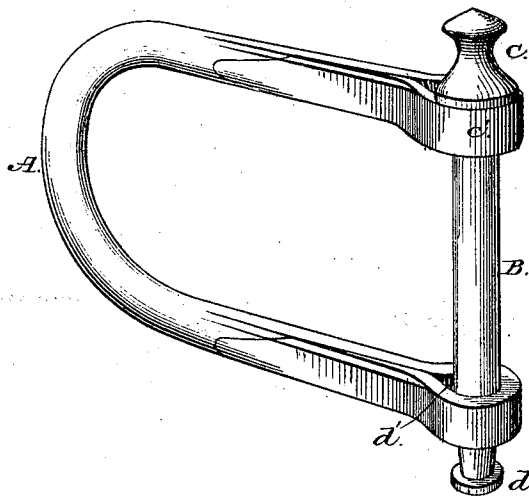


H. M. WILLIS.  
Clevis-Bolt.

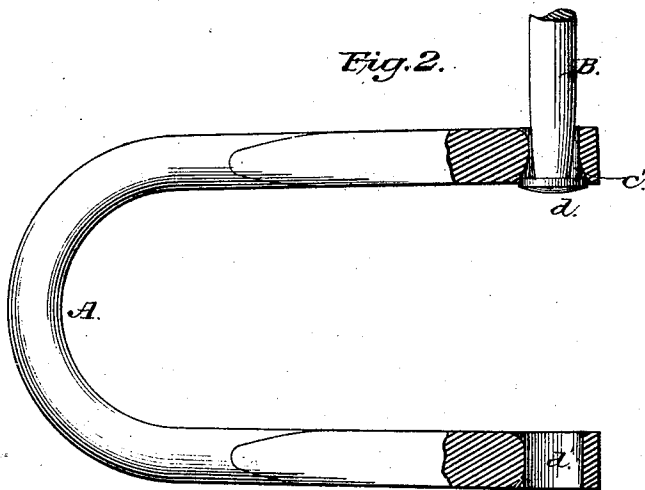
No. 207,375.

Patented Aug. 27, 1878.

*Fig. 1.*



*Fig. 2.*



WITNESSES

*John A. Ellis.*  
*E. H. Bates*

*Henry M. Willis*  
INVENTOR

*by Geo. A. Sawyer.*

ATTORNEY

# UNITED STATES PATENT OFFICE.

HENRY M. WILLIS, OF MINEOLA, NEW YORK.

## IMPROVEMENT IN CLEVIS-BOLTS.

Specification forming part of Letters Patent No. 207,375, dated August 27, 1878; application filed July 2, 1878.

*To all whom it may concern:*

Be it known that I, HENRY M. WILLIS, of Mineola, in the county of Queens and State of New York, have invented certain new and useful Improvements in Clevis-Bolts; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings.

The object of my invention is to provide a bolt adapted to all the purposes of a clevis, and at the same time being inseparable from the clevis.

In the use of the ordinary clevis-bolt, held in position by a common pin, it has been found that the bolt frequently becomes detached and is lost.

By the use of my non-detachable bolt any liability to this loss is removed, and the clevis and the bolt being practically but one attachment, greater convenience is given to the user of agricultural implements requiring a clevis.

By the use of my invention the common bolt-pin is not required, the construction of the bolt permitting its disuse.

Referring to the drawings, Figure 1 represents the clevis with the bolt drawn out to its full extent, and Fig. 2 shows the clevis with the bolt in position.

A is the clevis; B, the bolt with the heads

*c d* made at or near each extremity. The clevis-eye *c'* is made smaller than the other eye *d'*. By this arrangement the head *d* of the bolt is allowed to pass through the eye *d'*, while its size will not permit of its passage through the eye *c'*, thus making the bolt inseparable from the clevis. When the clevis is in use on an agricultural implement the bolt is held in position and made self-keying by the pressure of the whiffletree upon it, the head *d* not readily permitting the upward sliding of the bolt while this pressure is exerted. If, however, for any reason I choose to make the bolt additionally secure, I can insert a pin through a hole made in its lower extremity, or adopt some other simple device; but on any such arrangement I make no special claim.

What I do claim, and desire to secure by Letters Patent, is—

A clevis having eyes of unequal size, in combination with a bolt moving therein having a head on each end, the head on one end too large to pass through either eye, and the head on the other end passing through but one eye, thereby making the clevis and bolt inseparable, substantially as described.

HENRY M. WILLIS.

Witnesses:

H. W. EASTMAN,  
F. M. EASTMAN.