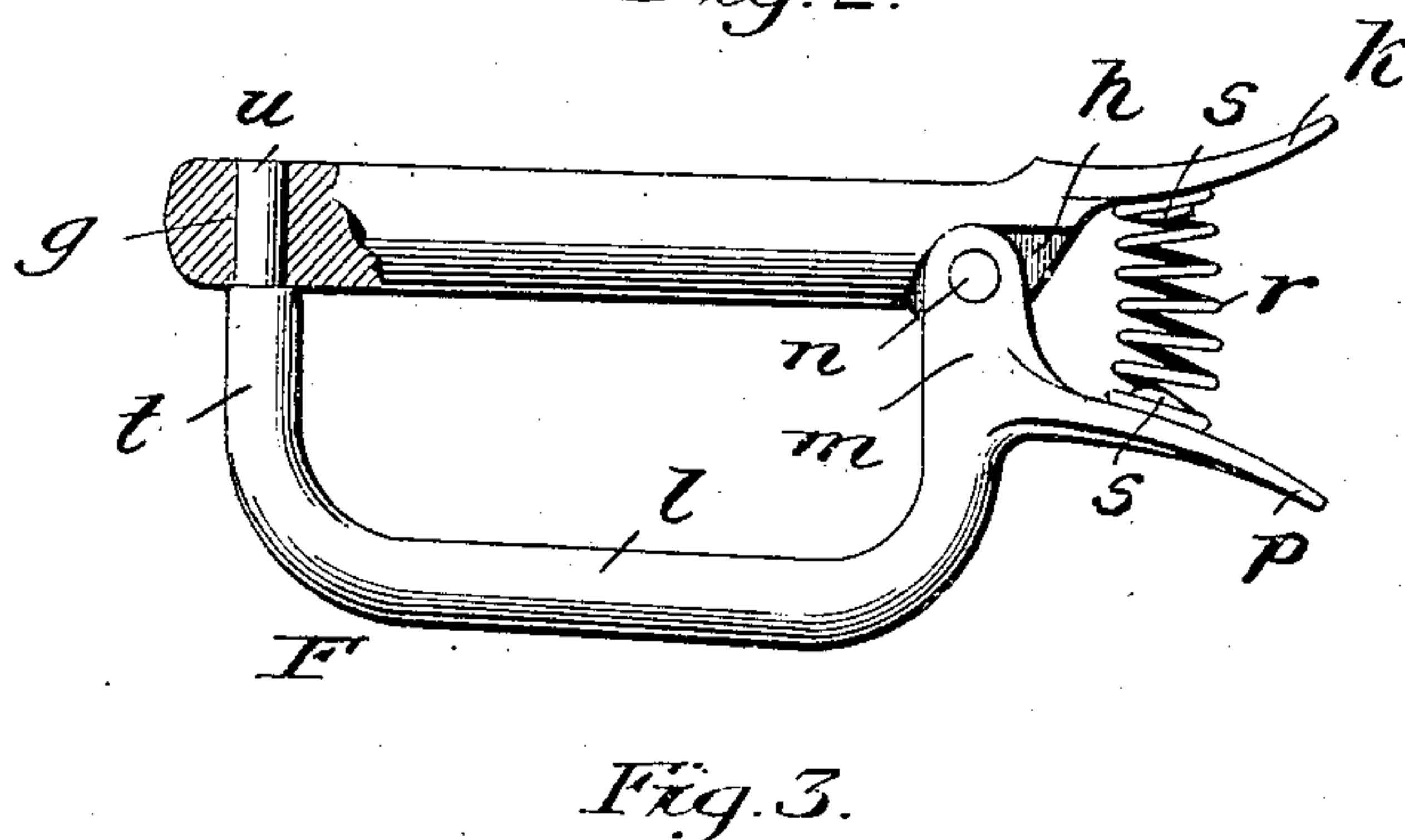
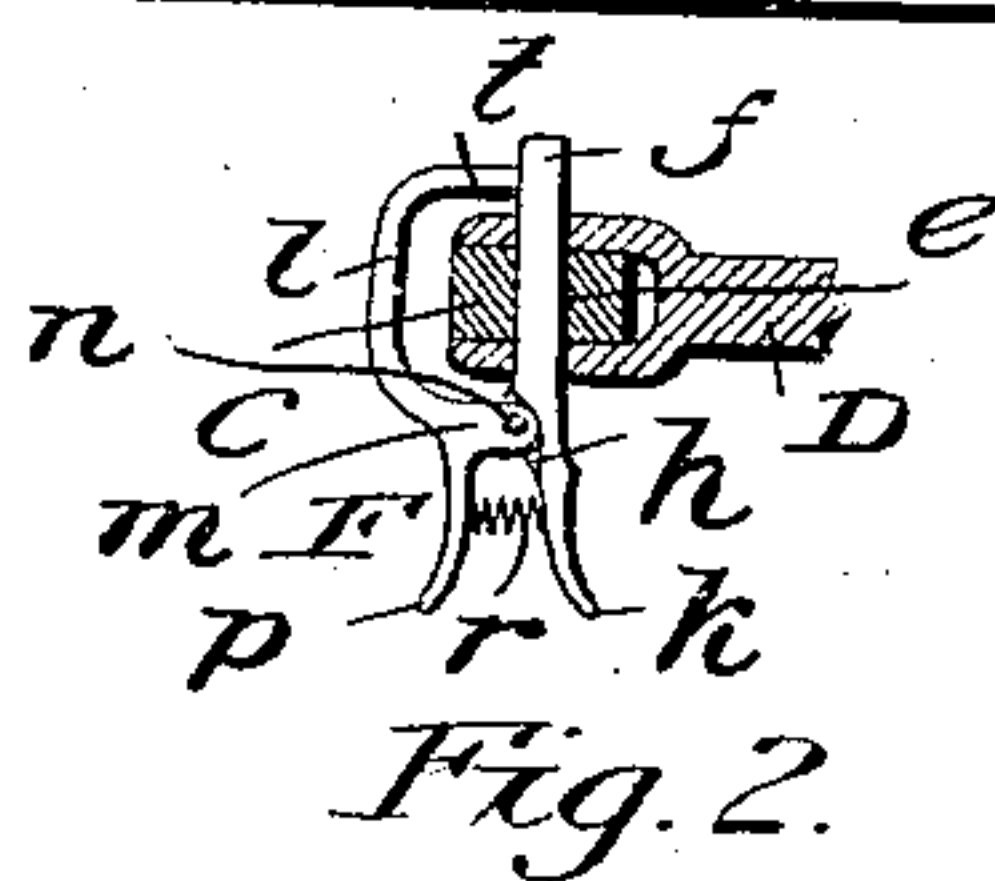
