No. 893,981. PATENTED JULY 21, 1908.

L. DE L. CAMMANN.

NOSE BAG SUSPENSION.

APPLICATION FILED JULY 12, 1907.

Fig. 1

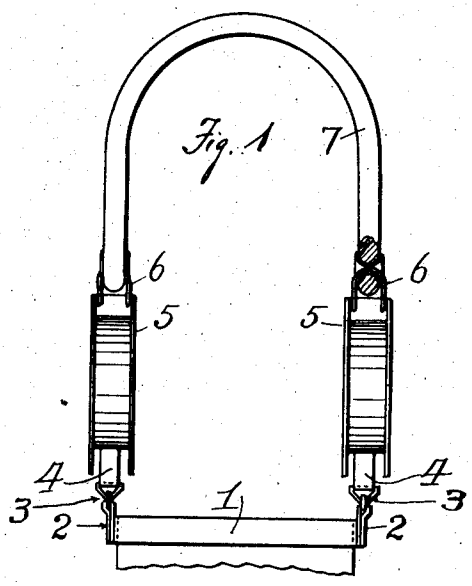


Fig. 2.

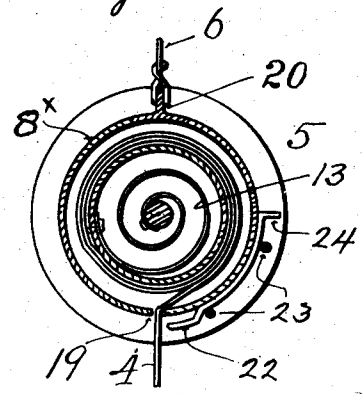


Fig. 3.

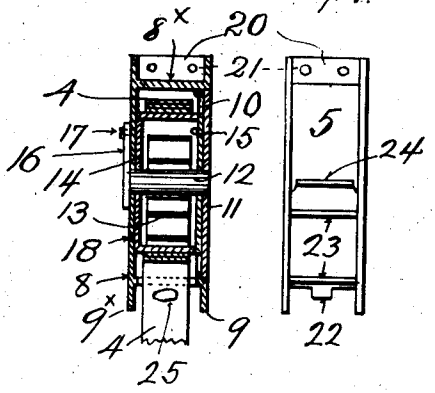


Fig. 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

LOUIS DE L. CAMMANN, OF MONTCLAIR, NEW JERSEY.

NOSE-BAG SUSPENSION.

No. 893,981. Specification of Letters Patent. Patented July 21, 1908.

Application filed July 12, 1907. Serial No. 383,444.

To all whom it may concern:

Be it known that I, LOUIS DE L. CAMMANN, a citizen of the United States, and a resident of Montclair, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Nose-Bag Suspension, of which the following is a specification.

This invention relates to means for attaching feed-bags to the animal in such manner that the animal will have the grain in the bag within easy reach at all times without having to toss the head to get the grain, thus effecting a saving in the quantity of grain used in feeding, a no inconsiderable item of expense.

Other advantages of the invention will appear hereinafter.

The invention consists essentially of a spring-suspension for the bag, whereby as the animal lowers the level of the grain in the bag by eating it, the bag is automatically raised to maintain the said level at or near the mouth of the animal; other features of the invention will appear hereinafter.

One form of the invention is illustrated in the accompanying drawing, forming part hereof, in which—

Figure 1 is a front elevation, with part of the feed bag omitted; Fig. 2 is a side elevation, with the casing in section, of a spring-drum; and Fig. 3 is a sectional view of said drum; Fig. 4 is an edge view of a spring-drum.

In the drawing, the reference symbol 1 designates the feed bag, which may be of any approved or known form or construction; the reference 2 marks straps or ears attached to the bag 1 and connected by links 3 with the straps 4 depending from the drums 5; the reference 6 designates wire or other straps connecting the drums 5 with the strap, cord, or other ligament 7 whereby the whole is suspended from the animal's head or neck.

The drums 5 shown comprise plates 8 provided with the circular flange $8^{\times}$, which, again, are provided with the flanges 9, $9^{\times}$ parallel to the plates 8, or forming continuations thereof, as the case may be. The circular parts $8^{\times}$ are also provided with inside flanges 10 just inside the outer surfaces of the flanges 9, and plates 11 are set against the shoulders thus formed and are secured in any appropriate manner. Shafts 12 are inserted in holes in the plates 8 11 and are there secured against turning in any suitable manner, as by means of arms 16 which are fast on or are integral with said shafts, and screws 17 which pass through said arms and engage with threaded holes 18 in the plates 8. By providing more than one hole 18 for each arm 16, one may vary the tension of the springs 13 with nicety, or to degrees less than the change due to one turn of the cranks 16. Clock, or other suitable springs 13 are made fast to the shafts 12 and to the inner drums 14. The drums 14 are provided with heads 15 and the two heads are journaled on the shaft 12 to turn independently thereof. The straps 4 are also fast to the drums 14 on the outside thereof, and they are wound on the drums by the action of the springs 13 and they wind up said springs as they are drawn off. The straps 4 pass through slots 19 in the flanges $8^{\times}$, said slots 19 being located at points opposite to the cross flanges 20 to which the said links 6 are connected by holes 21. The usual buckles, snap-hooks, etc., may be employed where convenient, but are not herein shown.

In order to relieve the springs 13 when the bag is not in use suitable keepers 22 may be employed in conjunction with the straps 4 or the links 3. As shown, the keepers 22 consist of flat metal strips curved to slide on the flange $8^{\times}$, and are held in place by the rods or rivets 23 secured in the flanges 9 $9^{\times}$, and by their own upturned ends 22 and 24. The straps 4 may have holes 25 therein for coaction with the keepers 22.

In the use of the invention, the springs 13 have their tension adjusted in such wise that the weight of the bag plus the weight of the grain put into the bag for a feed will draw the bag down to a point such that the level of the grain is at the animal's mouth or perhaps a little higher; then, as the animal consumes the grain, the springs automatically lift the lightened bag, and maintain the convenient relation between the level of the grain and the animal's mouth. The keepers 22 are used when the bag is swung under the wagon or elsewhere, to relieve the strain on the springs 13.

The perforated or foraminous straps 4 may be replaced by equivalent means, without departing from the invention.

What I claim as new and desire to secure by Letters Patent of the United States is—

1. The combination with a nose-bag for feeding animals, of spring-drums, a neck-strap connected with said drums, foraminous straps connecting the bag with the drums,

and slides on the drums for engaging with said straps for relieving the springs of the strain.

2. The combination with a nose-bag for feeding animals, of spring-drums, foraminous connections between said drums and said bag, connections between said drums for suspending them from the animal's neck, and slidable keepers attached to and movable independently of said drums and adapted to engage with said foraminous connections to take the weight of the bag when desired.

Signed at New York city in the county of New York and State of New York this 11th day of July A. D. 1907.

LOUIS DE L. CAMMANN.

Witnesses:
GEO. W. TAYLOR,
ALONZO P. MEYER.