

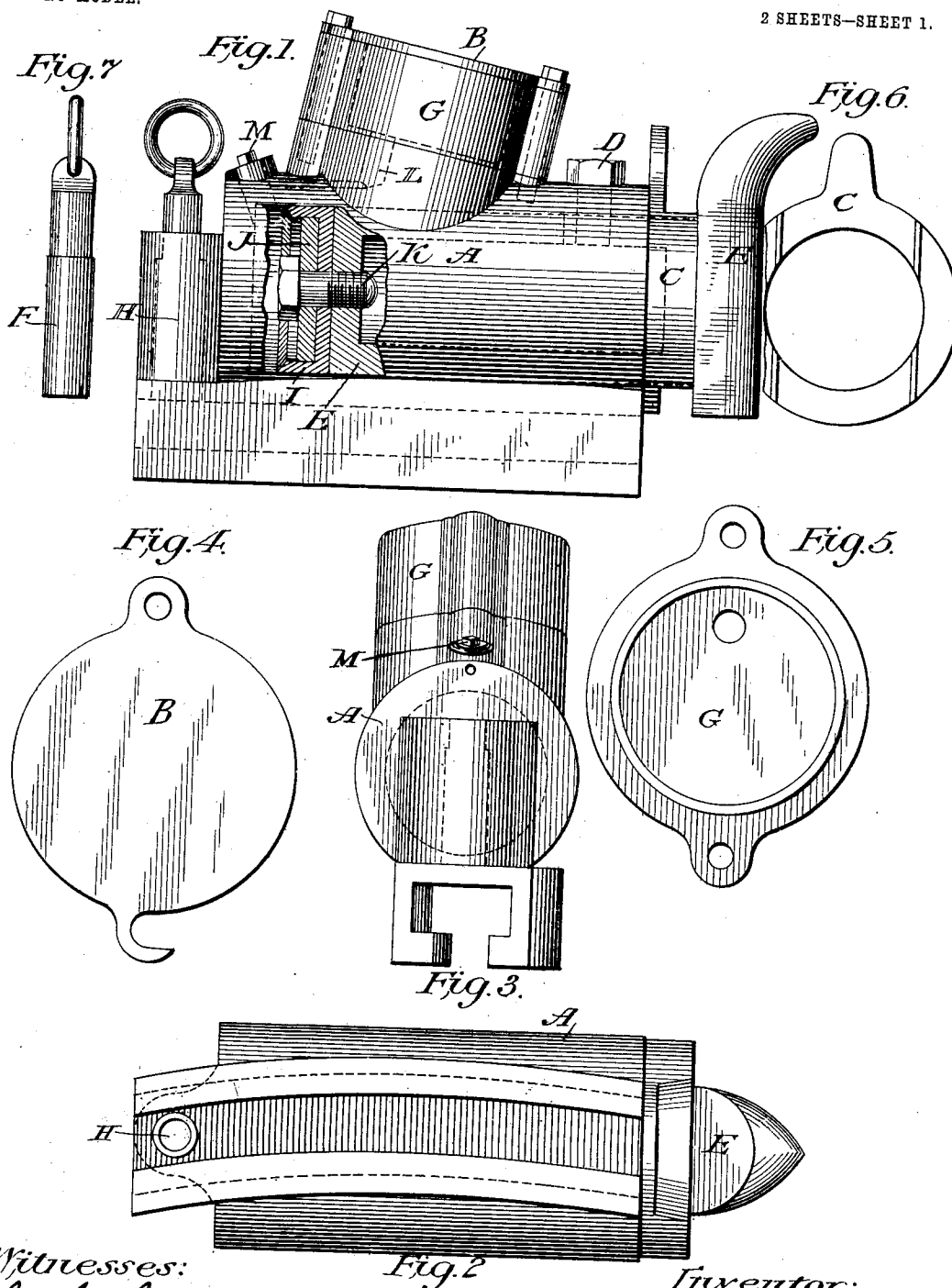
No. 741,248.

PATENTED OCT. 13, 1903.

