

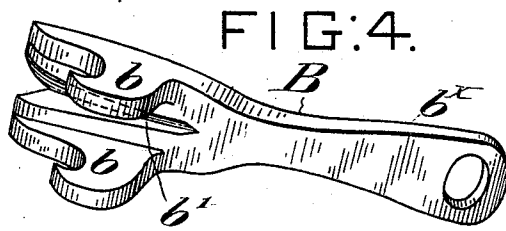
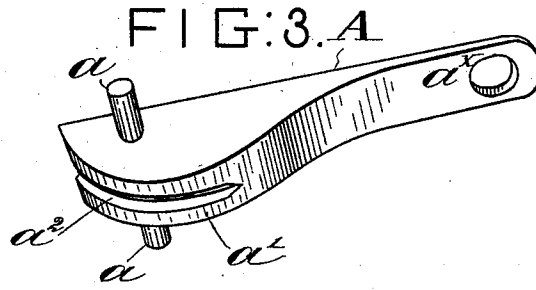
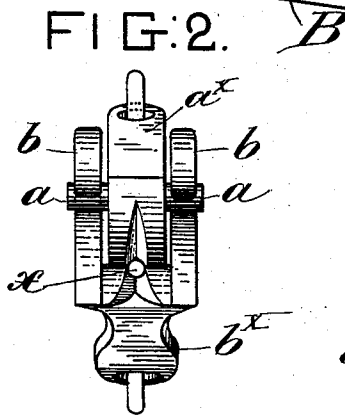
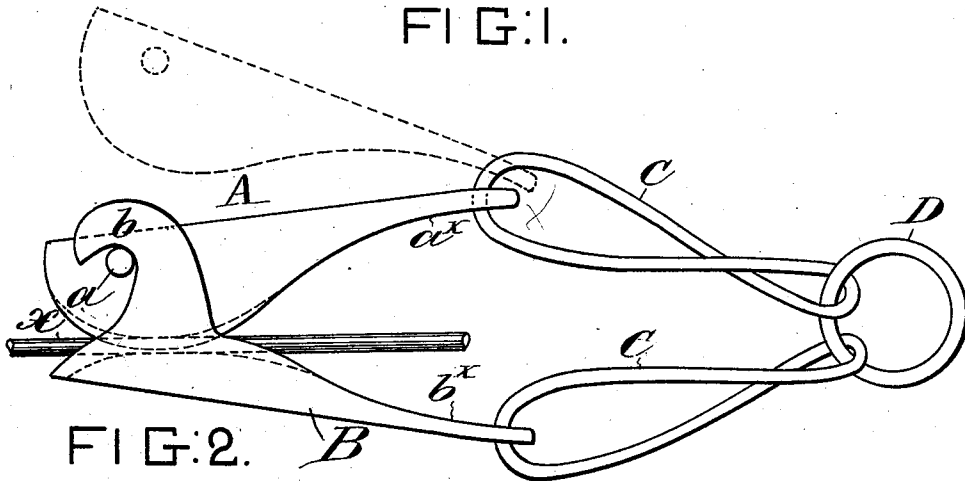
(No Model.)

J. S. HICKS.

CLUTCH FOR DRAWING AND STRAINING WIRES.

No. 601,207.

Patented Mar. 22, 1898.



WITNESSES:

*J. N. Wimmer*  
*Peter H. Ross*

INVENTOR

*Joseph S. Hicks*

BY

*Henry Conner*  
ATTORNEY

# UNITED STATES PATENT OFFICE.

JOSEPH S. HICKS, OF JERSEY CITY, NEW JERSEY.

## CLUTCH FOR DRAWING AND STRAINING WIRES.

SPECIFICATION forming part of Letters Patent No. 601,207, dated March 22, 1898.

Application filed July 30, 1897. Serial No. 646,505. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH S. HICKS, a citizen of the United States, residing at Jersey City, Hudson county, New Jersey, have invented certain new and useful Improvements in Clutches for Drawing and Straining Wires and for Like Purposes, of which the following is a specification.

This invention relates to a self-gripping clutch or tool for general use, but one especially adapted for seizing and straining continuous wires, such as trolley-wires and electrical conductors generally; and the object is to produce a simple, inexpensive, easily-operated gripping-tool, which may be readily applied to a continuous wire and which will grip the wire with a force due to the pull or strain thereon.

