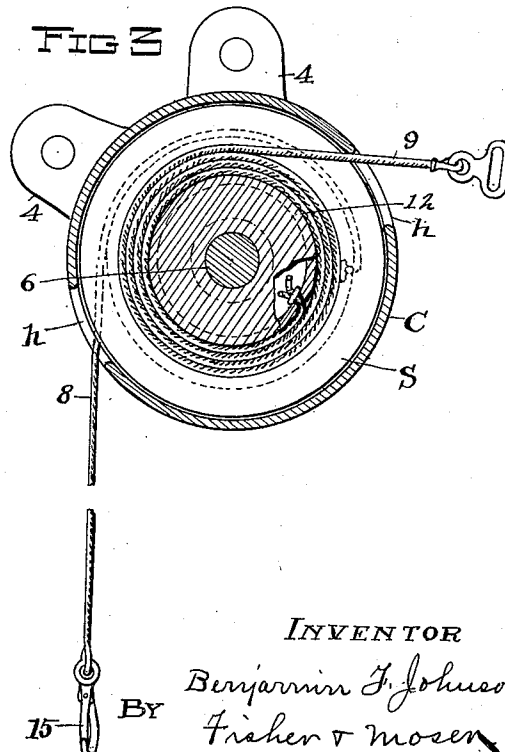
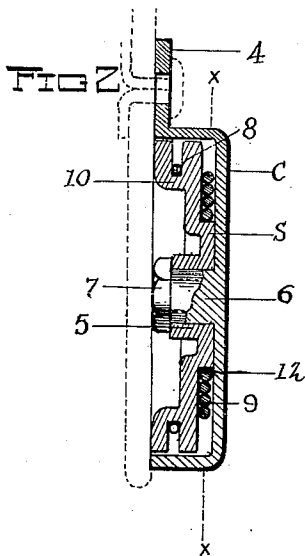
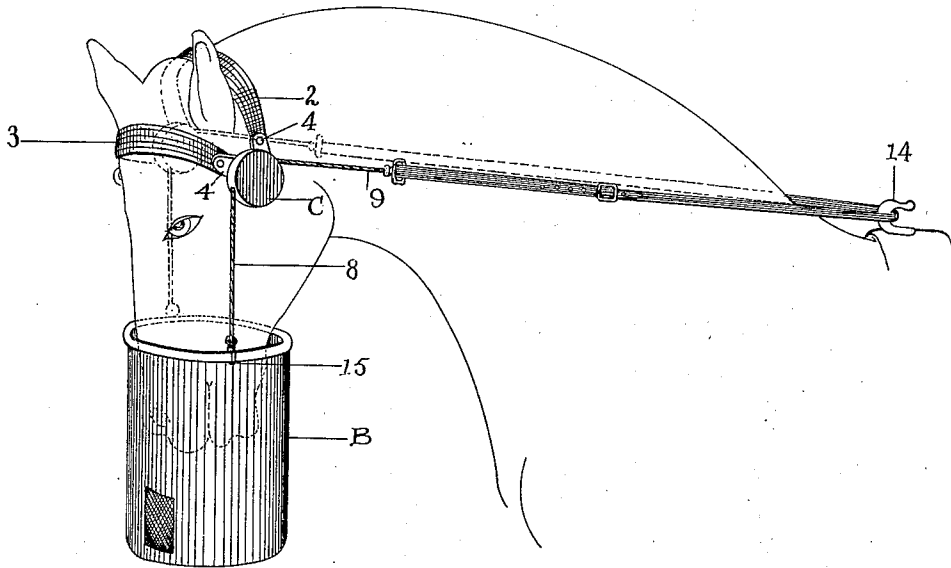


B. F. JOHNSON.
FEED BAG FOR HORSES.
APPLICATION FILED APR. 3, 1911.

1,007,110.

Patented Oct. 31, 1911.

FIG I



ATTEST
E. M. Fisher
J. C. Mendenhall.

INVENTOR
Benjamin F. Johnson
BY *Fisher & Mosen* ATTYS.

UNITED STATES PATENT OFFICE.

BENJAMIN F. JOHNSON, OF CLEVELAND, OHIO.

FEED-BAG FOR HORSES.

1,007,110.

Specification of Letters Patent.

Patented Oct. 31, 1911.

Application filed April 3, 1911. Serial No. 618,673.

To all whom it may concern:

Be it known that I, BENJAMIN F. JOHNSON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Feed-Bags for Horses, of which the following is a specification.

