

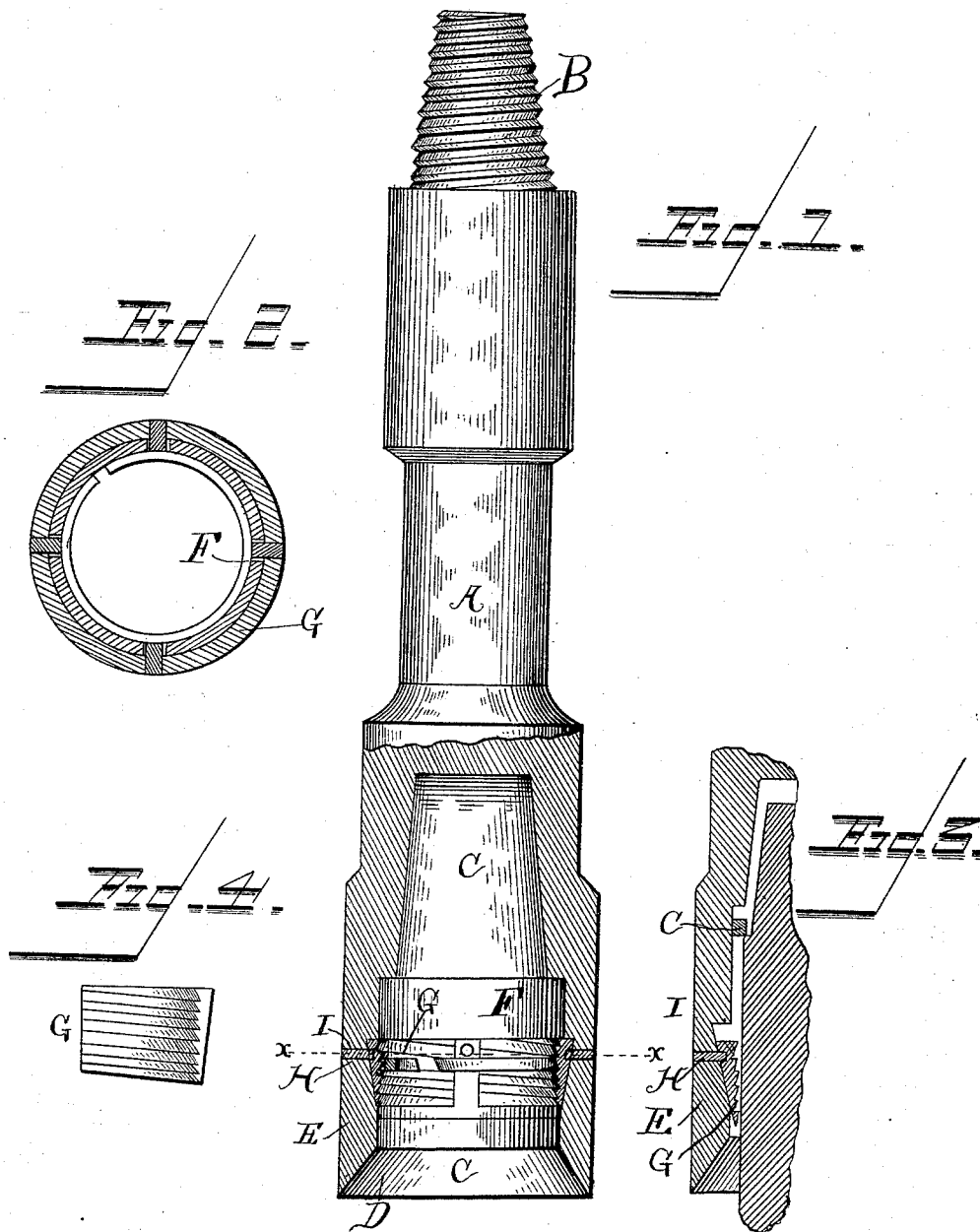
(No Model.)

C. H. TAYLOR.

TOOL TO FISH OUT DRILLS &c., FROM ARTESIAN WELLS.

No. 488,909.

Patented Dec. 27, 1892.



WITNESSES

D. Darby
N. W. Sterling

INVENTOR

Charles H. Taylor
by Howard Bros. Attorneys

UNITED STATES PATENT OFFICE.

CHARLES HAVELOCK TAYLOR, OF MONTREAL, CANADA, ASSIGNOR OF ONE
HALF TO JOHN W. CARMICHAEL, OF WILMINGTON, NORTH CAROLINA.

TOOL TO FISH OUT DRILLS, &c., FROM ARTESIAN WELLS.

