(No Model.)

N. B. HELM.

CLEVIS AND PIN.

No. 432,735. Patented July 22, 1890.

Fig. 1.

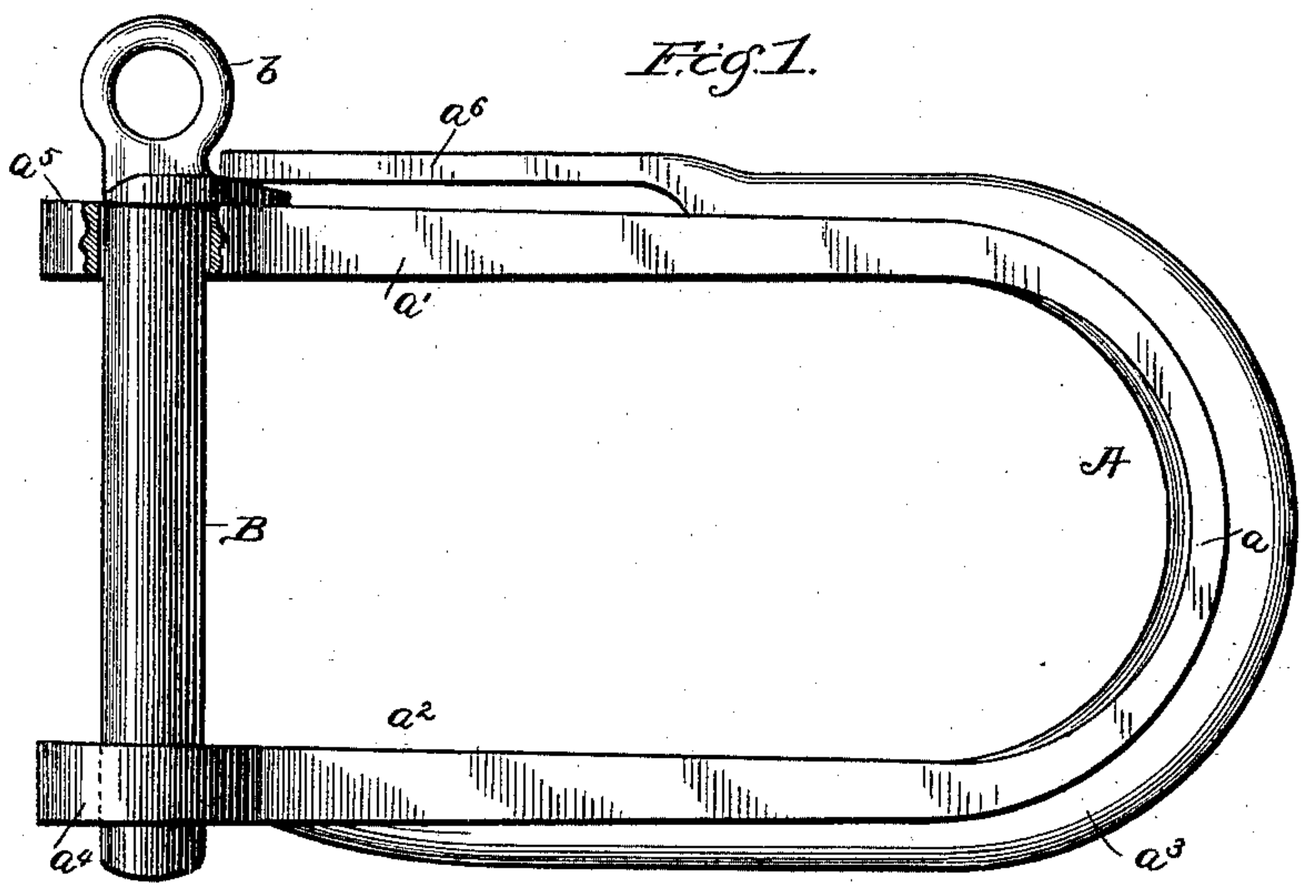
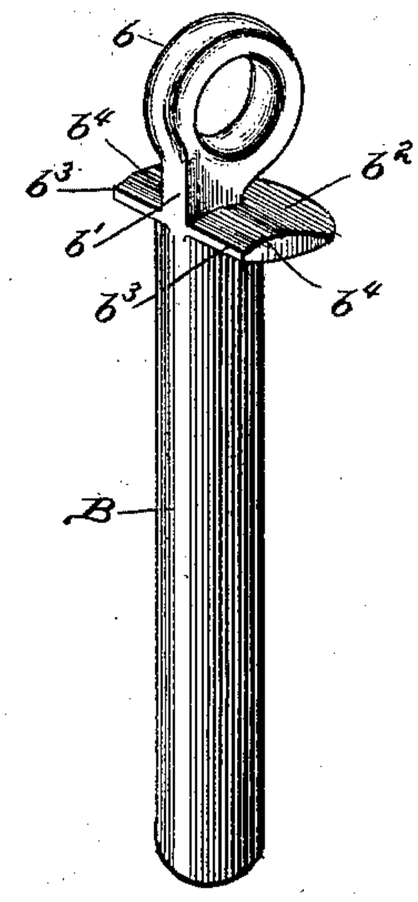


Fig. 2.



