

(No Model.)

F. SWEETLAND.
BICYCLE SADDLE.

No. 474,106.

Patented May 3, 1892.

Fig. 1.

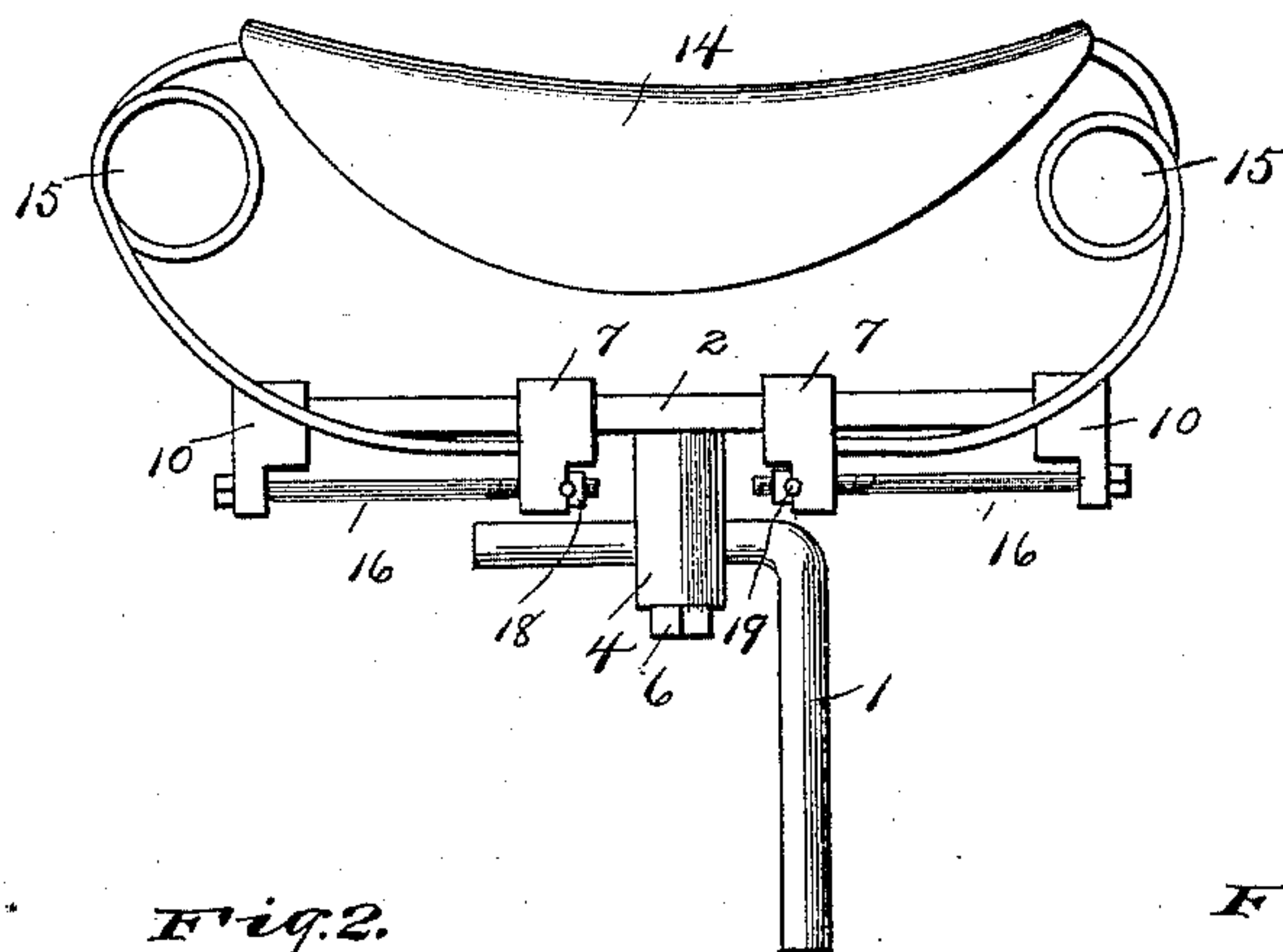


Fig. 2.

Fig. 3.

