No. 725,923. PATENTED APR. 21, 1903.

H. F. BEEMAN.

LIFTING DEVICE.

APPLICATION FILED JAN. 2, 1903.

NO MODEL.

Fig. 1.

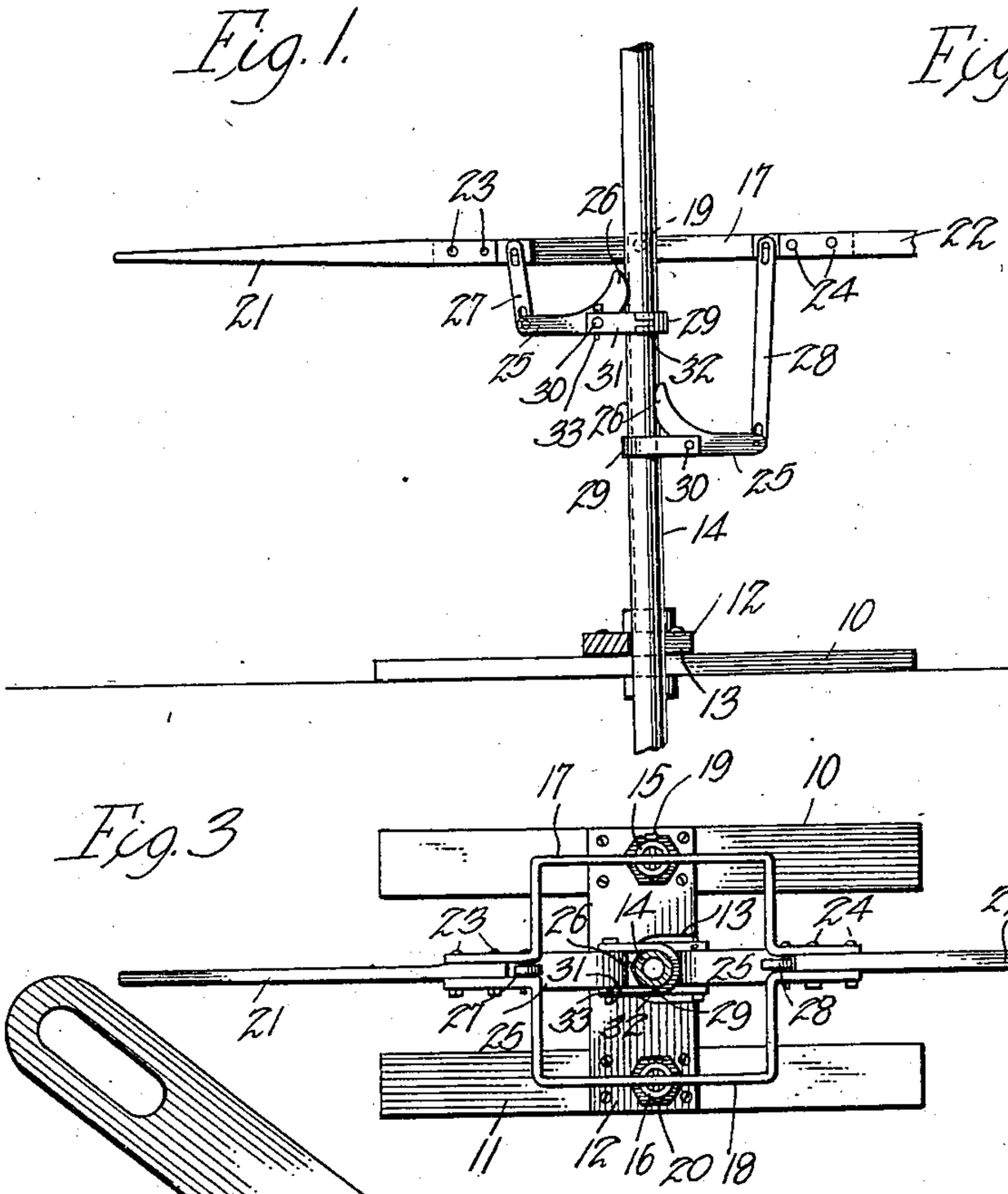


Fig. 2.