Witnesses.
Wm. M. Rheem.
Louis W. T. Whitehead.

Inventor.
Nathan B. Helm.
By Drayton, Cooke & Browne Atty's.

UNITED STATES PATENT OFFICE.

NATHAN B. HELM, OF HARVARD, ILLINOIS, ASSIGNOR TO HUNT, HELM & FERRIS, OF SAME PLACE.

CLEVIS AND PIN.

SPECIFICATION forming part of Letters Patent No. 432,735, dated July 22, 1890.

Application filed December 13, 1889. Serial No. 333,584. (No model.)

To all whom it may concern:

Be it known that I, NATHAN B. HELM, of Harvard, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Clevises and Pins; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in clevises; and the object is to provide a simple, cheap, and durable device that may be readily and quickly connected to a whiffletree, plow, drag, or other implement without the use of links, rings, or other devices.

The invention consists in the novel features of construction herein illustrated and described, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side view of a clevis embodying my invention. Fig. 2 is a perspective view of the clevis-pin.

Referring to Figs. 1 and 2, A is the clevis proper, comprising the bow a and the two arms or links a' a^2. A strengthening-rib a^3 may extend partially or entirely around the bow a and the arms a' a^2, as shown. The end of the lower arm a^2 is provided with an enlargement a^4, having a suitable hole or opening therein, through which the lower end of the clevis-pin B is passed. The end of the upper part a of the clevis is similarly provided with an enlargement a^5 and has a similar hole or opening therethrough. The rib a^3 is preferably so extended upon the arm a' as to form a thin or spring arm a^6, extending from the bow end of the arm a' toward the enlarged end a^5 thereof, but terminating short of the opening in said end a^5. This arm a^6 obviously may be otherwise secured to the arm a'.

B is the clevis-pin, provided at its upper end with a loop or handle b, one side b' of which is straight. Below the loop or handle b the pin B is provided with a flanged extension b^2, extending upon all sides of the pin B, except that on which the vertical or straight face b' is located, said extension terminating in abrupt faces b^3, as clearly shown in Fig. 2. The flange b^2 is provided on either side of the face b' and adjacent to the faces b^3 with inclined portions, constituting a cam b^4. The depth or thickness of the flange b^2 at its cam portions b^4 is equal or slightly greater than the normal distance between the adjacent faces of the spring-arm a^6 and the arm a' of the clevis.

The operation of the device is as follows: The pin B is turned so that its side bearing the face b' is opposite to the extreme end of the spring-arm a^6. The pin B is then passed vertically through the opening in the enlarged end a^5 and the opening in the enlarged end a^4, and when in position the bottom face of the flange b^2 will rest upon the upper face of the enlarged end a^5. The pin will now be revolved in its bearings until the position of the flange is the reverse of that described—that is, until it is in the position illustrated in Fig. 1. In so revolving the pin B the spring end of the arm a^6 is slightly raised by the action of either cam b^4 and is allowed to again resume its normal position after passing either of said cams. It will thus be seen that the parts are secured together by the simple insertion of the pin B through the openings in the ends of the clevis and the revolving of the pin in its bearings. It will also be noticed that the cams b^4 are relatively narrow and that the portion of the flange b^2 between said cams and opposite to the face b' is relatively long and low. By such construction it is found that the pin B, when in the clevis, as shown in Fig. 1, may receive a slight rotary motion therein without tending to separate the parts. This slight rotary movement is very advantageous, because of the strain on the parts when the clevis is in use.

I claim as my invention—

1. The combination, with a clevis having holes through the extremities of its arms and provided with a spring on the outside of one

of its arms, of a pin provided with a cam-flange, adapted to pass beneath and engage the end of the spring.

2. The combination of the yoke A, provided with the arm a^6, and the pin B, provided with a flange b^2 and a straight portion b' b^3, said flange b^2 comprising two cams b^4 b^4 and a central relatively thin portion, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

NATHAN B. HELM.

Witnesses:
E. H. SENGER,
A. C. MANLEY.