No. 630,169. Patented Aug. 1, 1899.

C. W. BLACK.

CLEVIS.

(Application filed Apr. 3, 1899.)

(No Model.)

Fig. 1.

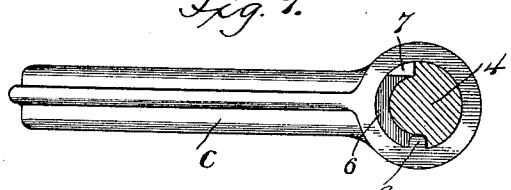


Fig. 5.

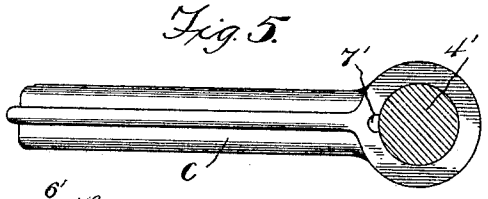


Fig. 10.

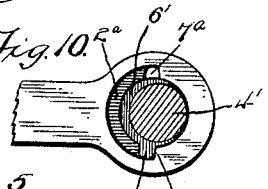


Fig. 2.

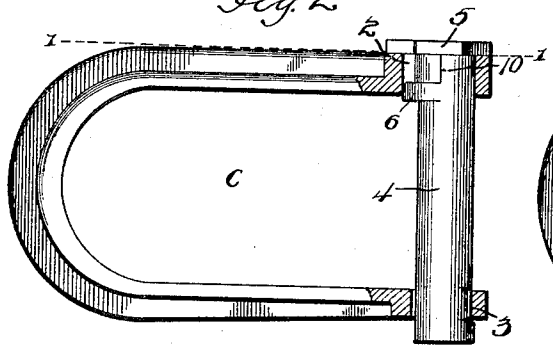
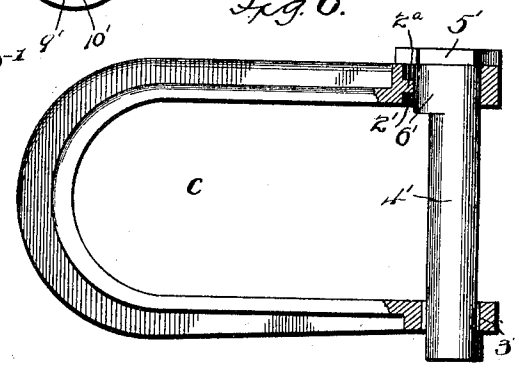


Fig. 6.



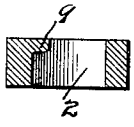


Fig. 3.

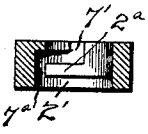


Fig. 7.

Fig. 4.

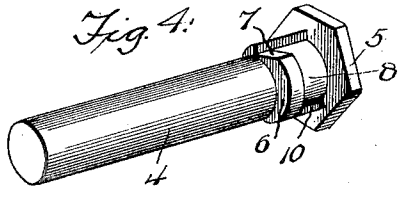


Fig. 9.

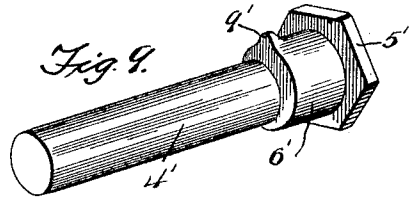
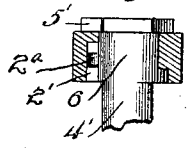


Fig. 8.



Witnesses

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Heath Sutherland

Charles W. Black Inventor

By his Attorneys.

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES W. BLACK, OF MICHIGAN CITY, INDIANA, ASSIGNOR OF ONE-HALF TO AUGUST P. TIMM, OF SAME PLACE.

CLEVIS.

SPECIFICATION forming part of Letters Patent No. 630,169, dated August 1, 1899.

Application filed April 3, 1899. Serial No. 711,543. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BLACK, a citizen of the United States, residing at Michigan City, in the county of La Porte and State of Indiana, have invented a new and useful Clevis, of which the following is a specification.

This invention relates to clevises for use in connection with wagons, farming devices, and other like appliances; and the object of the invention is to provide a simple and easily and cheaply manufactured clevis which is so constructed as to lock the pin firmly in place. In the common and old style clevis the pin when in draft always had a tendency to work up and out of the clevis and doubletree or evener to which the clevis is coupled, thereby cutting off and losing any leather or iron-wire key inserted in the lower end of the pin to hold it in place. By my construction I provide a pin that will stay absolutely in place under all conditions.

