C. D. HAVENS.

CLEVIS.

APPLICATION FILED NOV. 26, 1913.

1,095,859. **Patented May 5, 1914.**

Fig. 1

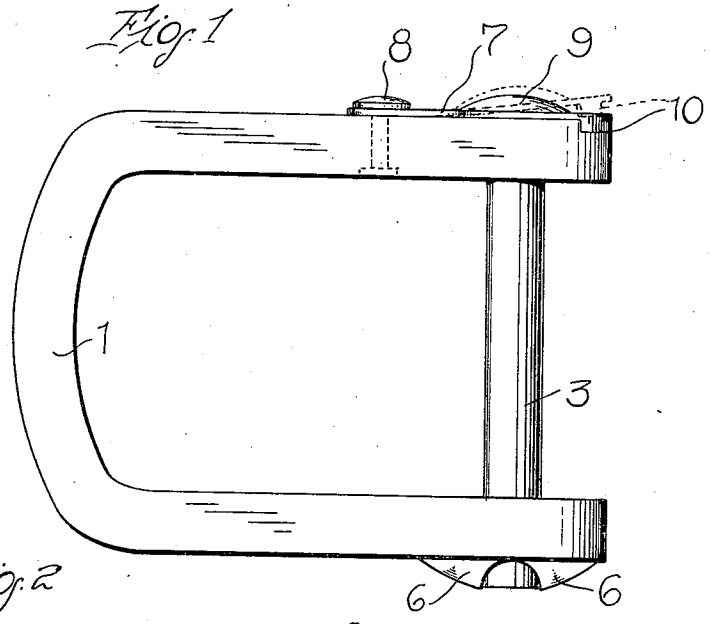


Fig. 2

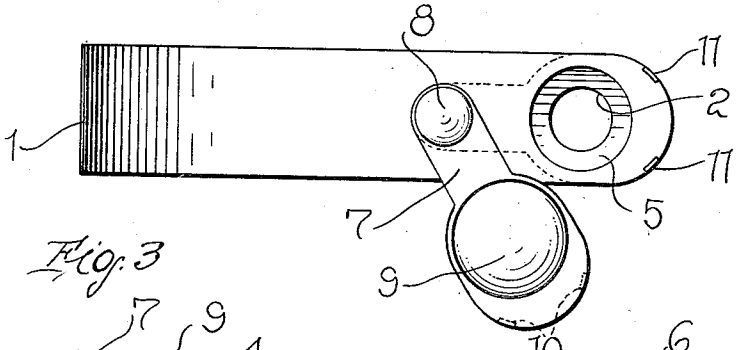


Fig. 3

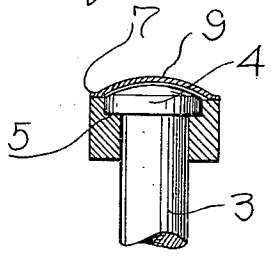
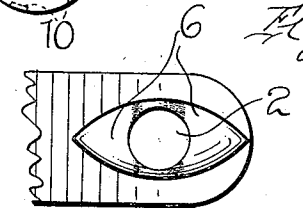


Fig. 4



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CLEVIS.

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To all whom it may concern:

Be it known that I, CHARLES D. HAVENS, a citizen of the United States, residing at Fairfax, in the county of Osage and State of Oklahoma, have invented certain new and useful Improvements in Clevises, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in clevises in connection with vehicle tongues and poles and the primary object of the invention is to provide an improved clevis in which means is provided for the retention of the pivot pin or bolt in place.

A further object of the invention resides in providing a clevis which is so constructed as to avoid the interference in the operation of the swingle-tree or double-tree and which will not become unduly worn in ordinary usage.

Still another object of the invention resides in providing a device which is simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is an elevation of a clevis constructed in accordance with my invention. Fig. 2 is a plan view thereof with the bolt removed. Fig. 3 is a fragmentary vertical section therethrough; and Fig. 4 is a fragmentary bottom plan view of the device.

