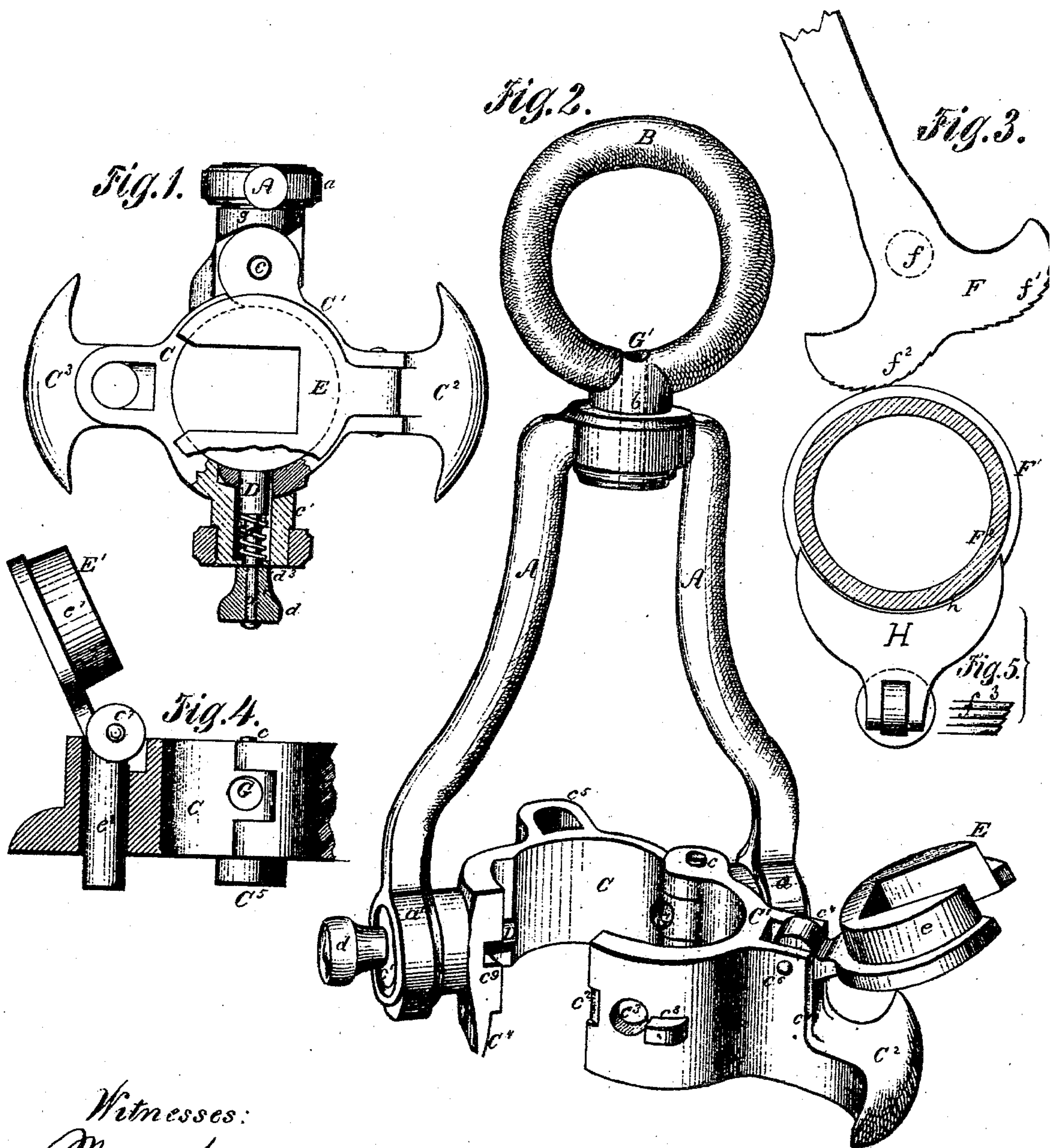


A. Good, Jr.,

Tube Clamp.

No. 98459.

Patented Dec. 28. 1869.



Witnesses:
Wm. H. Rowe.

Inventor:
Adam Good, Jr.

UNITED STATES PATENT OFFICE.

ADAM GOOD, JR., OF TITUSVILLE, PENNSYLVANIA.

IMPROVEMENT IN CLAMPS FOR ELEVATING WELL TUBES AND RODS.

Specification forming part of Letters Patent No. 98,459, dated December 28, 1869.

To all whom it may concern:

Be it known that I, ADAM GOOD, Jr., of Titusville, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Combined Swiveled Clamps and Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which make part of this specification.

My invention relates to a class of clamps used in oil-wells for lifting tubes or pump-rods into or out of said wells in less time, with more saving of labor, and with better security against occasional slipping and dropping of tubes or rods from their hold into the well, thereby saving great expense to the operators.

In the annexed drawings, Figure 1 is a top view of my clamp. Fig. 2 is a perspective view of my clamp. Fig. 3 is a double-eccentric wrench for keeping tubes from turning. Fig. 4 is a view of a detachable clamp for square rods. Fig. 5 shows an attachment to prevent tubes from slipping.