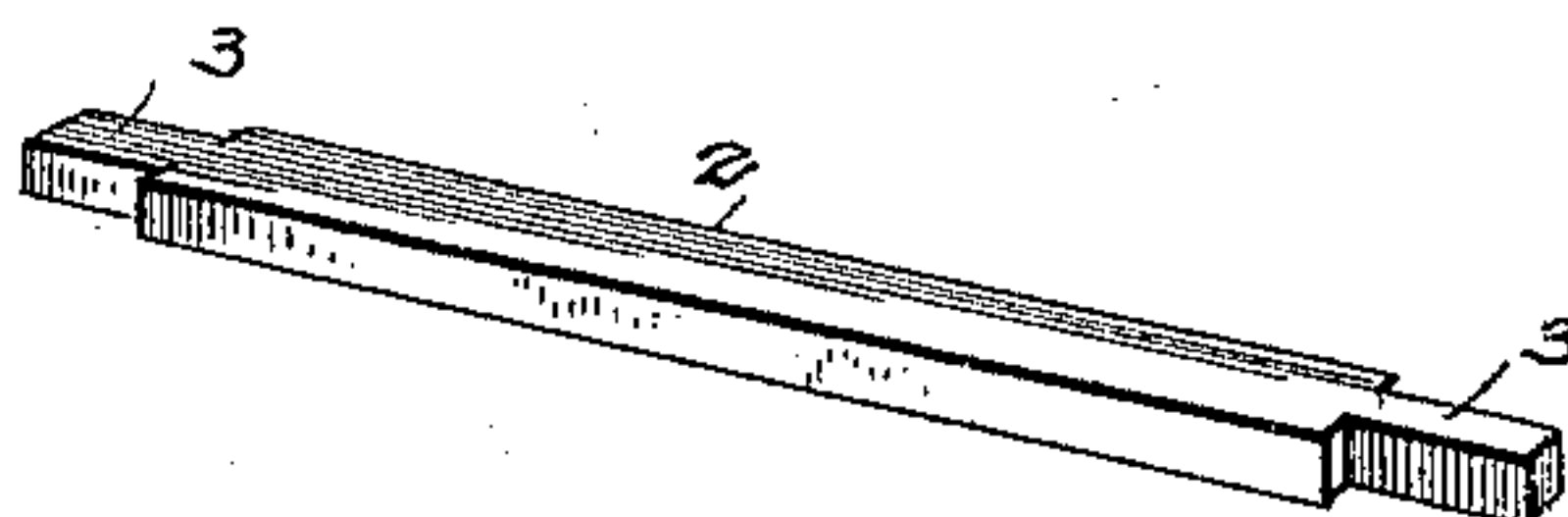


Fig. 4.

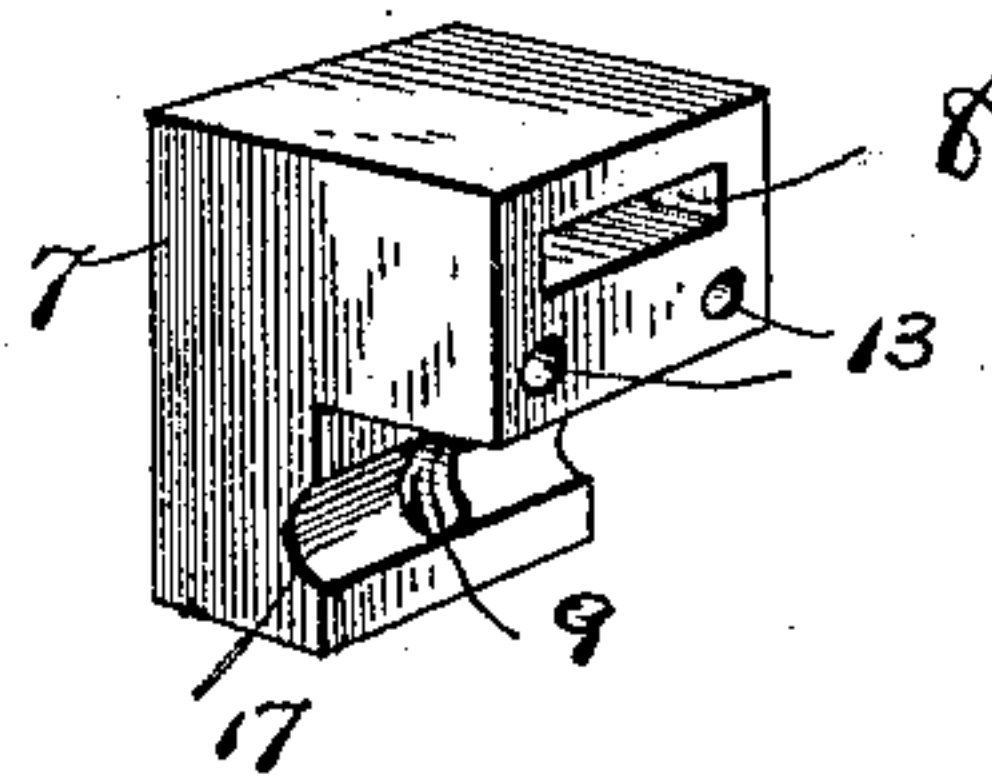


Fig. 5.