This invention relates to feed bags for horses, and the invention consists in the new and original means shown for suspending the bag and automatically bringing the feed within reach of the horse while the bag is held in a suspended position, all substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of the head and neck of a horse with my improved feed bag support shown thereon and a bag suspended therefrom in using position on the head. Fig. 2 is a considerably enlarged cross section of the disk shaped and apparently ornamental device on the head gear seen in Fig. 1 but which in fact is a shell or casing having a rotatable member within from which the bag is suspended and through which the automatic feed operation is effected, and Fig. 3 is a sectional face view corresponding substantially to line *x-x*, Fig. 2.

The device is shown herein as supported upon a simple form of head gear consisting of two straps 2 and 3 united at their ends and having the device fixed over their joint or union through the respective ears 4 by detachable or other means, the manner of securing the same being really immaterial and varying according to conditions. For example, if it were placed on a bridle in the same relation as herein shown the construction of the bridle might require modification of fastening, and in some cases parties desire only a temporary engagement of the device on the bridle, such as hooking it on to adapt it to only feeding uses.

Structurally the device comprises a comparatively thin outer shell or casing C, preferably of polished brass but which may be of aluminum or other metal and wrought externally to have the appearance of an ornament of disk shape and somewhat massive. Otherwise said casing has a wall of sufficient depth to house a spool, sheave or wheel S provided with something of a hub 5 in this instance sleeved upon a central

stem or projection 6 on the inside of said casing and upon which said sheave is confined by a nut 7, or other suitable means. The said sheave is shown herein as a single casting but it may be built up of several parts or otherwise made and be within my conception, the essential features being that it should be rotatably mounted within the casing C and have differential diameters for winding the two wires or cords 8 and 9 upon. In the present showing the wire 8 runs or is wound upon the larger diameter represented by the channel 10, and the wire 9 on the annular seat 12, and in both instances the space for the wire or cord is narrowed so that the wire must wind upon itself. The wire 9 in any event is intended to engage over the hook 14 on the harness saddle, while wire 8 has a snap hook 15 as shown adapted to engage a ring on the bag B. Of course it will be understood that both sides of the horse's head are equipped alike, and the wire 9 itself or strap extensions may be employed to engage it with the hook 14. Other details also admit of more or less change or substitution without departing from the invention.

Now, having the foregoing equipment in the form substantially as shown and described, it is to be especially observed that it differs from the usual feed bag for horses particularly in this that it enables a horse to feed advantageously with his head up very much as when feeding out of a trough. Heretofore when a feed bag was used the horse had to rest the bag on some sort of a base or bottom in order to get the feed and usually upon the ground, but in the present case he is in a sense reined up and stands naturally and gets his feed as he wants it by simply reaching down slightly for it. This is where the differential sheave works to supply the feed or to bring it up to the horse as he reaches down for it, the two operations being simultaneous and one following the other as effect follows cause. For illustration: Suppose the head of the horse to be up to a given position and the bag of feed is suspended therefrom as shown, naturally he will reach down to get the feed, and as he does this the bow of the neck straightens out more or less and lengthens accordingly. This imparts a rotary movement to sheave S in the direction which will wind up the wire 8 and thus raise the

bag, and the farther the head of the horse goes down the higher up the bag will come and proportionately farther because the winding up of wire 8 is on the larger radius and is that much faster and farther than the unwinding of wire 9. It follows that as the horse lowers his head a comparatively short distance, or somewhat farther as the bag gets empty, he finds the bag coming up to meet him in every case. Then having taken a mouthful he naturally raises his head again and the bag lowers and gives him room to both chew and breathe, and so on until the bag is emptied. Wire or other suitable flexible cable or cord can be used for the connections 8 and 9.

It will be observed that as pull on cord 9 continues said cord unwinds to a smaller diameter while at the same time cord 8 winds upon itself to a larger diameter, thus increasing the up-lift of the bag as the horse reaches toward its bottom. Both cords are shown as entered through holes or slots $\frac{1}{2}$ in the edge wall of the casing, and I can furnish the casing and its sheave and cords with end loops or hooks to the trade for use with bridles and feed bags or sacks as shown, or I can sell the equipment with or without the bag.

What I claim is:

1. A device of the kind described comprising a head-gear for horses, a casing fixed on each side thereof and a sheave rotatably mounted in each casing having two diameters, a cord engaged over each of said diameters through the edge of said casing and means on the outer ends of said cords to effect operating connections.

2. A device adapted to be used in feeding grain in feed-bags to horses, consisting of a circular casing open on its inside, closed on its outside and having projections at its edge to fasten the same in place and a central inwardly projecting stud and opposite slots through its edge, a sheave rotatably mounted on said stud having two diameters, and a cord wound upon each diameter of said sheave and having free portions extending through said slots respectively outside said casing to make operating connections therewith.

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

BENJAMIN F. JOHNSON.

Witnesses:

E. M. FISHER,
F. C. MUSSUN.