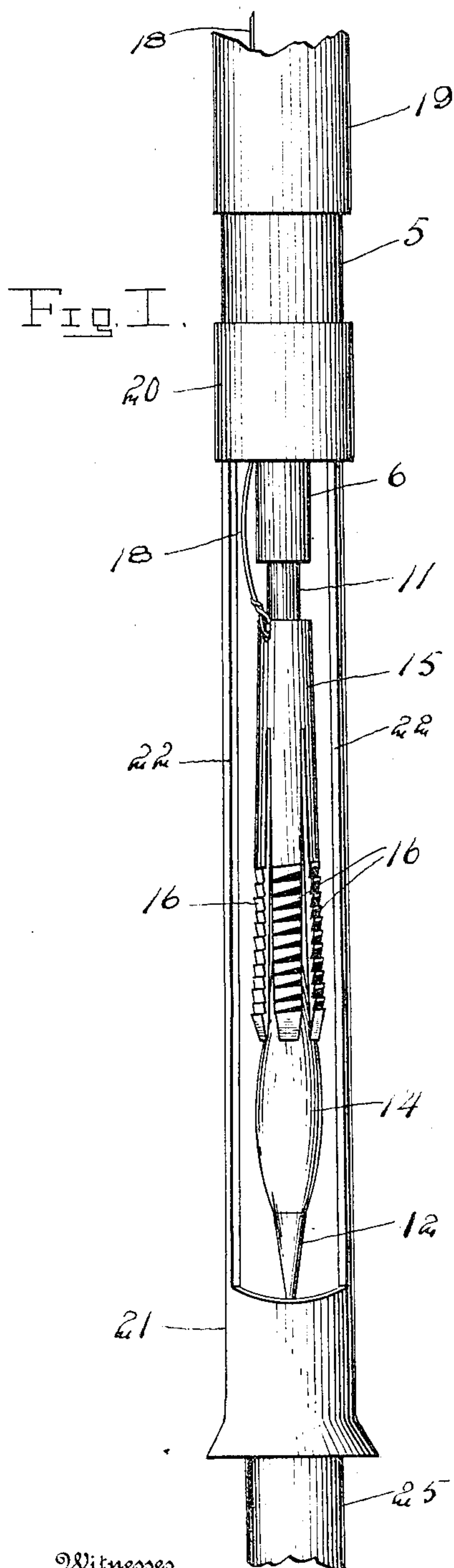


No. 818,928.

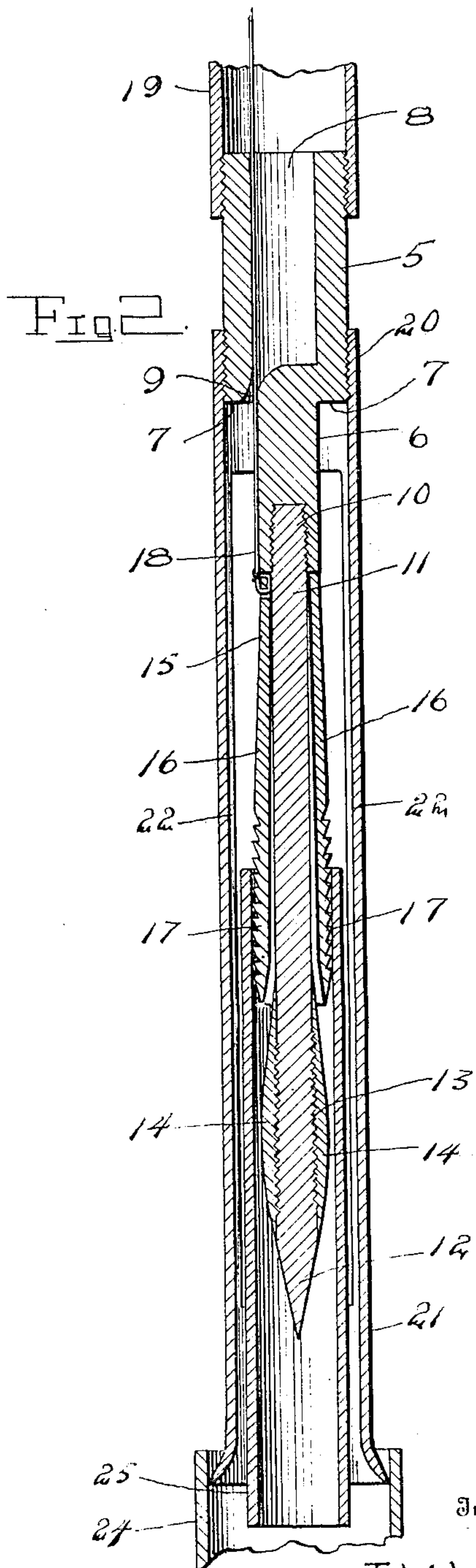
PATENTED APR. 24, 1906.

J. W. WALKER.
PIPE PULLER.

APPLICATION FILED MAY 1, 1905.



Witnesses
L. C. Simpson.
E. M. Delford



Inventor
J. W. Walker.
By *Charles J. Walker*
Attorney &

UNITED STATES PATENT OFFICE.

JAMES W. WALKER, OF GREENFIELD, INDIANA.

PIPE-PULLER.

No. 818,928.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed May 1, 1905. Serial No. 258,269.