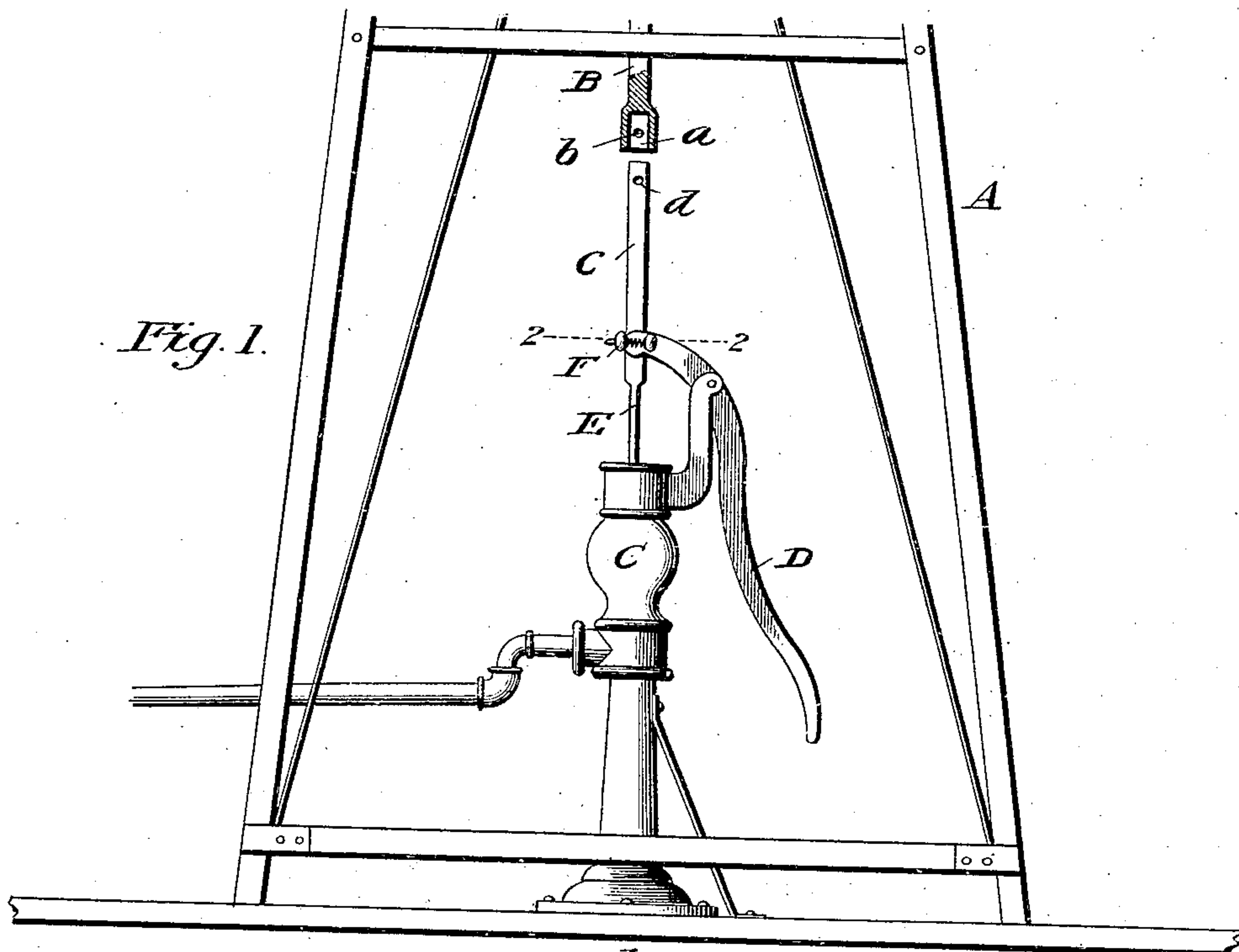