F. W. JONES.
HYDRAULIC INDICATOR.
APPLICATION FILED MAY 27, 1901.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
J. S. Bugg
J. S. Welch

Inventor:
Fredrick W. Jones

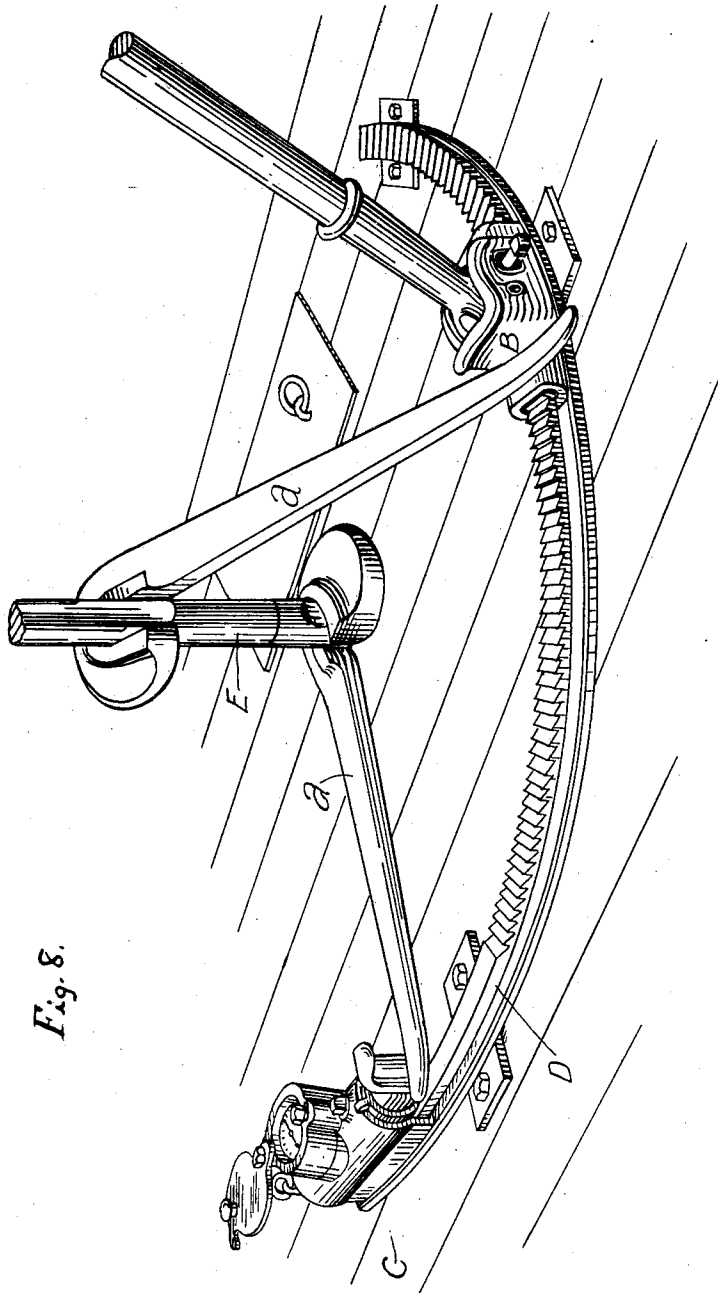
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2 SHEETS—SHEET 2.



Witnesses
B. W. Pierce
Harry A. Brook

Inventor
F. W. Jones

UNITED STATES PATENT OFFICE.

FREDERICK W. JONES, OF SANTA PAULA, CALIFORNIA.

HYDRAULIC INDICATOR.

SPECIFICATION forming part of Letters Patent No. 741,248, dated October 13, 1903.

Application filed May 27, 1901. Serial No. 62,159. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. JONES, a citizen of the United States of America, residing at Santa Paula, in the county of Ventura and State of California, have invented a new and useful Hydraulic Indicator, of which the following is a specification.