SPECIFICATION forming part of Letters Patent No. 488,909, dated December 27, 1892.

Application filed April 13, 1892. Serial No. 429,076. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HAVELOCK TAYLOR, a citizen of Canada, residing at Montreal, in the Province of Quebec and Dominion of Canada, have invented a certain new and useful Improvement in a Fishing-Tool for Catching and Extracting Broken or Detached Drills or Drilling-Tools from Artesian or Oil Wells; 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 consists of a tool designed for catching and extracting from Artesian or oil wells, broken or detached drills or drilling tools.

The object of the invention is to provide a tool which can be readily attached to the drilling rod as in the case of a drill, and to be so provided at its lower end as to receive the upper end of the detached or lost tool and hold the same therein by certain novel construction as to such part.

The construction of the tool briefly stated is that of an open ended or socketed metal piece adapted to be lowered into the drill hole or well and receive therein the end of the detached tool, the said socket being provided with ratchet sections normally held in an upwardly flared portion of the socket and adapted to be released by the entrance of the detached tool and wedge themselves between the said tool and the inclined walls of the socket, thus firmly engaging the tool and causing the hold to tighten by the downward pull when the said detached tool is being raised.

The invention also consists in certain other novel features in the construction and arrangement of parts, all, as hereinafter fully set forth and pointed out in the claim.

In the accompanying drawings in which the invention is fully illustrated, Figure 1, is a view in elevation of the extracting tool with the catching end broken away and showing a transverse vertical section through the same. Fig. 2, is a horizontal transverse sectional view taken on the line *x, x*, of Fig. 1. Fig. 3, is a view in section of a portion of a catching end of the tool, showing the operation of its interior parts in the act of securing a detached

tool. Fig. 4, is a perspective view of one of the ratchet sections detached.

Referring to the drawings by letter, A designates the catching tool which may be of the form of a drill tool as to general appearance or of any usual or preferred form, the same being provided with a screw threaded portion B, at its upper end for attaching it to the drill rod as in the case of an ordinary drill. The lower portion of the device is preferably in cylindrical form and provided with a socket C, which is in general form similar to that of the upper end of a drill but of a size sufficient to readily admit the entrance therein of the detached tool.

To facilitate the entrance of the detached or broken tool into the socket C, the bottom edge of the catching tool is beveled as shown at D thus relieving it of any obstructing edge and forming a guide for the broken or detached tool.

Within the socket C an annular tapering or inclined portion is formed by cutting into the sides of the socket so as to cause the walls at this point to be upwardly flared. Within this tapering portion E of the socket are held by means of the spring ring F, the curved sections G which are inclined on their rear faces to conform to the taper of the socket, causing their front faces which are ratched or screw threaded to be vertical. These ratchet sections G are preferably four in number and when placed within the socket in their proper position extend around the walls of the same and fill the flared out portions E making the walls of the socket vertical with the exception of the ratchet face of said sections.

At diametrically opposite points in the tapering portion of the socket are provided lugs or projections H which extend between the curved ratchet sections G and serve to keep said sections within their respective places, sufficient play being allowed however, in order that the ends of the sections may escape the said projection when being forced out by the inclined or tapering wall of the socket when the sections are in their dropped position as shown in Fig. 3. It will be observed that the sections G have their ratchet faces formed by being screw threaded. This permits the detaching of the extracted tool from

the socket by turning the same and in this operation the projection H prevent the sections from turning.

5 The function of the ring F, as will readily be seen, is to normally hold the ratched sections up against the shoulder I, by being inserted within the socket so as to press against the faces of the said sections.

10 From the view shown in Fig. 3, the operation of the several parts of the device will be clearly seen. The detached tool being readily guided into the socket C, pushes up spring ring F, which taking the pressure off of ratchet sections causes them by their own weight to
15 drop, and to be forced outward by the inclined face of the socket against the detached tool and to closely hug the same. The tendency of the ratchet sections to increase their hold on the detached tool when the weight of said
20 tool is put upon them or any degree of pull required to raise the drill from the well, will be clearly apparent.

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

25 In a tool of the character described, the socket formed in the lower end thereof having an interior tapering recess, tapering ratchet sections adapted to fit the said tapering recess and a spring ring adapted to impinge against
30 the ratchet faces of the tapering sections and to normally hold them in the upper portion of the tapering recess, said spring ring being dislodged by the entrance of the detached tool and forced up substantially as described,
35 thereby releasing the tapering ratchet sections which descend and engage the detached tool as set forth.

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

CHARLES HAVELOCK TAYLOR.

Witnesses:

W. R. COCHRANE,
D. G. MAXWELL.