In the accompanying drawings, which illustrate an embodiment of the invention, Figure 1 is a side elevation of the clutch shown as clamped on a wire, and Fig. 2 is a front end view of the same as seen from the left in Fig. 1. Figs. 3 and 4 are perspective views of the separable jaws A and B of the clutch detached.

The clutch comprises two separable jaws—namely, a lever-jaw A and a seating or fulcrum jaw B, these two jaws being loosely coupled or linked together at the ends of their handles or stems by links C, coupled to a drawing ring or link D.

The cam-jaw or gripping-jaw A has fulcrum-journals *a a* on the sides of its head, a handle or stem *a<sup>x</sup>*, and a cam-face *a'*, Fig. 3, eccentric to the fulcrum-journals and provided with a groove *a<sup>2</sup>* to receive the wire *x* in clutching it.

The seat-jaw B has two hooks *b* in the nature of cheek-pieces, which loosely embrace the head of the jaw A and form open fulcrum-bearings for the fulcrum-journals *a a* on the last-named jaw when the two jaws are put together as in Figs. 1 and 2. The jaw B has also a handle or stem *b<sup>x</sup>* and a groove *b'*, Fig. 4, in the seat to receive the wire to be clamped.

The handles *a<sup>x</sup>* and *b<sup>x</sup>* of the two lever-jaws are coupled loosely to a draw-ring D by strong links C, as clearly shown.

The construction permits the heads of the jaws to be separated, as indicated by the dotted lines in Fig. 1, which show the jaw A separated

from the jaw B; but they will always be coupled loosely together at the ends of their handles by the links C and ring D. 55

In operating the clutch or gripping-tool the workman takes a jaw in each hand and bringing the two together on the wire rope or the like he hooks the fulcrum-journals *a* on the jaw A into the hooked open fulcrum-journals *b* on the jaw B. Then by bringing the handles of the jaws together or toward each other he causes the head of the jaw A to turn slightly on its fulcrum-journals and thus cause its cam-face to clamp firmly the thing grasped onto the seat of the jaw B. The ring D may be coupled to ordinary tackle for drawing, and the pull will cause the jaws to grip the wire the tighter. 65

Respecting the grooves *a<sup>2</sup>* and *b'* in the respective jaws, these will be by preference of a V form and will extend out to the front ends of respective heads of the jaws, as indicated in the several figures, so as to facilitate the application of the jaws properly to the wire to be gripped and to adapt the jaws to wires of several sizes. 75

The clutch may be made in different sizes to suit different kinds of work or to take in any range of sizes of wire, &c., and it may be made of any material desired. I contemplate making the jaws of malleable iron; but the particular metal employed is not material to my invention. 80

I do not, of course, claim, broadly, a clutching or gripping device which clamps with the pull on the handles, as this is common in ice-tongs and the like; but 85

What I do claim is—

1. A clutch device suited for drawing continuous wires and the like, comprising two separable lever-jaws, one having a convex cam-face *a'* and fulcrum studs or journals *a, a*, thereon, and the other lever-jaw having a convex seat and two hooks *b, b*, adapted to engage with and to be disengaged from said fulcrum-studs, said seat being between said hooks, and said clamping-surfaces, studs and hooks being at one extremity of the levers and the other ends of the levers being provided with links or suitable devices for pulling upon the lever-jaws and upon a wire held by them, all substantially as set forth. 90

2. A clutch device suited for drawing con- 100

tinuous wires and the like, comprising two  
separable lever-jaws, one having a convex  
cam-face  $a'$  provided with a groove  $a^2$ , and hav-  
ing fulcrum studs or journals  $a, a$ , and the  
5 other lever-jaw having a convex seat provided  
with a groove  $b'$ , and having two hooks  $b, b$ ,  
adapted to engage with and to be disengaged  
from said fulcrum-studs, said seat being be-  
tween said hooks, and said clamping-surfaces,  
10 studs and hooks being at one extremity of  
the levers and the other ends of the levers be-

ing provided with links or suitable devices for  
pulling upon the lever-jaws and upon a wire  
held by them, all substantially as set forth.

In witness whereof I have hereunto signed 15  
my name in the presence of two subscribing  
witnesses.

JOSEPH S. HICKS.

Witnesses:

HENRY CONNETT,  
PETER A. ROSS.