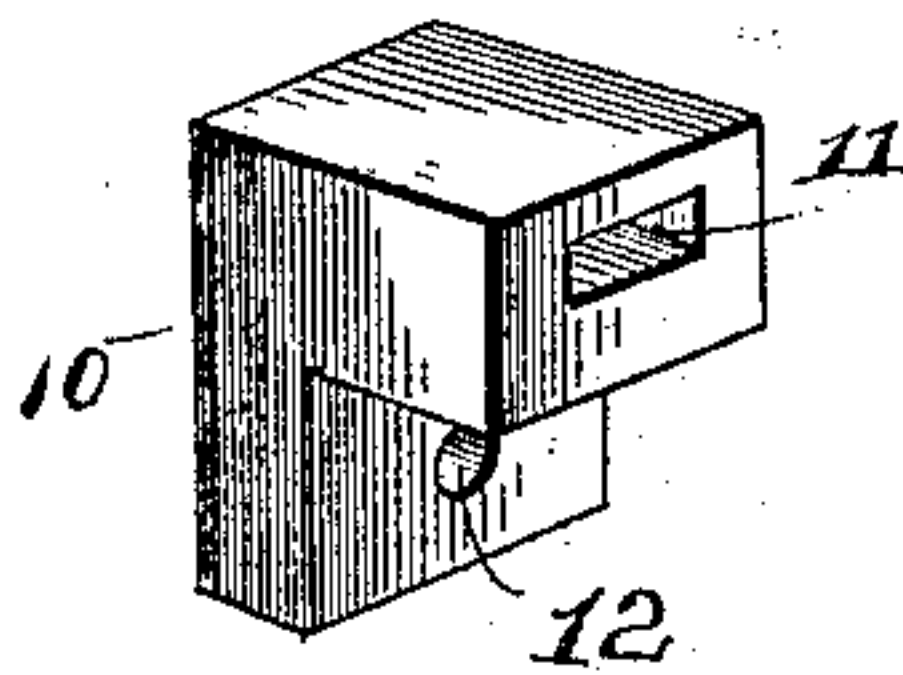
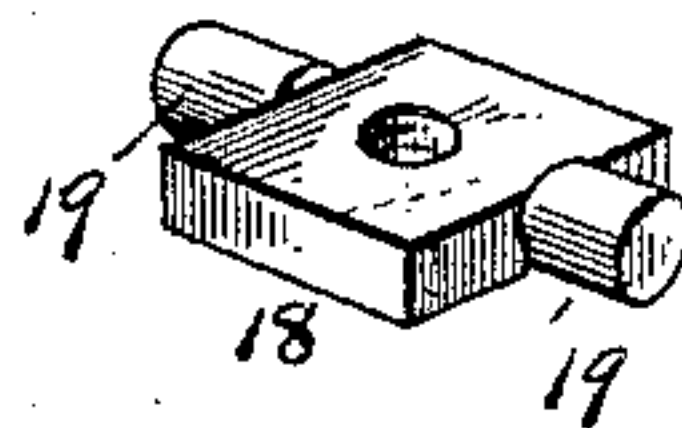


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK SWEETLAND, OF ANGOLA, NEW YORK.

BICYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 474,106, dated May 3, 1892.

Application filed January 20, 1892. Serial No. 418,888. (No model.)

To all whom it may concern:

Be it known that I, FRANK SWEETLAND, a citizen of the United States, residing at Angola, in the county of Erie and State of New York, have invented a new and useful Bicycle-Saddle, of which the following is a specification.

My invention relates to improvements in bicycle-saddles, and more especially to that class of saddles known as "suspension" and employed on the "Safety" type of bicycles, though, as will hereinafter appear, the saddle may be employed upon the ordinary type of bicycles.

The objects of my invention are to provide a secure, safe, and easily-adjustable mechanism whereby the leather of the saddle may be given the requisite tension.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is an elevation of a saddle constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a detail in perspective of the saddle-supporting spring. Fig. 4 is a detail of one of the sliding collars. Fig. 5 is a similar view of one of the fixed collars. Fig. 6 is a detail of one of the adjusting-nuts.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the usual inverted-L-shaped seat-standard with which the type of Safety bicycles is usually provided, or it may represent the backbone of a bicycle of the ordinary type.

