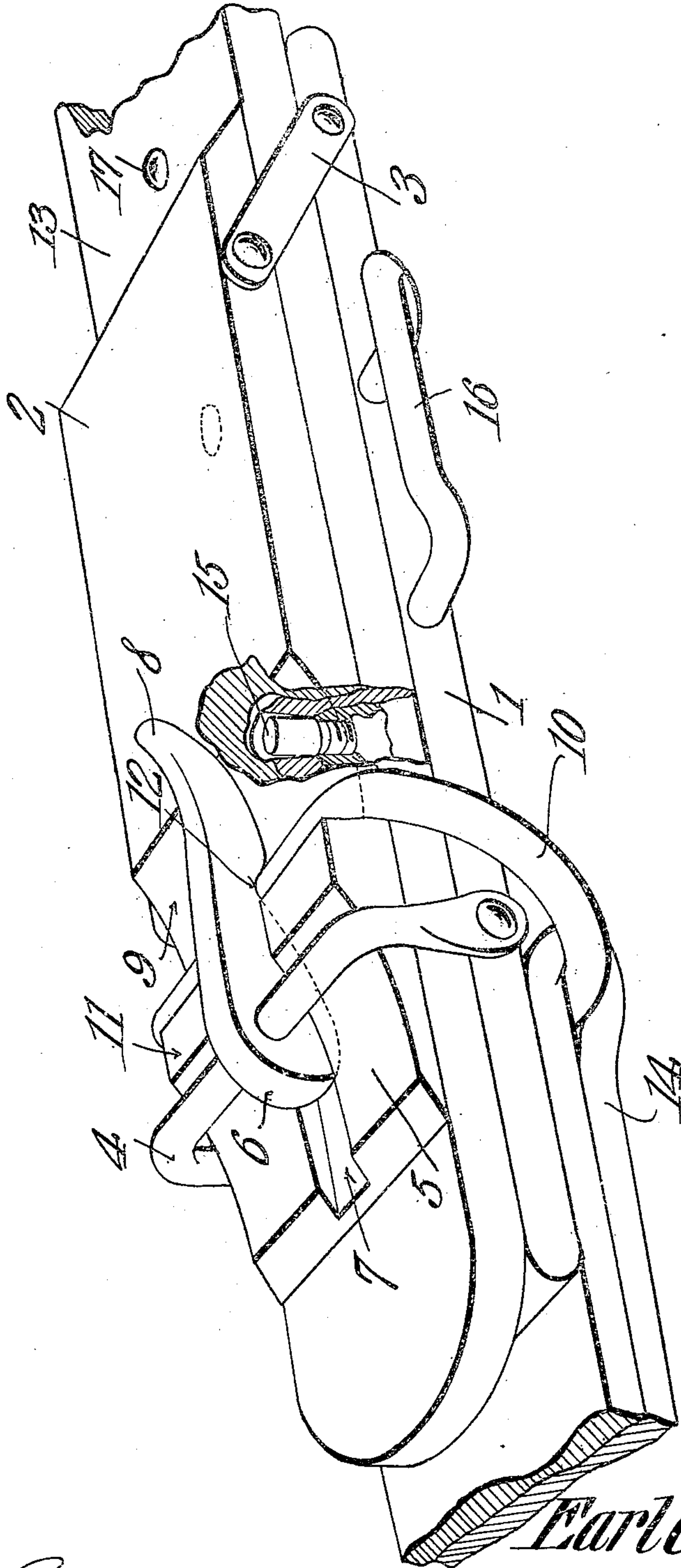


E. C. KIMBALL.  
TRACE BUCKLE.  
APPLICATION FILED JAN. 12, 1910.

959,868.

Patented May 31, 1910.



Witnesses.

*Mason B. Lawton*

Inventor

*Earl C. Kimball*

By

*Chas. Snow & Co.*  
Attorneys



# UNITED STATES PATENT OFFICE.

EARL C. KIMBALL, OF NAPER, NEBRASKA.

TRACE-BUCKLE.

959,868.

Specification of Letters Patent.

Patented May 31, 1910.

Application filed January 12, 1910. Serial No. 537,769.

*To all whom it may concern:*

Be it known that I, EARL C. KIMBALL, a citizen of the United States, residing at Napier, in the county of Boyd and State of Nebraska, have invented a new and useful Trace-Buckle, of which the following is a specification.

The objects of the invention are, generally, the provision in a merchantable form of a device of the class above described which shall be inexpensive to manufacture, facile in operation, and devoid of complicated parts; specifically, the provision of a buckle comprising a pair of flat plates adapted to inclose two or more strap ends between them; of novel means for assembling one of said plates with the other; of novel means for actuating one of said plates toward the other in clamping relation; of resilient means for controlling and holding the clamping means; other and further objects being made manifest hereinafter as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for certain distinctive and peculiar features of the device, it being understood, that within the scope of what hereinafter is thus claimed, divers changes in the form, proportions, size, and minor details of the structure may be made, without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the accompanying drawing wherein my device is shown in perspective.