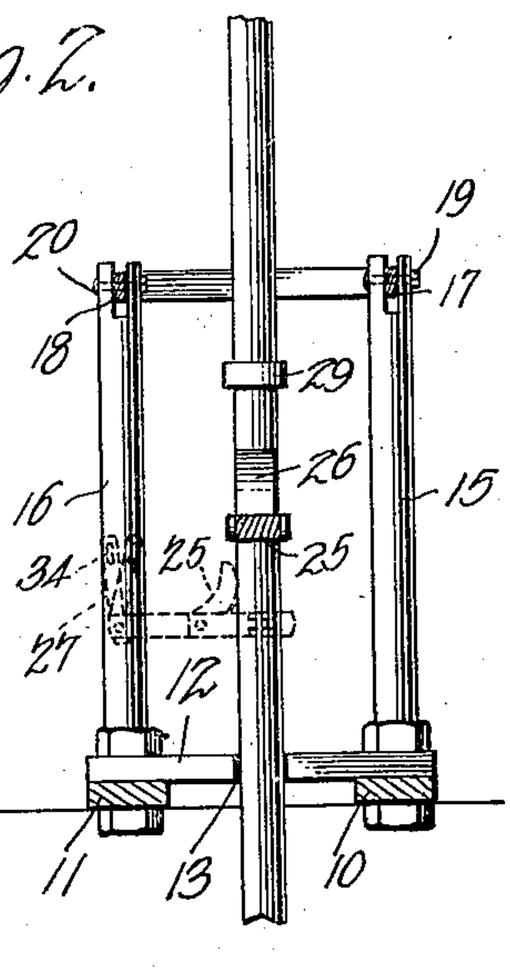


Fig. 3

Fig. 4.

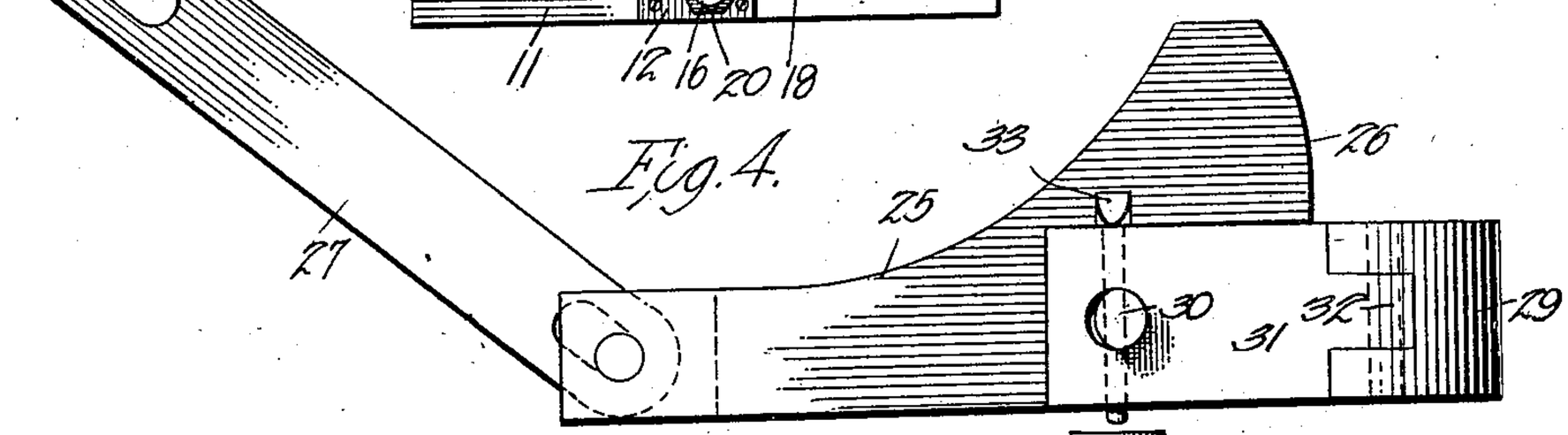
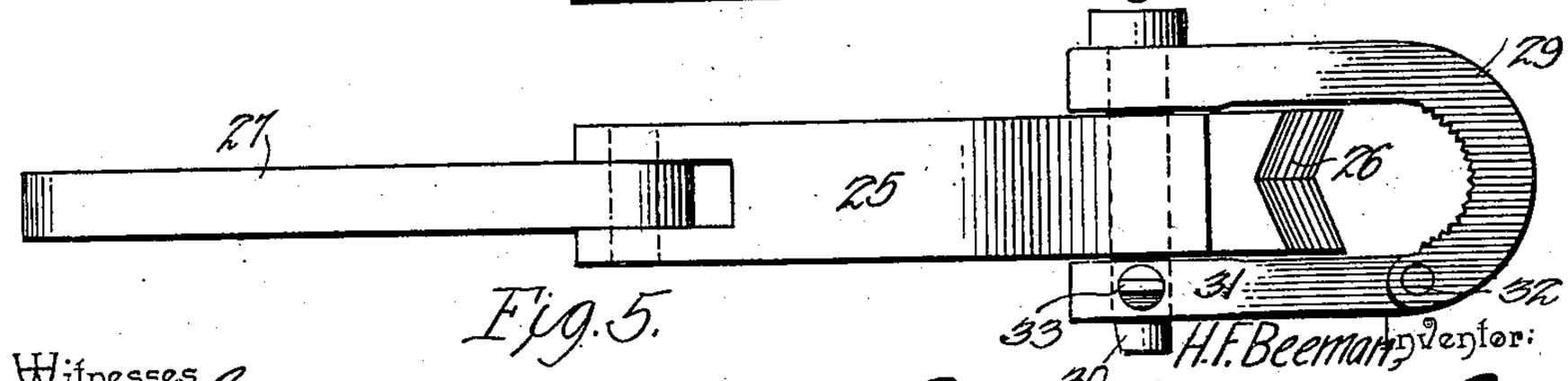


