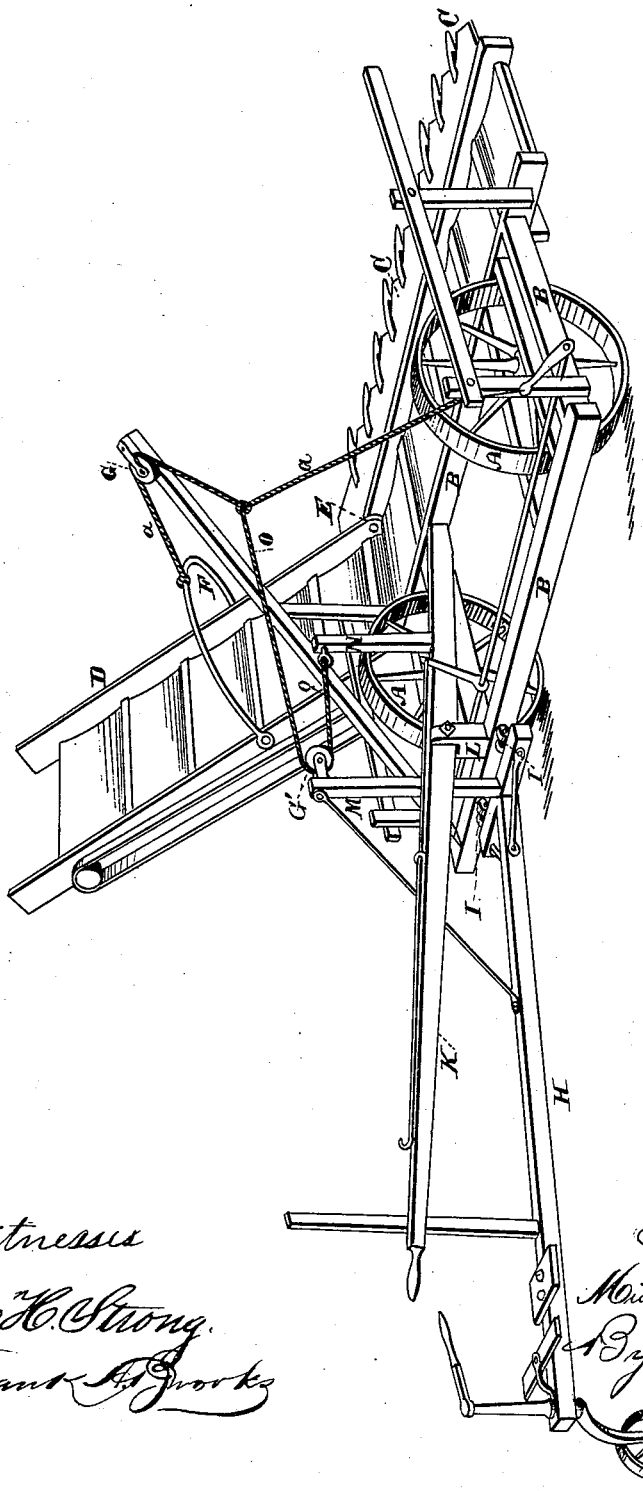
(No Model.)

# M. N. LAUFENBURG.

## HEADER.

No. 260,882. Patented July 11, 1882.

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# UNITED STATES PATENT OFFICE.

MICHAEL N. LAUFENBURG, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO BAKER & HAMILTON, OF SAME PLACE.

## HEADER.

SPECIFICATION forming part of Letters Patent No. 260,882, dated July 11, 1882.

Application filed May 16, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL N. LAUFENBURG, of the city and county of San Francisco, State of California, have invented an Improvement in Headers; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in that class of apparatus employed for harvesting grain known as "headers;" and it consists in a means for balancing the machine, so that the weight of the elevator-spout will assist in raising and depressing the lever by which the sickle is adjusted to the proper height.

In the ordinary header the bearing-wheels support a frame the front of which carries the sickle-bar and carrying-belt for the cut grain, while the elevator-spout is hinged at one end of the front portion.

The pole to which the team is harnessed is hinged to the rear of the frame, and a lever secured to the front of the frame extends back above the pole, so as to be within easy reach of the driver, in the usual manner of constructing these machine. When at work, however, the strain is so great that it is almost impossible to move the lever when it is desired to raise the sickle on account of the weight of the forward part of the machine and the overhanging spout.

My invention is intended to equalize this weight by so connecting the rope which suspends the spout with the frame and tongue that the weight of the spout counterbalances the pressure upon the lever.

The drawing represents a perspective view of my invention.

A A are the bearing-wheels of a header.

B is the frame, which is supported upon the axles of the wheels.

The sickle or cutter-bar is attached to the front at C, and the carrying-belt for the cut grain passes around rollers or drums in the space just behind it, and thence up the inclined elevator-spout D, which is hinged to the side of the frame in front, as shown at E.

The spout has a bail, F, and a rope, *a*, from this bail passes over a pulley, G, and thence to the opposite side of the frame, where it is secured, these parts being of the usual construction in headers.

H is the pole, which extends backward from the rear of the header-frame, to which it is hinged at I. The rear end is supported upon the steering-wheel J.

K is a lever, the front end of which is secured to the front of the frame B, while its handle is within easy reach of the driver, who stands on the rear end of the pole. This lever is secured to the post L, and by raising or depressing the handle the front of the frame and the cutter-bar is depressed or elevated.

In order to overcome the strain caused by the pressure upon the joint I, where an angle is formed when the frame is tilted either up or down from a horizontal line, I employ the weight of the spout D, which is connected as follows: M is a post which rises from the inner end of the pole, to which it is secured near the hinge. N is a similar post secured to and rising from the lever K. A rope, O, is fastened to the rope *a*, and passes back to the post M around a pulley, G′, at that point, and thence it returns to the post N, where it is secured.

It will be seen that when the lever K is thrown down the upper ends of the two posts will approach each other, and the rope O will be shortened between those points and lengthened between the post M and its point of attachment to the rope *a*. This allows the rope *a* to approach a straight line and the spout and bail to drop down and assume a more nearly horizontal position.

When the lever K is raised the opposite action upon the rope and spout takes place, the latter being then raised in proportion as the front of the frame with the sickle-bar is depressed. By this action the discharge end of the spout is constantly kept at nearly the same level, whether the sickle be elevated or depressed. The weight of the overhanging end of the spout is thus also utilized to counterbalance the weight of the forward part of the machine, so that it may be easily raised.

In some cases the rope O may be carried along the pole, around a pulley, and thence up to the lever K, which will give a similar action, and other arrangements may be made of

the connections; but my present arrangement is more effective.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hinged suspended elevator-spout, in combination with the rope *a*, rope O, and lever K, whereby the weight of the forward part of the machine will be counterbalanced by the weight of the spout, substantially as herein described.

2. A hinged suspended elevator-spout, in combination with the rope *a*, rope O, lever K, and the posts M and N, substantially as and for the purpose herein described.

3. The standard M upon the pole and the standard N upon the lever K, in combination with the ropes *a* and O, the pulleys G G′, and the elevator-spout D, all constructed, arranged, and operated as set forth.

In witness whereof I have hereunto set my hand.

M. N. LAUFENBURG.

Witnesses:
S. H. NOURSE,
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