No. 875,408.

PATENTED DEC. 31, 1907.

W. E. BOYD.
PUMP ROD CONNECTION.
APPLICATION FILED JUNE 3, 1907.



Inventor

Witnesses

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PUMP-ROD CONNECTION.

No. 875,408.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed June 3, 1907. Serial No. 377,077.

To all whom it may concern:

Be it known that I, WILLIAM E. BOYD, citizen of the United States, residing at Springview, in the county of Keyapaha and State of Nebraska, have invented new and useful Improvements in Pump-Rod Connections, of which the following is a specification.

My invention pertains to pumps; and it contemplates the provision of simple and easily operated means through the medium of which the piston rod of a pump may be connected to a hand lever and the pitman rod of a windmill, alternately.

With the foregoing in mind the invention will be fully understood from the following description and claim when the same are read in connection with the accompanying drawings, forming part of this specification, in which:

Figure 1 is a view partly in elevation and partly in vertical section illustrating a pump, a portion of the pitman rod of a windmill and my novel connecting device; the said device being shown as effecting connection between the piston rod of the pump and the hand lever thereof. Fig. 2 is a transverse section taken in the plane indicated by the line 2—2 of Fig. 1 and showing the parts of the connection on an enlarged scale. Fig. 3 is an enlarged view, partly in plan and partly in section, of my novel device, removed.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is a portion of a windmill tower.

B is a portion of the pitman rod of a windmill; said rod being provided in its lower end with a socket *a* having transverse apertures *b* in opposite walls thereof.