The special object of my invention is to produce an indicator that will indicate the number of pounds pressure that has been put upon the wrench-handles while screwing up the joints of oil-well tools. When they (the tools) come unscrewed, it causes a great deal of trouble and expense to fish them out. When once a joint is screwed up too tight, it is practically spoiled and has to be rethreaded. With this machine a person can tell exactly how tight the joints are, as the machine is provided with an ordinary hydraulic-pressure gage by which the operator while screwing can tell what pressure he is putting on the wrench-handle. The standard pressure is taken from a test which gives the best results and is used as a standard, and when screwed up to this standard pressure it is perfectly tight. The old method of screwing up these joints is by a man's own judgment and strength. No two men's judgment are alike in regard to how tight they should be, as some men are stronger than others. Consequently some are screwed too tight and others not tight enough, which causes them to come unscrewed in the well, which sometimes costs thousands of dollars and often the well has to be abandoned.

My indicator will work with either the Forgie or Barrett jacks, which are used for screwing up the joints, without any change whatever to either. When a person changes from a large joint to a small one, or vice versa, the chances are he never gets it set up right the first or second trial. With my machine the number of pounds pressure for each-size joint is marked on the machine, so when a joint is screwed up to the given pressure a person knows that it is right and there is no fear of it coming unscrewed.

Figure 1 is a side view of the entire machine. Fig. 2 is a bottom view. Fig. 3 is an end view. Fig. 4 is a lid for gage-box. Fig. 5 is looking down into gage-box. Fig. 6 is an end view of guard-ring. Fig. 7 is a pin to hold

the machine in place. Fig. 8 is a perspective view of the machine in operation.

Similar letters refer to similar parts throughout the several views.

A represents the main body of the cylinder, with part broken away to show the construction of the inside end of plunger E.

I is a leather cup held in place with ring J, made of iron, cup and ring fastened to plunger with three-quarter inch bolt K.

C is a safety-ring, made so that it will turn on plunger E. C is made with two slots to correspond with the horn of plunger, so that when plunger is compressed into cylinder it will fit in these slots; but when ring C is turned so that slots stand at right angles to horn on plunger it will act as a guard to keep plunger from being forced in. As is necessary when unscrewing joints on oil-well tools, as it takes a great deal more pressure to unscrew these joints than it does to screw them up, thereby the gage would be subject to unnecessary strain if it were not for ring C.

D is a bolt screwed through cylinder into a slot cut into plunger E to keep the plunger from coming out of cylinder when being handled.

G is a gage-box held in place with suitable bolts with a cover B made to swing on one bolt, as shown by drawings. The gage for this plunger is made with connection on back and is screwed into hole L, which is connected to back of cylinder, as indicated by dotted line.

On Fig. 1, M is a plug screwed into the passage leading into the cylinder, the said plug to be removed for filling the cylinder with fluid.

F is a pin made to fit into hole H, which fits into corresponding hole in the T-rail that holds the machine in place. F is made with a ring on the upper end for a finger-hold.

Fig. 2 shows the arrangement of T-slot on bottom of cylinder, which is sometimes made on a four-foot radius and sometimes straight, as the case may be. Fig. 3 shows the end view of cylinder and the arrangement of T-slot.

In Fig. 8, C is the indicator. D is the circle. E is the tools which are screwed together. A is the wrenches. B is the jack for jacking the wrenches around the circle.

Now, having described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a dynamometer, the combination with
5 a cylinder adapted to contain a fluid, of a
plunger operating therein provided with a
leather cup on its inner end and a suitable
horn on its outer end adapted to be engaged
by a wrench-handle, substantially as de-
scribed.
- 10 2. In a dynamometer, the combination with
a cylinder and a plunger operating therein
and provided with a horn on its outer end, of
a ring surrounding said plunger intermediate
the cylinder and horn, said ring having a
15 transverse slot adapted to receive the horn

when registering therewith, said ring serving
as a stop in all other positions, substantially
as described.

3. In a dynamometer, the combination with
a cylinder and a plunger operating therein, 20
said cylinder provided with a circular slot
adapted to be engaged with a circular rail,
substantially as set forth.

In testimony whereof I have signed my
name to this specification in the presence of 25
two subscribing witnesses.

FRED. W. JONES. [L. S.]

Witnesses:

J. G. GREGG,
S. N. SCOTT.