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY F. BEEMAN, OF BLUE RIVER, WISCONSIN.

LIFTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 725,923, dated April 21, 1903.

Application filed January 2, 1903. Serial No. 137,498. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. BEEMAN, a citizen of the United States, residing at Blue River, in the county of Grant and State of Wisconsin, have invented a new and useful Lifting Device, of which the following is a specification.

This invention relates to devices employed more particularly for forcibly lifting well-tubes and similar structures, but which may be employed for other purposes, and has for its object the production of a simply-constructed and easily-applied device or apparatus, which may be readily applied to tubes or rods of various sizes and readily attached to and detached from the tube at any desired point; and the invention consists in certain novel features of the construction, as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters in all the views, Figure 1 is a side view. Fig. 2 is an end view, and Fig. 3 is a plan view, of the device applied. Fig. 4 is a side view, and Fig. 5 is a plan view, of the gripping implement enlarged.

The improved device may be employed in connection with many different structures, but is more particularly applicable for removing well-tubes from deep wells or drive-wells and for similar purposes, and for the purpose of illustration the device is shown applied to an ordinary well-tube; but it will be understood that I do not wish to be limited to the use of the device for any particular purpose or in connection with any particular structure, and reserve the right to the use of the device for any purpose or in connection with any form of structure to which it is applicable.

In one means of applying the improved apparatus I employ a supporting-base, vertical standards, a double-acting lever-frame, and gripping means engaging the tube or other article to be operated upon, and means for movably connecting the gripping members to the lever member.

The base portion consists of spaced side members 10 11 and a transverse central member 12, connected to the side members, as by suitable bolts, the central member provided with a cavity 13, adapted to embrace the tube to be lifted, the tube indicated at 14, so that the tube will extend vertically centrally of the framework, as shown.

The standard members consist, preferably, of tubular sections 15 16, inserted through the side members 10 11 and transverse member 12 at their crossing-points, the double thickness of the material composing the base at these points affording the requisite support for the standards.

The standards will be provided with vertical slots in their upper ends, in which the side members 17 18 of the lever-frame are pivoted, as at 19 20, the ends of the side members curving inwardly and bolted upon opposite sides of the oppositely-extending handles 21 22, the holding-bolts being indicated at 23 24, as shown.

The gripping means is illustrated more fully in Figs. 1 and 2 and two will preferably be employed, and as both are precisely alike corresponding parts are designated by like denoting characters.