C is a pump having a hand lever D and a piston rod E; the latter being equipped with an upper flattened portion *c* in which are transverse apertures *d* and *e*, and F is my novel connecting device. The said device F is made of steel or any other metal suitable to the purpose for which it is intended, and it comprises a pin *f*, preferably of circular form in cross-section, having adjacent to its opposite ends an aperture *g* and a lug *h* and also having at its rear end a finger piece *k*, a keeper *l* having an arm *m* straddling and pivotally connected at *n* to the lug *h* and also having a finger-piece *p* extending rearward from the arm *m*, and a coiled spring *r* interposed between the finger-pieces *k* and *p*

and held in position relative thereto by projections *s* on the inner sides of said finger-pieces. In addition to the features mentioned the keeper *l* is provided at its forward end with an arm *t* which terminates in a reduced portion *u* adapted to enter the aperture *g* in the pin *f* after the manner illustrated in Fig. 3. By virtue of the device F being constructed in the manner described it will be observed that when the finger-piece *p* is moved against the action of the spring *r* toward the finger-piece *k*, the end *u* of the keeper *l* will be removed from the aperture *g* in pin *f*, and said pin *f* may then be inserted in and removed from devices to be connected with the same facility as an ordinary pin. It will be noticed, however, that when the pin *f* has been passed through two devices to be connected, and the finger-piece *p* is relieved of pressure, the spring *r* will operate to return the keeper *l* to the position shown, relative to the pin *f*, and said keeper will then serve to effectually prevent casual disconnection of the pin *f* and the device F as a whole from the devices that are to be connected.

In the practical use of my novel connecting device F for the specific purpose stated it will be seen that when it is desired to connect the pump rod E and the hand lever D, it is simply necessary to pass the pin *f* through registered apertures in the rod and lever, and then relieve the finger-piece *p* from pressure when the keeper *l* will immediately assume and remain in the position illustrated in Figs. 2 and 3, relative to the pin *f*, and consequently will serve to effectually prevent casual displacement of the pin and disconnection of the hand lever D from the rod E. When the hand lever D and the pump rod E are connected, as stated, it will be apparent that the pump may be operated in the usual manner by hand.

When it is desired to operate the pump through the pitman rod B of the windmill instead of by hand power, my novel device F is manipulated to permit of the withdrawal of the pin *f* from the pump rod E and hand lever D, and subsequent to said withdrawal, the upper end of the pump rod E is positioned in the socket *a* of the rod B, and the pin *f* is placed in the registered apertures of said rod and socket after which pressure is removed from the finger-piece *p* so as to enable the keeper *l* to assume the position shown in Fig. 3, relative to the pin *f*, and in

that way preclude casual displacement of said pin and disconnection of the pump rod E from the pitman rod B. When the pitman rod of the windmill is utilized to actuate the piston rod of the pump, it will be apparent that the hand lever D will remain idle and hence will not be liable to strike and injure persons standing by the pump.

It will be apparent from the foregoing that my novel connecting device F is of such construction that the pump may be expeditiously and easily changed from a hand operating pump to a power operated pump and vice versa, and this without the employment of skilled labor or tools, and with the expenditure of but little effort on the part of the operator.

While designed more especially for use in connection with a pump and the pitman rod of a windmill, I desire it understood that my novel connecting device is adapted to be used to advantage for other purposes, such for instance as connecting parts of different kinds of machines.

The construction herein shown and described constitutes the preferred embodiment of my invention, but I desire it under-

stood that in practice such changes may be made as fairly fall within the scope of my invention as claimed.

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

A device for the purpose described, comprising a pin terminating at one end in a finger-piece and having a diametrical aperture adjacent to its opposite end and also having a lug adjacent to the inner end of said finger-piece, a keeper having an angular arm at one end pivoted to the lug of the pin and an angular arm at its opposite end arranged to enter the diametrical aperture of the pin and also having a finger-piece extending outward from its first mentioned arm and arranged opposite the first mentioned finger-piece, and a coiled spring interposed between and connected with the said finger-pieces.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM E. BOYD.

Witnesses:

H. M. DUVAL,
W. H. BRANT.