In carrying out my invention, I provide primarily a lower plate denoted by the numeral 1. Above this lower plate 1, is disposed an upper plate 2, of substantially the same width as the lower plate 1, but of slightly less length. The upper plate 2 is hinged for movement in the direction of its length, to the lower plate 1, by means of connecting members 3, the ends of which are pivotally assembled with the edges of the lower plate 1 and of the upper plate 2, adjacent one end of the device. The end of the lower plate 1 which is remote from the connecting members 3, carries a transversely disposed pivotally mounted clevis

4, arranged to upstand from the upper surface of the lower plate 1. As hereinbefore stated, the upper plate 2 is hinged for longitudinal movement upon the lower plate 1, and in order to enable the free end of the said upper plate 2 to move beneath the clevis 4 when the said plate 2 is moved longitudinally, the plate 2 is tapered at one end as denoted by the numeral 5.

Journalled for rotation upon the clevis 4, intermediate its ends, is a cam 6, the head of which is adapted to engage the upper face of the upper plate 2, to force the said upper plate 2 downward toward the lower plate 1, to clamp between the said plates, the end of a strap 13, which may be a trace extending from the buckle of my invention to the draft tree of a vehicle.

The chamfered portion 5 of the upper plate 2 is longitudinally channeled as denoted by the numeral 7, to receive the cam 6, the said channel serving to restrain the cam 6 against lateral movement, and to hold it in place intermediate the ends of the clevis 4. The cam 6 terminates in a lever 8 which extends from the clevis 4, longitudinally of the upper plate 2. The upper plate 2 is transversely cut away as denoted by the numeral 9, to receive the end 8 of the cam, the transverse excision 9 resulting in the formation in the upper face of the upper plate 2, of a transverse, upstanding shoulder 11, having functions hereinafter described.

A bail 10 is provided, arranged to inclose the plates 1 and 2 and the strap end 13, which is disposed between them. This bail 10 is adapted to rest in the transverse excision 9 of the upper plate 2 and to bear against the shoulder 11, which upstands from the upper face of the plate 2. When the cam 6 is disposed in the position shown in the drawing, the lever end 8 thereof, rests normally upon the bail 10, the lever end 8 of the cam being cut away upon its lower face to form a notch 12, adapted to receive the bail 10. With that portion of the bail 10 which lies beneath the lower plate 1 there is assembled, in any suitable manner, the extremity of a strap 14 which, in the present instance, may be considered to be a portion of a trace, extending from the buckle of my invention to the collar of the draft animal.

If desired, the lower plate 1 may be provided upon its upper face, with an upstanding stud 15 adapted to engage with apertures 17 in the strap 13 which is disposed



between the plates 1 and 2. This stud 15 is not absolutely necessary for the proper working of the device, and, if desired, it may be dispensed with. With this end in view, I have threaded the lower extremity of the stud 15 as clearly shown in the drawings in order that it may be assembled with, and at will removed from, the lower plate 1. If desired, the lower plate 1 may be provided upon its remote edges with laterally extending staples 16, adapted to receive the back band 7, or other harness elements.

In practical operation, assuming the device to be in the position shown in the drawing the lever 8 of the cam may be swung upon the clevis 4, toward the strap 14, whereby the cam 6 will be free from its hold in the channel 7 of the plate 2. The plate 2 may then be moved longitudinally, the connecting elements 3 enabling the said plate 2 to be spaced vertically from the plate 1, whereupon the strap 13 may be moved longitudinally between the plates 1 and 2. When the strap 13 has been adjusted to the required position, the lever end 8 of the cam is drawn into the position shown in the drawings whereby the said plates 1 and 2 will rigidly be clamped upon the end of the strap 13.

It will be seen that when the device is subjected to the oppositely disposed tension of the straps 13 and 14, the cam 6 will engage the plate 2 with a force increasing with the tension in the straps. The bail 10 engaging

the shoulder 11 of the upper plate 2, will tend to draw the plates 1 and 2 together, clamping the strap 13 with a pressure increasing as the tension in the strap elements 13 and 14 increases.

The device, although of simple construction, furnishes a means adapted to clamp together, without mutilation, the ends of a pair of straps which are subjected to great tensile strain, such for instance, as the traces of a harness.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:—

A device of the class described comprising a lower plate; a clevis transversely mounted on the lower plate; an upper plate hinged for longitudinal movement upon the lower plate and arranged to extend within the clevis; a cam carried by the clevis and arranged to engage the upper plate; a bail inclosing the plates; the upper plate being provided with a shoulder and a recess to receive the bail; and the cam being arranged to engage the bail to lock the same in the recess and against the shoulder.

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

EARL C. KIMBALL.

Witnesses:

C. GUY CROSBY,  
GEO. R. CROSBY.