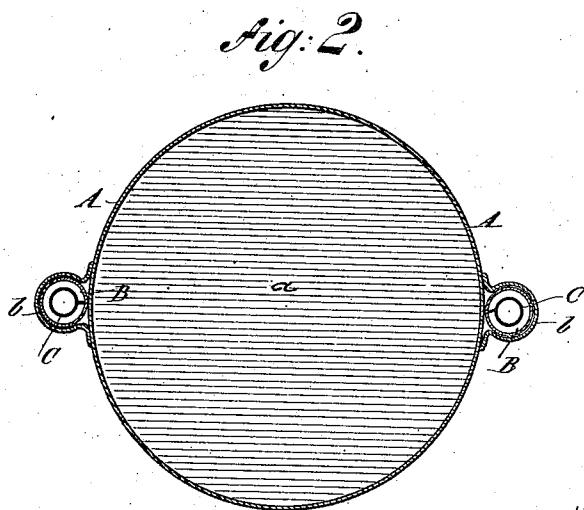
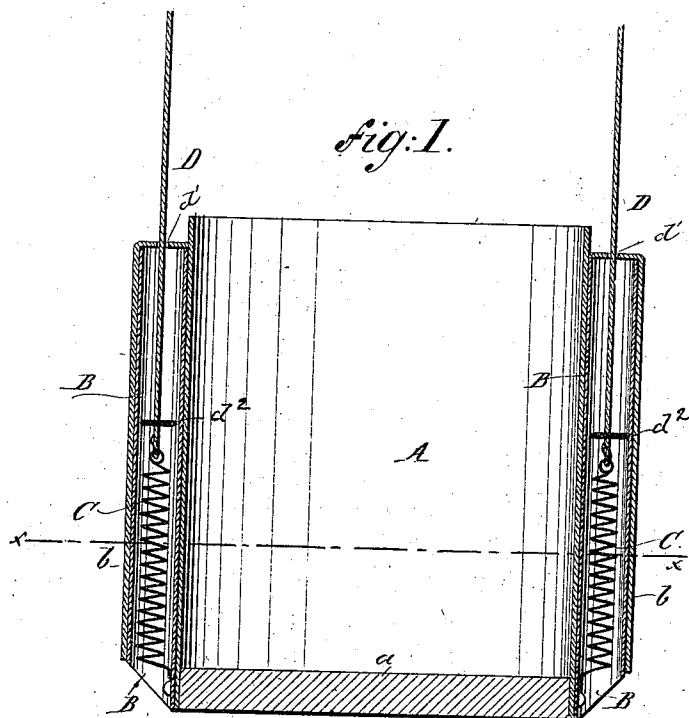


(No Model.)

E. KLAHN.
FEED BAG.

No. 506,239.

Patented Oct. 10, 1893.



WITNESSES:
A. Schuhl.
Mrs. B. Andelfinger

INVENTOR:
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BEST AVAILABLE COPY

UNITED STATES PATENT OFFICE.

EMIL KLAHN, OF JERSEY CITY, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE STAR AUTOMATIC FEED BAG COMPANY, OF NEW JERSEY.

FEED-BAG.

SPECIFICATION forming part of Letters Patent No. 506,239, dated October 10, 1893.

Application filed December 29, 1891. Serial No. 416,452. (No model.)

To all whom it may concern:

Be it known that I, EMIL KLAHN, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Feed-Bags, of which the following is a specification.

My invention relates to improvements in feed-bags of that class which are provided with springs by the action of which the food within the bag is kept in contact with the mouth of the horse, and my invention consists of such a feed-bag provided with devices by which the action of the springs is regulated, so that the same cannot be drawn out too far.

In the accompanying drawings Figure 1 is a longitudinal section of my improved feed-bag. Fig. 2 is a horizontal section of the same in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

A in the drawings represents the feed-bag which is made of canvas or any other suitable fabric. Two tubes B B of metal or stiff fabric are fastened to the feed bag diametrically opposite each other by sewing the canvas covering *b* of the tubes to the fabric of the bag or, if preferred, by placing the tubes in the bag and attaching the same firmly to the fabric of the bag. Spiral springs C are inserted in the tubes B and by their lower ends attached to the stiff bottom *a* of the bag. To the upper ends of the springs the neck straps or cords D D are fastened.

It is evident that when the bag is filled with food, the weight of the food will act upon the springs within the tubes so that the bag is caused to sink. The more the quantity of the food is diminished, the more the bag is caused to rise by the decreasing action of the weight of the food upon the springs. To prevent the springs from being drawn out of the tubes, the latter are covered at their tops, leaving only openings *d' d'* to allow the straps D D to move up and down. The straps are provided with disks or other stop-devices *d²* fastened to the same somewhat above the

springs, which stop-devices abut against the inner surfaces of the top-coverings of the tubes when the springs are drawn out too far.

When the feed-bag is to be used, it is filled with a certain quantity of food, and the neck-strap is adjusted so that the food is just in contact with the mouth of the horse, the horse being thus enabled to conveniently eat the food. The tension of the spring C caused by the weight of the food, will be successively decreased the more the food is consumed by the horse and, as the decreasing tension of the spring or elastic band causes the bag to rise, the food is always kept in close contact with the mouth of the horse, so that any further adjustment of the bag is dispensed with after the bag is applied once to the neck or head of the horse.

My improved feed-bag has the advantage that the horse can eat the food without any disturbance, as all movements of the head to reach the food, after a portion of the same is eaten up, are entirely dispensed with.

I am aware that spiral springs are used in a similar manner for measuring instruments and balances, but all those instruments and apparatus do not show a feed bag of my special construction.

What I claim is—

In a feed-bag, the combination of tubes provided with top-coverings and attached to the fabric of the bag, spiral springs placed into the tubes and fastened to the bottom of the bag, straps attached to the upper ends of the springs and passing through openings in the top coverings of the tubes, and stop-devices attached to the said straps within the tubes and abutting against the top-coverings of the tubes when the springs are drawn out too far, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 10th day of December, A. D. 1890.

EMIL KLAHN.

Witnesses:

CHARLES KAY,
THOMAS CONRAD.