2 designates a resilient or spring saddle-supporting bar which has its opposite extremities recessed at opposite sides or edges, whereby they are slightly reduced, forming tenons 3. Depending from the under side or center of the spring-bar is a stud or post 4, having a transverse bore 5, adapted to loosely fit the upper or horizontal portion of the inverted-L-shaped standard 1. The stud or post may be adjusted upon the standard 1 and secured at any point of its adjustment through the medium of a binding-bolt 6.

7 designates a sliding collar, there being

one employed at each side of the stud 4. These collars, when viewed in elevation, are L-shaped and their upper portions are provided with transverse elongated slots 8, designed to loosely fit the spring-bar 2, while their lower depending portions are provided with transverse bores 9, and between the bore and slot of the collars each has a pair of perforations 13.

10 designates a fixed collar, one being employed at each end of the spring-bar 2. Each fixed collar is provided near its upper end with a transverse slot 11, slightly smaller than the slot 8 of the movable collars and adapted to somewhat snugly fit the reduced tenons 3 of the spring-bar 2. Corresponding with the bores 9 of the movable collars each of the fixed collars is provided with a bore 12, aligning therewith.

14 designates the leather portion of the saddle, and the same is suspended by the front and rear pairs of coiled spring-rods 15. The terminals of these springs pass at opposite sides of the front and rear fixed collars and at their inner extremities are secured in the pairs of perforations 13 of the movable collars, as shown.

Threaded bolts or rods 16 are passed through the bores 12 and 9 of the pairs of fixed and movable collars at the opposite sides of the stud 4, the outer ends of the bolts loosely fitting the bores 12 of the fixed collars and capable of slight movement therein. The inner edges or faces of the movable collars in line with the bores 9 thereof are provided with half-notches 17. Nuts 18 are threaded on the inner ends of the bolts or rods 16, and said nuts are provided at diametrically-opposite sides with cylindrical locking-trunnions 19, designed to engage the notches 17 heretofore mentioned.

By applying a wrench to the heads of the bolts 16, to which heads access may be readily had, it will be obvious that the movable collars 7 may be fed in either direction along the spring-bar 2, and thus increase or decrease the length of springs, and thereby regulating the tension of the springs to adapt the saddle for riders of various weights. By the adjusting of the springs the saddle may be tightened or loosened to suit different riders, and the

operation may be accomplished with ease through the medium of an ordinary wrench.

Having described my invention, what I claim is—

5 1. In a saddle, the combination, with the spring supporting-bar and opposite pairs of fixed and movable collars mounted thereon, the outer collars being provided with perforations, of adjusting-bolts connecting the pairs
10 of fixed and movable collars, a superimposed saddle, and front and rear springs connected to the ends of the saddle and having their terminals passed by the outer collars and secured to the inner movable collars, substantially as specified.

15 2. In a saddle, the combination, with the spring supporting-bar and opposite pairs of fixed and movable collars mounted thereon, the outer collars being provided with perforations, of a superimposed saddle, front and
20 rear pairs of springs connected to the ends of the saddle and having their lower terminals passed by the outer collars and secured to the inner movable collars, and means for adjusting said inner collars with relation to the outer
25 collars, substantially as specified.

3. The combination, with the spring supporting-bar, the opposite outer pair of L-shaped fixed and inner opposite pair of adjustable collars, each of the outer fixed pair
30 being provided with a slot and bore and each of the inner movable collars having a bore, a slot and perforations, threaded bolts passing loosely through the bores of the inner and
35 outer pairs of collars and terminating at their inner ends opposite transverse notches 17,

formed in the inner faces of the inner collars, and nuts 18, having opposite cylindrical trunnions 19 threaded on the bolts and fitting the notches, of the saddle-leather 14, and the front
40 and rear pairs of springs 15, having their lower ends or terminals passed at the sides of the outer collars and their inner ends secured to the inner collars, substantially as specified.

4. The combination, with the inverted-L-
45 shaped standard 1, the spring-bar 2, having the stud 14 depending from its under side and recessed to receive and adjustably mounted upon the standard, the binding-bolt 6, the notched or reduced ends of the spring-bar,
50 the oppositely-fixed end collars 10, recessed, as at 11, to fit the ends of the spring-bar and provided with bores 12, the inner pair of movable collars 7, slotted, as at 8, to receive the spring-
55 bar and having the bore 9, the opposite threaded bolts loosely fitting the bores of the collars, the nuts 18, having trunnions 19 mounted on the inner ends of the bolts and having their trunnions fitting notches at the inner sides of the inner collars, of the saddle 14, and the front
60 and rear pairs of springs 15, connected to the extremities of the saddle and having their lower extremities secured to the movable collars, substantially as specified.

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

FRANK SWEETLAND.

Witnesses:

E. M. CLARK,
N. B. WOOD.