

(No Model.)

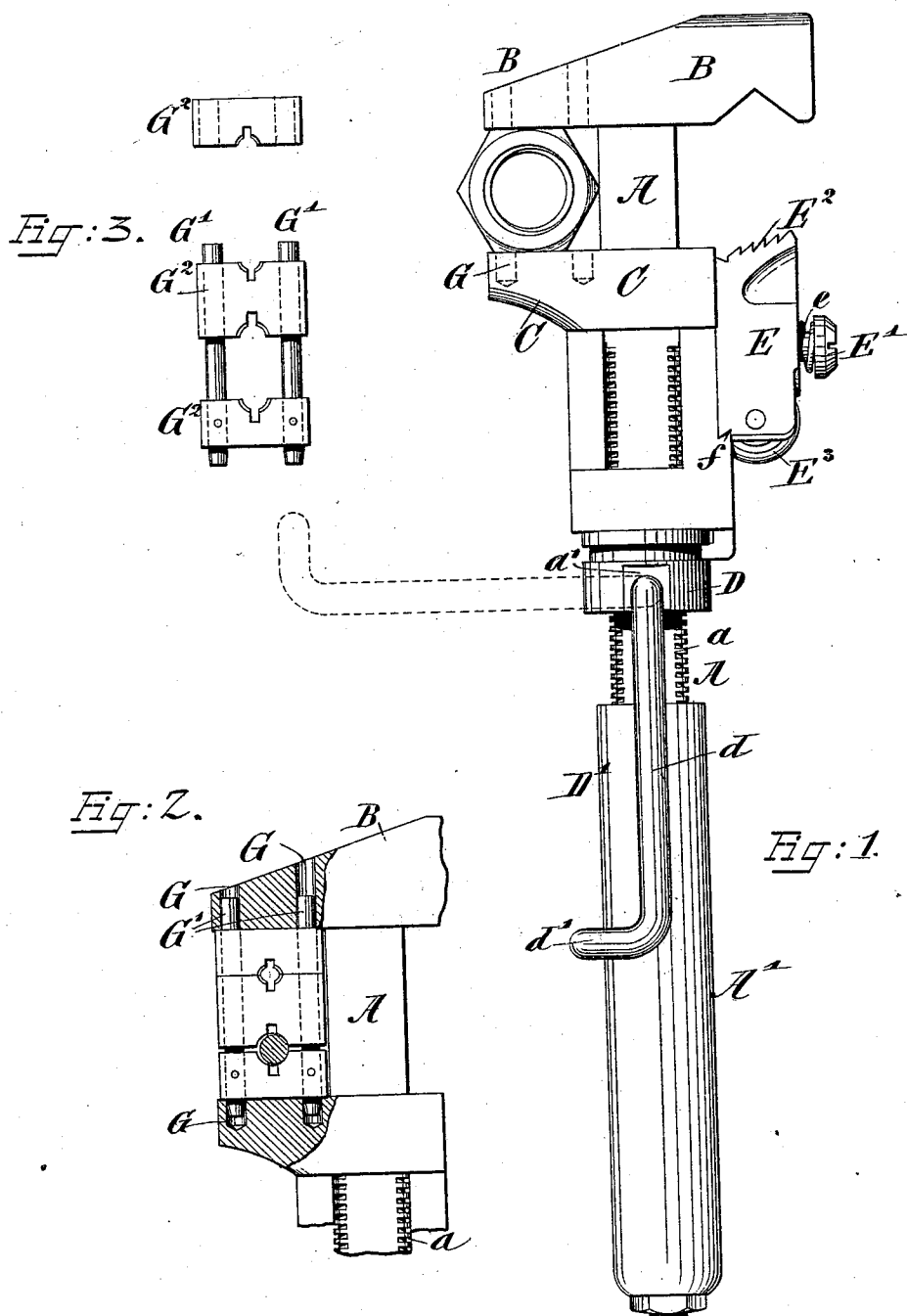
2 Sheets—Sheet 1.

R. HABERTHÜR.

COMBINED WRENCH AND PIPE AND THREAD CUTTER.

No. 521,265.

Patented June 12, 1894.