In the drawings, A represents a stirrup, which is suspended by a vertical swivel, b, and ring B. This stirrup A ends with two bearings, a and a', which receive the journals of a clamp, C, with an opening large enough to fit the largest size of tubes used in oil-wells. One part, C', of said clamp is movable on a vertical hinge, c, so that the whole clamp can be opened to admit a pipe sidewise. The movable part C' is locked by a spring-bolt, D, inserted into the journal c' in an axial direction. Fig. 1 shows the journal c' in section, exposing the spring-bolt D, with its step d' and spring d² around the step. The spring d² bears against a shoulder, d³, at the end of journal, c' and against the shoulder of bolt D, caused by the step already mentioned, thereby forcing the bolt into the hole c³ in the movable part C', which keeps the whole clamp locked. There is an inclined notch, c², at the end of C', against which the end of the spring-bolt slides when C' is being closed. Thus the opening of the spring-bolt by hand is not necessary when the clamp is to be closed. To open said clamp C the spring-bolt D is pulled back by a knob or handle, d, until it has cleared the hole c³. Then C' may be turned open. As the clamp C has to support a considerable weight, I strengthen the movable part C' by providing it with a bearing-block,

c³, near the hole c³, which fits into a receiving-notch, c³, in the clamp C, and in this manner relieves C' from all strain. The clamp C is also provided with several lugs, c⁴, c⁴, and c⁵, for the purpose of receiving several pivoted or hinged wrenches or other implements for working tubes or rods. The drawings show two such sucker-rod clamps and wrenches, E and E'. The wrench E is hinged at c⁶, so that it may be swung back and off the opening in the clamp when not wanted. It is provided with a flange, that rests on top of the clamp C when used, and with an offset, e, which fits the hole in said clamp. The slot in clamp E is to fit the sucker-rod; and I intend to have a series of such clamps with slots of different sizes, which may easily be exchanged by taking out the pin c⁶. The clamp C with clamp E together also serve in the capacity of a screw-wrench by turning the stirrup A over into a horizontal position and making a lever of it for holding the sucker-rod tightly while connections or disconnections are being made. Clamp E' in Fig. 4 is hinged to a round shank, e², which fits into a vertical hole in lug c⁵. It is otherwise of the same construction as clamp E, excepting, perhaps, a larger or smaller sized slot.

To prevent the sudden slipping of any of the tubes through the clamp C before it is in position, I make use of a catch, H, as seen in Fig. 5, which bears with its own weight against the pipe in an inclined position. This catch has a semicircular edge, which impinges upon the surface of the tube as soon as it starts downward, and is carried down a little distance with it, whereby the catch H is forced with its shank against the lug c⁵ and the tube against the opposite side of the clamp C. This will effectually jam the tube and arrest its further progress.

If a tube is to be held firmly in the clamp C, so as to keep it from turning around, I make use of a serrated double cam-head wrench, F, with a fulcrum-pin, f, which is inserted into the already-mentioned hole in lug c⁵. The ratchet-teeth on cam f' point to the left, and when in contact with the pipe-coupling will prevent its turning toward the left side, and vice versa with the cam f², as is shown in Fig. 5. The catch H may have more than one edge, as shown by f³, to make it more effectual. The cams f' and f² on the wrench F are eccentric, increasing their diameters toward the out-

side. This serves to jam the tube in a lateral way, and to keep it rigid for the purpose of screwing onto or unscrewing pipes or tubes from their couplings.

The flanges C^2 C^3 are for the purpose of setting on the top part of a so-called "casing tee" or T , as is used on top of wells while they are being pumped. There are also two lugs, c^4 c^5 , at the bottom part of the clamp C , which bear right and left inside of said casing T , to keep the clamp C in a central position.

The operation of my clamp is evident from the specification, so I do not deem it necessary to repeat what I specified already.

I claim as my invention—

1. The tube-clamp C , constructed, as described, with a hinged part, C' , in such manner that the whole clamp can be opened for the purpose of admitting the tube or pipe within the clamp sidewise, and locked together so as to complete the circle of the clamp, substantially as hereinbefore described.

2. In combination with a clamp having a hinged section, C' , as described, the spring-bolt D , inserted in the journal c' in an axial direction, for the purpose of locking the hinged section C' to the fixed part C when the tube is embraced between them, substantially as before described.

3. The hinged section C' of the clamp, provided with a bearing-block, c^8 , in connection with a receiving-notch, c^9 , in the fixed part C , for the purpose of supporting the hinged section and relieving it from strain when the two parts are locked together, as before described.

4. The combination of a hinged sucker-rod wrench, E , with a clamp constructed with a

hinged and fixed section, C and C' , substantially as before described.

5. The sucker-rod wrench E , hinged to the clamp so that it may be turned over or swung back off the opening in the clamp when not desired for use, substantially as before described.

6. The socket C^5 for the reception of a sucker-rod wrench, which may thus be connected to the clamp so that it may be removed therefrom and replaced by another having a larger or smaller opening to suit different sizes of sucker-rods, as hereinbefore described.

7. The clamp constructed with one or more lugs, c^4 c^5 , for the purpose of receiving the arresting-catch H and the cam-head wrench F and the wrench-clamps E E' , in the manner and for the purpose hereinbefore described.

8. The combination of an elevating swiveled tube-clamp, C C' , with a hinged tube-catch, H , operating in the manner substantially as hereinbefore described.

9. The combination of an elevating swiveled tube-clamp with a double eccentric tube-wrench, F , in the manner substantially as hereinbefore described.

10. The combination of the hinged and fixed parts of the clamp C C' , hinged wrench, the spring-catch D , with the bail or stirrup A , and the swiveled ring B , the whole constructed and arranged substantially as before described.

ADAM GOOD, JR.

Witnesses:

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