The grip means consists of head member 25, having a curving jaw portion 26, the face of the jaw being concaved and preferably serrated to increase the "grip" and having a connecting-link extending from its outer end. When two of the grip means are employed, the links will be extended, respectively, to the junctures of the handle portions 21 22 with the side members 17 18, as shown, at 27 28, one of the links being necessarily longer than the other, as the gripping means must be located one beneath the other, as shown in Fig. 1.

The opposing jaw member of the gripping means consists in a hook-shaped portion 29, pivoted at its rear end by transverse pin 30 to the head member and extends across the operating curved face of the jaw 26 and connected by its free end to the other end of the pin 30 by a link 31, the link being movably connected to the member 29, as by a hinge-joint 32, so that the link may be turned outward to provide for the insertion of the tube between the members 26 and 29. By this simple means grip mechanism may be connected to the tube at any desired point, and it will not be necessary to disconnect any

portion of the tube to attach the grip. The link 31 thus supports the hook-shaped opposing jaw member and prevents the strains to which it is subjected from bending it out of shape, while at the same time the link may be very quickly detached when it is required to connect the device to the tube. The movable link 31 will be held in position upon the pin 30 by any suitable means, as by a removable pin 33. By this arrangement it will be obvious that if the gripping-jaws 26 29 be placed upon a tube or rod and power applied to the links 27 or 28 in one direction the tube or rod will be firmly gripped, and then when the links are released gripping means will readily move along the tube or rod without engaging it. Thus when the double-ended lever-frame is moved in one direction one of the gripping devices will engage the tube or rod and carry it upward with the upwardly-moving end of the lever-frame, while the other gripping device will move downwardly upon the rod and assume a new position ready to grip the tube or rod at the next stroke, and so on alternately, the tube or rod being thus drawn upwardly by the intermittent actions of the gripping devices, as will be obvious.

The gripping devices may be constructed of any size required and adapted to grasp tubes or rods of any size.

The inner surface of the opposing jaw member 29 will preferably be serrated to increase its grip.

When removing the head from the pump, one of the cam-holders will be clamped to the pipe and suspended, as by the link 27, from a hook 34 upon one of the posts 15 or 16, as indicated by dotted lines in Fig. 2, thus obviating the necessity for a "platform-dog."

Having thus described my invention, what I claim is—

1. In a device of the class described, a gripping means consisting of a head member having a curved jaw, an opposing jaw member formed of an open hook movably connected to said head and extending transversely of said curved jaw and spaced therefrom, and a link member hinged at one end to said opposing jaw, and means for securing the opposite end independently of said head member, substantially as set forth.

2. In a device of the class described, a gripping means consisting of a head member having a curved jaw concaved upon its curved face, an opposing jaw member formed of an open hook movably connected to said head and extending transversely of the curved jaw and spaced therefrom, and a link member movably connected to said hooked jaw by one end and detachably connected to said head member by the other end, substantially as set forth.

3. In a device of the class described, a gripping means consisting in a head member having a curved jaw, and with a transverse pin therethrough, an opposing jaw member formed of an open hook movably connected by one end to said transverse pin and extending by its other end across the operative face of said curved jaw and spaced therefrom, and a link member movably connected by one end to the free end of said hooked jaw and connected by the other end detachably to the other end of said transverse pin, substantially as set forth.

4. In a device of the class described, a base-frame consisting of spaced longitudinal side members and transverse member secured centrally to said side members, and having a central cavity, standards passing through said side members and transverse member at their crossing-points, a lever-frame movably connected to said standards by its side members, grip members spaced apart for movably engaging a pump-tube, and links connecting said grip members respectively to said lever-frame upon opposite sides of said standards, substantially as set forth.

5. In a device of the class described, a supporting-base, spaced standards extending from said base, a lever-frame consisting of spaced side members movably connected centrally to said standards and with their ends connected to the opposite sides of oppositely-extending handle members, the pump-tube extending between said standards and spaced side members of the lever-frame, grip members adjustably connected to said pump-tube, and links connected respectively to said grip members and likewise to said lever-frame, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY F. BEEMAN.

Witnesses:
JOHN J. BLAINE,
A. J. SEEMANN.