To all whom it may concern:

Be it known that I, JAMES W. WALKER, a citizen of the United States, residing at Greenfield, in the county of Hancock, State of Indiana, have invented certain new and useful Improvements in Pipe-Pullers; 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 pipe-pullers such as are employed for pulling or catching and withdrawing tubular drill-rods or other pipes from inside the casing.

The object of the invention is to provide a puller having its parts so constructed and assembled that it may be adjusted for use in connection with pipes of widely-different diameters.

A further object of the invention is to provide a construction that will include a guide removably attached, so that it may be disconnected or removed when it is not to be used or for the substitution of a guide of different dimensions.

Other objects and advantages of the invention will be understood from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is an elevation showing the present invention with the guide in place. Fig. 2 is a central longitudinal section through the puller with the guide in place and engaged over a pipe within a well-casing and with which pipe the pulling-jaws are in engagement.

Referring now to the drawings, the present pipe-puller comprises a cylindrical head 5, the lower end portion of which is reduced and cylindrical, as shown at 6, there being a shoulder 7 at the upper end of the portion 6. In the upper end of the head 5 is a central recess 8, from which leads a passage 9 to the angle between the shoulder 7 and the portion 6 of the head.

In the lower end of the portion 6 of the head is a central longitudinal recess 10, which is threaded to receive a rod 11, the lower end of which is pointed, as shown at 12, and directly above which point the rod is threaded, as shown at 13, to receive an oblate spheroidal sleeve 14.

Upon the rod 11 above the sleeve 14 is slidably mounted a collar 15, from which de-

pend spring-arms 16, the lower end portions of which are thickened, as shown at 17, at points above their lower extremities and are then gradually decreased in thickness to their lower extremities. The outer faces of the lower end portions of the arms 16 are serrated, as illustrated, for a purpose to be presently explained.

When the collar 15 moves downwardly on the rod 11, the lower ends of the arms 16 run upon the sleeve 14 and by it are forced outwardly or apart, and when the collar is moved upwardly on the rod the arms move from the sleeve 14 and spring toward each other. A wire 18 is attached to the collar 15 and passed upwardly through the passage 9 and recess 8 and may be continued upwardly to any desired length, so as to extend through a tubular rod 19 that is screwed onto the upper end portion of the head 5 and by means of which the puller is manipulated.

A guide is provided and consists of an upper cylindrical portion 20, that is screwed onto the lower end portion of the major part of the head 5, and a lower cylindrical member 21, connected thereto by integral arms 22, the member 21 being flared at its lower end.

In fishing for a pipe in a well-casing the entire tool illustrated is employed, the guide 22 passing down inside of the casing 24, so as to take over the upper end of the pipe 25 that is to be pulled, the member 21 acting to guide the lower end 12 of the rod 11 into the pipe 25. The tool is lowered until the portions 17 of the arm 16 have passed into the pipe 25, at which time the collar 15 is at the upper limit of its movement or against the lower end of the reduced portion 6 of the head 5. The collar 15 is then lowered by means of the wire 18, so that the lower end portions 17 of the arm 16 pass onto the sleeve 14, which wedges therebetween and forces them outwardly against the inner face of the pipe 25. The tubular manipulating-rod 19 is then drawn upwardly and the frictional engagement of the portions 17 of the arms 16 with the inner face of the pipe 25 serves to hold the arms against upward movement at first, so that the wedge-sleeve 14 is drawn upwardly farther between the lower portions of the arms and they are forced into more intimate engagement with the pipe and the pipe is finally drawn upwardly, as will be understood. The teeth on the portions 17 are provided to insure the portions 17 against slipping from the pipe. When the puller is to be disengaged

from the pipe, the wedge-sleeve 14 is forced downwardly from the arms 16 by holding the wire 18 and forcing downwardly the head 5.

It will thus be seen that the tool may be used for different specific purposes and may be modified to suit different dimensions of pipes or casings to be pulled.

It will be understood that in practice modifications of the specific construction shown may be made, and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. A pipe-puller comprising a head having upper and lower recesses and a passage communicating with one of the recesses intermediate the ends of the head, a rod secured in the lower recess, a removable wedge disposed upon the free end of the said rod, a collar slidably mounted upon the rod, gripping-arms carried by and movable with the collar onto the wedge, and means connected with the collar and passed through the said passage and the upper recesses of the head for moving the collar with the arms away from the wedge.

2. A pipe-puller comprising a head having upper and lower recesses and a passage communicating with one of the recesses intermediate the ends of the head, a rod secured in the lower recess, a removable wedge disposed upon the free end of the said rod, a collar slidably mounted upon the rod, gripping-arms carried by and movable with the collar

onto the wedge, means connected with the collar and passed through the said passage and the upper recesses of the head for moving the collar with the arms away from the wedge, a tubular guide connected removably to the head and projecting beyond the free end of the rod, and means connected with the head for manipulating the puller.

3. A pipe-puller comprising a head having a lower reduced end portion having upper and lower recesses, the recess in the lower end portion being threaded, a rod screwed into the threaded recess, said head having a passage leading from the recess in the upper end of the head through the face of the reduced end portion, a removable wedge screwed onto the free end portion of the rod, a collar slidably mounted upon the rod above the wedge, spring gripping-arms carried by and movable with the collar onto the wedge, means connected to the collar and passed through said passage and the recess in the upper end of the head for moving the collar with the arms away from the wedge, a tubular guide connected removably to the head and projecting beyond the free end of the rod, and means connected with the head for manipulating the puller.

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

JAMES W. WALKER.

Witnesses:

HECTOR GLASCOCK,
JOSEPH F. SHEETS.