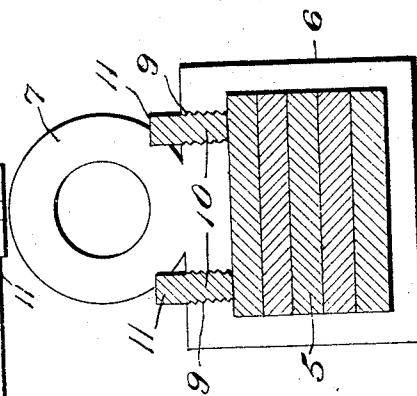
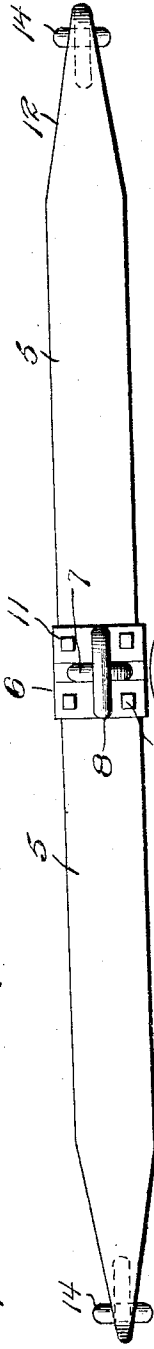
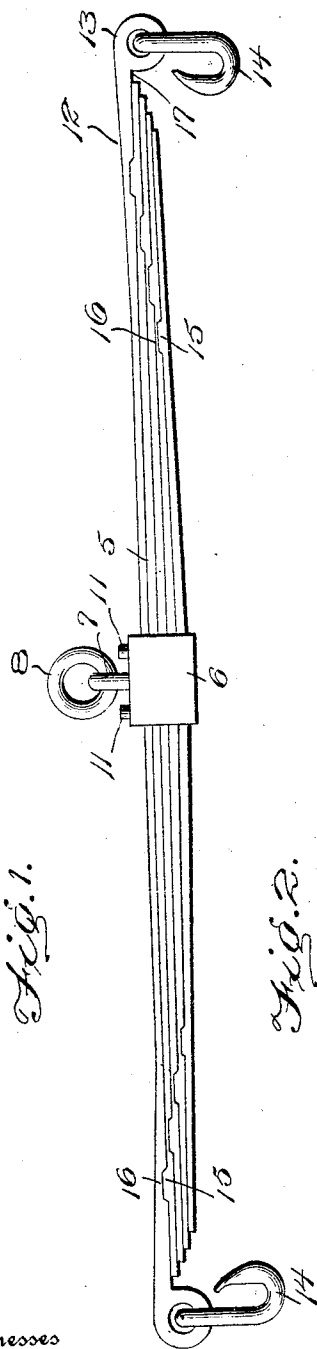


A. NELSON.
 SPRING SWINGLETREE.
 APPLICATION FILED AUG. 1, 1911.

Patented Oct. 1, 1912.

1,039,784.



Witnesses

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UNITED STATES PATENT OFFICE.

AUGUST NELSON, OF WESTCLIFFE, COLORADO.

SPRING-SWINGLETREE.

1,039,784

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST NELSON, citizen of the United States, residing at Westcliffe, in the county of Custer and State of Colorado, have invented certain new and useful Improvements in Spring-Swingletrees; of which the following is a specification.

This invention relates to swingletrees for attachment to plows, vehicles and the like and has for its object the provision of a comparatively simple and thoroughly efficient device of this character, the construction of which is such that the swingletree may yield in the direction of the line of draft and thus prevent injury to the animal's shoulders should the plow or vehicle strike a stone or other obstruction in the path of travel.

A further object is to provide a swingletree including a plurality of flat springs of different lengths arranged side by side and connected by a draft device, one of said springs being provided at its ends with means for attachment to traces.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claim.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a side elevation of a swingletree constructed in accordance with the present invention; Fig. 2 is a top plan view of the same; Fig. 3 is a vertical sectional view.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

The improved swingletree forming the subject matter of the present invention comprises a plurality of flat longitudinally disposed springs 5, of different lengths, arranged side by side and disposed in contact with each other so as to form in effect a laminated body portion.

Arranged at the middle of the swingletree, is a clamping band 6 having an eye 7

extending laterally therefrom and adapted to receive a ring or other draft device, indicated at 8. One side of the clamping band 6 is provided with a plurality of threaded openings 9, in which are seated correspondingly threaded screws 10, which latter bear against the adjacent spring 5 so as to center said springs within the band and prevent longitudinal movement of the springs with respect to each other. The screws 10 are preferably provided with angular heads 11 which project beyond the adjacent face of the band 6 so that said screws may readily be grasped with a wrench or other tool when it is desired to remove the screws for the purpose of replacing any one of the springs.

One of the springs is preferably thickened at each end and extended longitudinally beyond the adjacent springs to form a tapered terminal 12, the free end of which is bent laterally to produce an eye 13 for the reception of a trace engaging hook 14, the latter being pivotally mounted in the eye 13, as shown. One side of each spring 5, is provided with a longitudinal lug 15 which enters a correspondingly shaped recess or seat 16 formed in the adjacent spring, thus to assist in centering the springs with respect to each other and also to prevent lateral movement of said springs.

The inner faces of the eyes 13 are preferably provided with square shoulders 17, spaced from the ends of the adjacent springs so as to permit the eye carrying spring to yield laterally when subjected to a load.

It will here be noted that the construction of the swingletree is such that when the draft animal is carrying an excessive load, the eye carrying spring will yield in the direction of the draft and thus cause the shoulders 17 to successively bear against the ends of the adjacent springs and thus strengthen the swingletree and prevent the latter from buckling. By making the swingletree in this manner, injury to the shoulders of a draft animal, when the vehicle strikes a stone or other obstruction in the path of travel, is effectually prevented, inasmuch as the jar or impact is absorbed by the swingletree and not transmitted to the draft animal.

It will of course be understood that the swingletrees may be made in different sizes and shapes and provided with any number of springs without departing from the spirit of the invention.

It is to be particularly noted that the lugs 15 of the respective spring leaves 5 are arranged in two sets near the ends of the swingletree on opposite sides of the clamping band 6, and that the lugs 7 of each set are arranged in stepped relation to each other, out of alinement one with the other, whereby the springs are securely held properly centered by interengaging parts extending over a relatively large area, while at the same time the spring leaves are not unduly weakened as would be the case if all of the lugs and recesses were in superposed relation to each other, that is, in transverse alinement.

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

A swingletree composed of springs bearing one against the other, said springs being normally straight throughout their

lengths, a securing device connecting the springs together at points midway between the ends of the springs, the rearmost spring being longer than the springs located in front of the same, the rearmost spring having its terminal portions only thickened and provided with eyes, which are normally spaced from the next adjacent spring, all of the springs in advance of the rearmost spring having in the vicinity of their ends lugs, the lugs of the spring in advance engaging the next adjacent spring to the rear through the series of springs.

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

AUGUST NELSON. [L. S.]

Witnesses:

WILLIAM KETTLE,
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