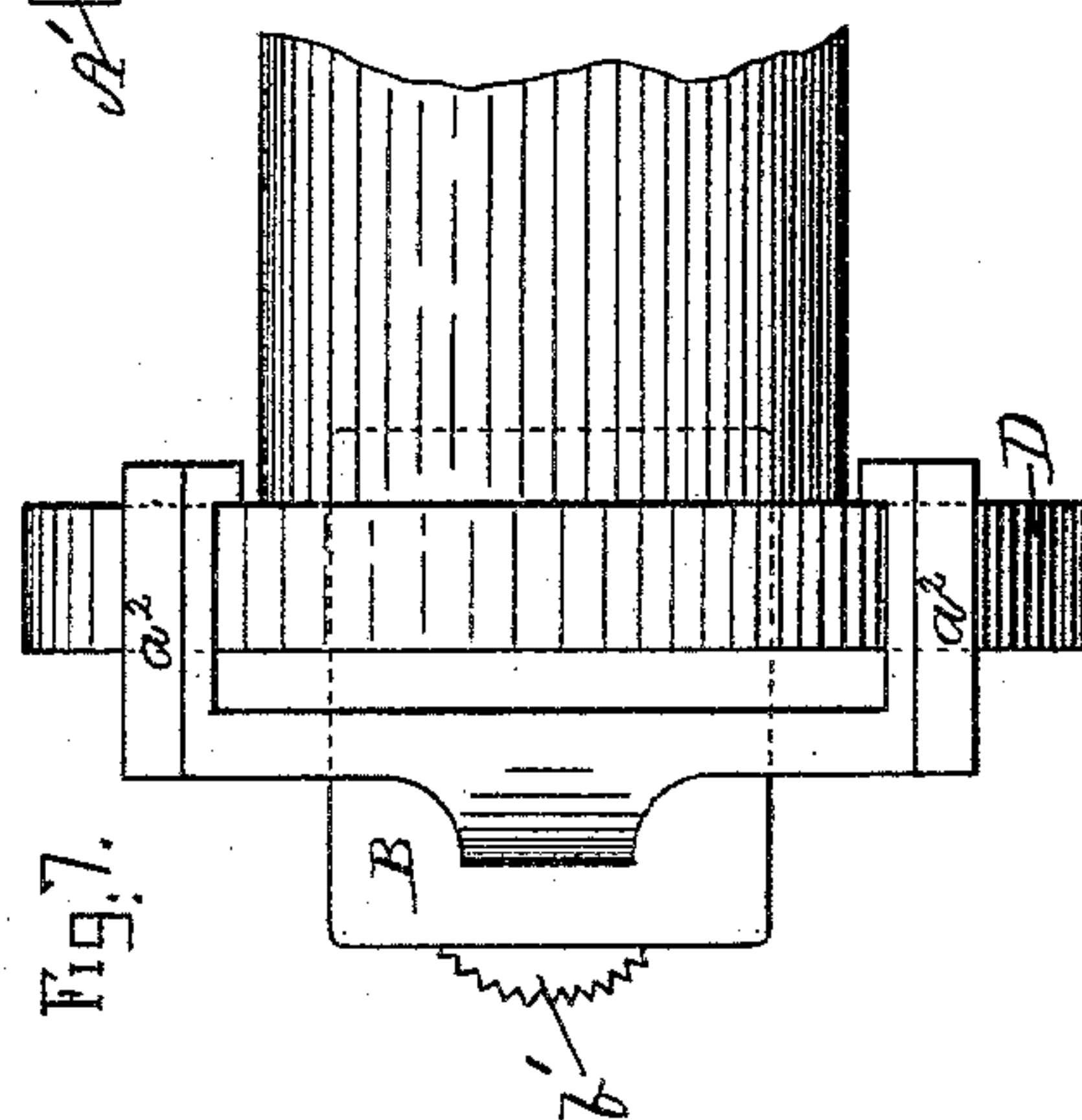


Fig. 7.

Witnesses.

Lauritz W. Möller.
John R. Snow

Inventor.

James F. Guthrie, Jr.
by his attorney,
J. E. Maynard

UNITED STATES PATENT OFFICE.

JAMES F. GUTHRIE, JR., OF SOMERVILLE, ASSIGNOR OF ONE-HALF TO
THOMAS C. ASHLEY, OF BOSTON, MASSACHUSETTS.

FLANGE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 411,807, dated October 1, 1889.

Application filed August 23, 1888. Serial No. 283,586. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. GUTHRIE, JR., of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Flange-Wrench, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation showing my wrench applied to a flanged pipe. Fig. 2 is a plan, and Fig. 3 an end view, of what is shown in Fig. 1. Fig. 4 is a sectional view on line 4 4 of Fig. 2. Fig. 5 is an elevation showing a modified form of my wrench applied to a flange-pipe. Fig. 6 is a plan, and Fig. 7 an end view, of what is shown in Fig. 5; and Fig. 8 is a sectional view on line 8 8 of Fig. 5.

My invention is a flange-wrench.

In the drawings, which show my invention embodied in the best way now known to me, rocking jaw A is mounted in carrier B, in which is mounted a threaded jaw-carrier A', provided, preferably, with a compound jaw A², which is best made up of two members *a*, as shown. Carrier B is preferably formed with a lip *b* to engage the flange when the wrench is used, and is provided with a thumb-nut *b'*, through which jaw-carrier A' passes, and by means of which it is moved, as will be plain without further description.

In the preferred form of my wrench, Figs. 1 to 4, inclusive, jaw A² is loosely pinned to carrier A', its members *a* being connected by folding links *a'*, and provided with sidewise projections *a*³ at their outer ends.

When the wrench is used, carrier A' is moved to carry jaw A² a sufficient distance from the inner end of jaw A to admit flange D, and is then moved to cause the jaws A A² to grip the flange. Jaw A, which is provided with a handle *a*², is then rocked on its fulcrum *a*⁴ and the flange D readily turned, as will be plain without further description.

In order to readily tighten and loosen jaws A A², I form nut *b* with holes *b*² in its periphery to receive a spike or the like, by means of which the nut is readily turned even when great force has been applied to the wrench and the members have become set. This is also a feature of my invention.

In Fig. 5 I show a modified form of jaw A², the jaw being in this case of one piece and integral with the carrier A'. Details of this modification are shown in Figs. 6, 7, and 8, and the operation of the modified form will be fully understood without further description, all the parts, except the jaw A², being the same as in the preferred form.

I am aware of Rose's patent, No. 383,544, dated May 29, 1888, and disclaim all that is shown in it.

What I claim is—

1. The herein-described combination of jaw A, carrier B, jaw-carrier A', and jaw A², jaw A being fulcrumed in carrier B, and jaw-carrier A' being mounted in carrier B, and jaw A² being provided with one or more sidewise projections *a*², all arranged to grip a flange between the inner end of the jaw A and the sidewise projections *a*², all substantially as and for the purpose set forth.

2. The herein-described combination of jaw A, carrier B, jaw-carrier A', jaw A², and nut *b'*, jaw A being fulcrumed in the carrier B, in which is mounted jaw-carrier A' and nut *b'*, the jaw-carrier A' passing through the nut *b'*, and the jaw A² being provided with one or more sidewise projections *a*², all arranged to grip a flange between the inner end of the jaw A and the sidewise projections *a*², all substantially as and for the purpose set forth.

JAMES F. GUTHRIE, JR.

Witnesses:

EDWARD S. BEACH,
JOHN R. SNOW.