With these ends in view the invention consists in the novel combination of elements and in the construction and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand the invention, the preferred embodiment thereof is illustrated in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a section on line 1 1 of Fig. 2 looking downwardly. Fig. 2 is a side elevation of the same, with the upper and lower branches or members of the clevis in longitudinal section. Fig. 3 is a detail sectional view taken transversely through the pin-opening in the upper branch of the clevis. Fig. 4 is a detail perspective view of the clevis-pin. Fig. 5 is a view similar to Fig. 1, showing a modification of the device. Fig. 6 is a side elevation thereof, the upper and lower branches of the clevis being partly in section. Fig. 7 is a detail sectional view taken through the pin-opening in the upper branch of the clevis. Fig. 8 is a similar view showing the pin in place. Fig. 9 is a detail perspective view of the modified form of pin. Fig. 10 is an underneath plan view of the end of the upper branch of the clevis, the pin being shown in section.

Like characters denote like and corresponding parts in each of the several figures of the drawings.

In the drawings a clevis C is represented and it is of a familiar shape, and it has at the outer ends of its upper and lower branches the pin holes or openings 2 and 3, respectively, which receive the pin 4, having at its upper end the head 5. The pin 4 at a place near its head is provided with the eccentric or bulge 6, which, it will be seen upon an inspection of Fig. 1, is disposed with its major diameter in the line of draft of the horse, and said eccentric is adapted to bind or wedge against the adjacent wall of the opening, as hereinafter described, so that the pin cannot turn. The eccentric has an irregular recess or slot, the short portion 7 of which is adapted to receive the spur 9, extending inward from one side of the wall of the upper clevis-pin opening 2 when said pin is introduced in place, and this spur is adapted to enter in the longitudinal portion 8 of the irregular recess when the pin is turned and until it abuts against the shoulder 10 at the end of the recess, as shown in Figs. 1 and 2, at which time the eccentric 6 will be with its major diameter in the line of draft, and the spur by engaging in the longitudinal portion 8 of the irregular slot or groove is for the purpose of keeping the pin from working up or jumping out when in use, and the eccentric by binding against the wall of the opening serves to prevent the rotation of the pin, as in case it should turn the transverse and short portion 7 of the irregular slot could be brought opposite the spur 9, in which event the pin could be forced from the clevis. Upon an inspection of Fig. 1 it will be seen that the transverse portion 7 of the irregular slot is located at a comparatively remote distance from the spur 9 and the eccentric is upon the line of draft, so that by binding against the wall it is adapted to prevent retractive movement of the pin back to the point at which the recess 7 can aline with the spur 9. In order to allow rocking of the pin in the upper opening to cause binding of the eccentric with the wall of said opening, the lower opening 3 in the clevis is elongated or elliptical, thereby permitting the lower end of the pin to move

forward and backward freely. This arrangement also permits the ready application and removal of the pin because of the play afforded the latter. The invention therefore includes a clevis and a pin, one of said parts having a spur serving to prevent the pin jumping from place, and also one of said parts having an eccentric, which when said pin is in its normal position has its major diameter in the line of draft thereof and permits wedging of the pin against rotary movement. As hereinbefore set forth, the spur is upon the clevis, while the recess which receives the same is upon the pin; but it is apparent that this relation can be reversed.

In Fig. 9 the pin 4′ is provided with an eccentric 6′ near its head 5′ and which has at the lower end thereof the spur 9′, which is adapted to successively enter the branches 7′ and 7ª of an irregular recess or slot formed in the wall of the opening 2′, as indicated clearly in Fig. 7, and said spur when the pin 4′ is in its normal position is adapted to engage the shoulder 10 at the end of the irregular slot, at which time it will be seen (Fig. 6) that the eccentric 6′ is in the line of draft, and said eccentric by binding against the ledge 2ª in said opening will prevent turning of the pin, and consequently prevent the branch 7′ of the irregular slot from being brought in line with the spur 9′, as in such event the pin could be forced out.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. The combination of a clevis and its pin, and one of said parts having an eccentric adapted to engage the other part, and said eccentric being disposed with its major diameter in the line of draft of the pin when the latter is in its normal position, and one of said parts having a spur and the other part having an irregular recess to receive said spur, substantially as described.

2. The combination of a clevis and its pin, said pin having an eccentric, and said eccentric being disposed with its major diameter in the line of draft of said pin when the latter is in its normal position, and one of said parts having a spur and the other part having an irregular recess to receive said spur, substantially as described.

3. The combination of a clevis and its pin, said clevis having a spur and the pin being provided with an eccentric having an irregular slot to receive the spur, and said eccentric, when the pin is in its normal position, being disposed with its major diameter in the line of draft on said pin, substantially as described.

4. The combination of a clevis and its pin, said pin being provided with an eccentric adapted to engage the clevis and which is disposed with its major diameter in the line of draft on the pin when the latter is in its normal position, and a spur on one of the parts adapted to engage the other part to prevent endwise movement of the pin, substantially as described.

5. The combination with a U-shaped clevis, the branches of which have openings and the wall of one of said openings having a spur and the other opening being elongated, and a pin adapted to be introduced into said openings and to be engaged and held against endwise movement by said spur, and said pin having an eccentric which is disposed with its major diameter in the line of draft on the pin when the latter is in its normal position, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES W. BLACK.

Witnesses:
FRANK M. HOBART,
HENRY HALLER.