Witnesses  
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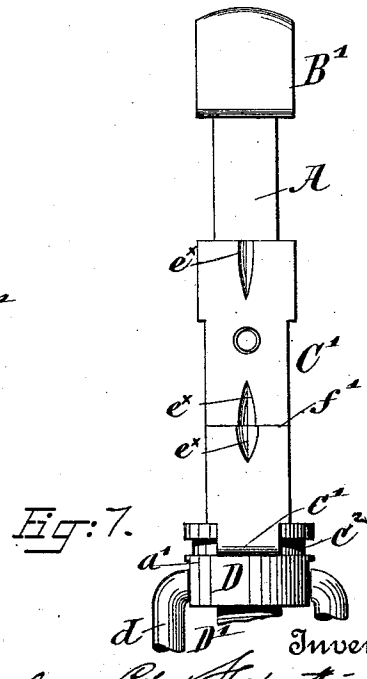
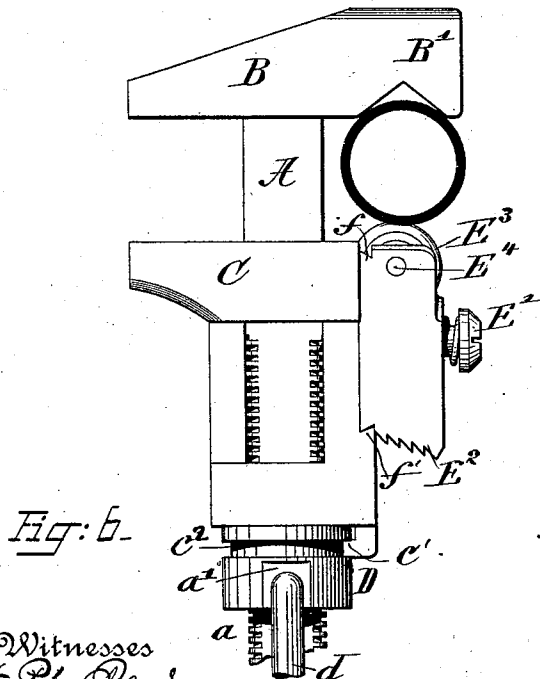
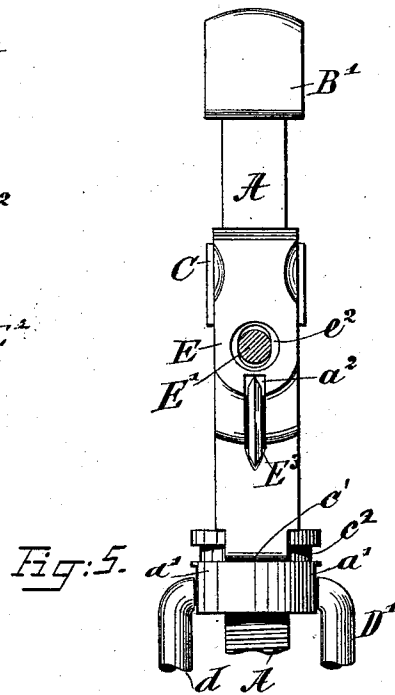
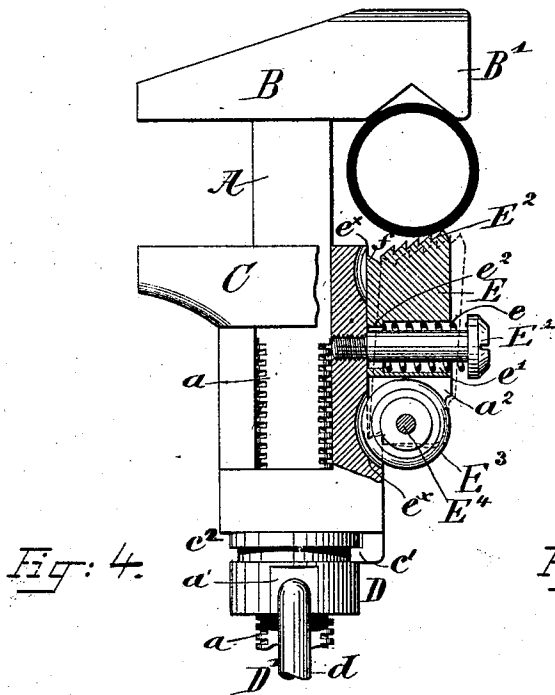
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# UNITED STATES PATENT OFFICE.