In describing my invention, I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which 1 indicates the body of a clevis of the usual U-shaped design, the free ends of the arms of which are provided with the alining openings 2. A pivot pin or bolt 3 is designed for introduction through the alining openings 2, said bolt having a head 4 thereon which is adapted to be partially received in a recess or counter-sunk portion 5 in the outer face of the one arm of said body. The outer face of the head 4 projects slightly beyond the outer face of the referred to arm of said body and the outer face of the opposite arm adjacent the opening therein is bossed on both sides thereof, as shown at 6 to partially inclose the outer projecting end of the bolt 3. The bosses 6 are beveled so that any member contacting therewith will ride thereover and be prevented from engagement with the outer or free end of said bolt and these bosses on opposite sides of the opening in the arm of the body are so designed as to admit of the finger of the operator to be received therebetween to force the bolt upwardly through the openings in the arms when it is desired to remove the bolt. It will be seen that in this construction no means is provided in connection with the free end of the bolt for the retention of the latter in place, it being an object of this invention to eliminate such means in view of the inconveniences and difficulties heretofore experienced in the use of the same. It is a well known fact that the use of cotter pins, nuts and other engaging means in a clevis affords a means whereby the latter may become unduly worn and readily engage with other members with which the clevis in use might contact. I, therefore, provide an improved means for the retention of the bolt in place which consists of a plate-like member 7 which is pivotally secured on a rivet or pin 8 in the arm of the body in which the recess 5 is provided. The pivoted end of the plate-like member 7 is reduced somewhat and the main or body portion of the plate is bulged outwardly or recessed, as shown at 9, to readily receive therein the projecting portion of the head 4 of said bolt 3. This plate member 7 is formed of spring metal and is adapted to be forced in place over the projecting portion of the head of the bolt, in the application of the plate member to its effective position and it must be here stated that this plate member is of such construction as to conform to the contour or outline of the one end of the arm of the body of the clevis.

When the plate-like member 7 has been forced into effective position over the head of the bolt, the projecting portion of the head of the bolt will be received in the bulged portion of the plate-like head member, although the head of the bolt itself will not positively contact with the wall of said bulged portion, inasmuch as it is a feature of the invention to avoid such contact during the use of the device. By permitting the inner wall of the bulged por-

tion of the plate-like member to avoid contact with the head of the bolt, any corrosion of the metal will not prevent the ready operation of said plate member.

In order to lock the plate member in its effective position, when so disposed, inwardly extending lugs 10 are formed adjacent the outer edge of the plate member on opposite sides thereof. These lugs are adapted to fit in slight recesses or notches 11 formed in or attached to the particular arm to which said plate member is applied. It will, of course, be understood that this plate member is slightly loose on its pivot, in order to admit of the same being removed from the arm of the body of the clevis. The same being of spring metal, however, will admit of the same being applied or removed, with but a slight loose movement at the pivot point thereof. This spring plate member 7 may be said to form a cap for the head of the bolt, for the retention of the latter in place and when said cap is disposed to its operative position over the head of the bolt, it will be seen that the same is seated closely against the upper side of the upper arm of the clevis and avoids any possibility of the same being accidentally displaced. It will also be seen that the cap member is formed of a single piece of metal and has no lateral projections which are liable to contact with members coming in contact with the clevis during the operation of the device. It will also be seen that the bossed portions 6 on the lower arm of the clevis will protect the lower projecting portion of the bolt and prevent the latter from being raised, while the cap is in proper position and also permit the clevis to be readily passed over any surface, without contacting with said bolt.

It will also be seen that this device is simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

While I have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described this invention, what I claim is:—

1. A clevis of the class described comprising a U-shaped body having openings in the arms thereof, a bolt introduced through said openings, a spring cap member pivotally carried on the one arm of said body to cover the head of said bolt and retain the latter in place in the body, and lugs formed on the outer end of said cap member adapted for engagement with portions of the body to retain said cap member in place thereon.

2. A clevis of the class described comprising a U-shaped body having alining openings in the arms thereof, one arm of said body being also provided with notches adjacent the free end thereof, a bolt introduced through said alining openings, a spring cap member pivotally carried on the last mentioned arm of the body and designed to cover the head of the bolt to retain the latter in place in said body, and integral lugs formed on said cap member adapted to be received in the notches of the arm of said body to retain said cap member in its operative position on said body.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

CHARLES D. HAVENS.

Witnesses:
FRANK O. QUARLES,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."