ROBERT HABERTHÜR, OF WEST HOBOKEN, NEW JERSEY, ASSIGNOR OF  
ONE-HALF TO FRANZ E. KÄMMER, OF SAME PLACE.

## COMBINED WRENCH AND PIPE AND THREAD CUTTER.

SPECIFICATION forming part of Letters Patent No. 521,265, dated June 12, 1894.

Application filed October 17, 1893. Serial No. 488,436. (No model.)

### *To all whom it may concern:*

Be it known that I, ROBERT HABERTHÜR, a citizen of the United States, and a resident of West Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in a Combined Wrench and Pipe and Thread Cutter, of which the following is a specification.

My invention has relation to a combination-tool, and its object is to produce a combination-tool that can be employed as an ordinary wrench, a pipe-wrench, a pipe-cutter and a thread-cutter for rods and pipes.

The invention consists of a combination-tool which comprises a stationary jaw, a movable jaw, and a centrally-pivoted spring-jaw that is notched at one end so as to form, in connection with the recessed end of the stationary jaw, a pipe-wrench, while the opposite end is provided with a rotary cutter by which, when the spring-jaw is reversed, an effective means for cutting off pipes is obtained.

In the accompanying drawings, Figure 1 represents a side elevation of my improved combination wrench and pipe-cutter. Fig. 2 is a detailed side-elevation, partly in section, showing the jaws arranged for cutting threads on rods or pipes. Fig. 3 is a side view of the thread cutting device, detached from the wrench. Fig. 4 is a detailed sectional side-elevation of the wrench, shown in use as a pipe-wrench. Fig. 5 is an edge elevation of Fig. 4. Fig. 6 is a detailed side-elevation of the tool, showing the same arranged as a pipe-cutter, and Fig. 7 is a detailed edge elevation of the tool, showing the spring-jaw removed from the sliding-jaw of the wrench, so as to show the recesses for the rotary cutter.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the shank of the wrench, which is inserted in the handle A' in the usual manner.

B is the stationary jaw of the wrench located at the outer end of the shank A, and C the movable jaw, which is operated by a screw-nut D that engages the threaded side portion  $a$  of said shank. A pivoted lever in the form of a bail D' is sprung into suitable sockets in the flattened portions  $a'$  at dia-

metrically opposite points of the screw-nut D, the sides  $d$  of said bail extending parallel with the shank A, while the U-shaped lower end  $d'$  is bent out at right-angles to the sides or legs  $d$  of the same, so as to embrace or fit around the handle A' and permit the ready turning of the screw-nut D simply by taking hold of the bail D' by one hand, and the final tight setting of the jaws B and C of the wrench by moving the bail into position at right-angles to the shank A, as shown in dotted lines in Fig. 1, and using the bail in this position as a lever for tightly setting the wrench to the screw-nut, pipe or other object to be operated on. The setting of the bail D' into position at right-angles to the shank A, however, is only done when the final clamping of the jaws is to be imparted, as thereby greater power can be transmitted to the screw-nut D than by the ordinary handling of the bail when the same is in position parallel with the shank, as shown in full lines in Fig. 1. The movable-jaw C is formed with the usual angular lug or projection C' received by the annular groove C<sup>2</sup> of the screw-nut D, whereby said nut is permitted to rotate, while at the same time it actuates said jaw.

To the side portion of the movable-jaw C, is applied a spring-jaw E, which is retained by means of a screw-bolt or post E' screwed into the side of the jaw C, a helical spring  $e$  being introduced into an opening  $e'$  of the said spring-jaw and resting on a shoulder  $e^2$  at the bottom of the same, said spring  $e$  serving for the purpose of permitting the ready application of the notched or serrated end E<sup>2</sup> of the spring-jaw to the pipe, so as to use the tool as a pipe-wrench, in connection with the recessed extension B' of the stationary jaw B. As the opening in the spring-jaw is much larger than the screw-post E', the spring further permits the releasing of the jaw E when moving the tool in opposite direction, to enable the same to "give" so as to be used for applying the serrated end of said jaw again to the pipe. The spring-jaw E is provided at its opposite end with a recess  $a^2$ , into which a rotary cutter E<sup>3</sup> is inserted, the cutter-shaft E<sup>4</sup> being supported in bearings of the recessed end of said jaw E, as shown clearly in Figs.

1 and 4. The side of the spring-jaw E next adjacent to the movable jaw C is provided with two end notches or recesses  $f$  so that said spring jaw can be engaged by the complementary projection  $f'$  on the side part of the movable jaw C and be held thereby firmly in position. The spring-jaw E can be readily turned on the retainingscrew  $E'$  so as to bring either the toothed or serrated face  $E^2$  of the jaw or the rotary cutter  $E^3$  of the same toward the recessed jaw  $B'$ , according as the pipe is to be operated on for coupling, or is to be cut off, as the case may be, the application of the tool as a pipe-wrench being clearly shown in Fig. 4, and as a cutter, in Fig. 6. To permit the use of the rotary cutter  $E^3$  in cutting-pipe, and to place the same in position of rest when not required, the side wall of the movable jaw C is provided with notches  $e^x$ , as shown in Figs. 4 and 7, so that the rotary cutter has sufficient play when the tool is used as a cutter, or it can be stored away in its inner position, as shown in Fig. 1, when the spring-jaw E is set so that the tool may be used as a pipe-wrench. When the device is to be employed as an ordinary wrench, the jaws B and C are applied to the screw-nut in the usual manner, and the screw-nut then turned into its proper position. When the tool is to be used as a pipe-wrench, the spring-jaw E is placed with its toothed or serrated face  $E^2$  opposite to the recessed extension  $B'$  of the stationary jaw B, as shown in Figs. 1 and 4, in which position the wrench can be readily applied to a pipe of any ordinary diameter. When it is desired to use the tool as a pipe-cutter, the spring-jaw E is turned on the screw-post G as a pivot, by being first released from the projection  $f$ , thus permitting its springing on its screw  $E'$ , so that the rotary cutter  $E^3$  may be moved to a position opposite to the recessed extension  $B'$ , as shown in Fig. 6, in which case the same can be readily used as a pipe-cutter in the usual well-known manner. When it is to be used for cutting screw-threads into tubes or rods, a suitable attachment is inserted between the jaws B and C, for which purpose they are provided with socket-holes G, into which removable pins  $G'$  are inserted, and on which pins the pipe or screw-cutting dies  $G^2$  are applied. For cutting different sizes of pipe or rods, different

sizes of dies are employed, so that in connection with the thread-cutting attachment, the tool can be used as an ordinary wrench, a pipe-wrench, and a pipe-cutter, and the said device for cutting threads on rods or bars.

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

1. The combination, with the stationary and the sliding jaw of a wrench, of a reversible jaw pivotally mounted on the sliding-jaw and provided at one end with teeth or serrations and at the other end with a rotary cutter, and means for holding said reversible jaw in its several positions, substantially as set forth.

2. The combination, with the stationary and the movable jaw of a wrench, of a screw-nut for actuating the movable jaw, and a swinging lever or bail pivoted to said nut for turning the same, and adapted to be swung alongside the handle of the wrench, substantially as set forth.

3. The combination with a stationary jaw and a movable jaw of a wrench, of a screw-nut for actuating the movable jaw and a bail pivoted to said screw-nut, said bail being formed with substantially straight sides, and a bent U-shaped portion at its outer end, said U-shaped portion extending around the handle of the wrench, the bail being adapted for turning the screw-nut and for finally applying the same, in the nature of a lever, substantially as set forth.

4. The combination with stationary and movable jaws of a wrench, of a post applied to one side of the movable jaw, a reversible spring-jaw applied to said post and provided with teeth or serrations at one end, and with a rotary cutter at the opposite end, said spring-jaw being provided with notches so as to set against the tapering shoulder of the movable jaw, which latter is further provided with recesses at the opposite ends for the rotary cutter, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ROBERT HABERTHÜR.

Witnesses:

PAUL GOEPEL,  
CHARLES SCHROEDER.