No. 887,834. PATENTED MAY 19, 1908.

N. R. NELSON.

COVER RETAINING MECHANISM FOR HOPPERS OF SEEDERS OR GRAIN DRILLS.

APPLICATION FILED SEPT. 4, 1906.

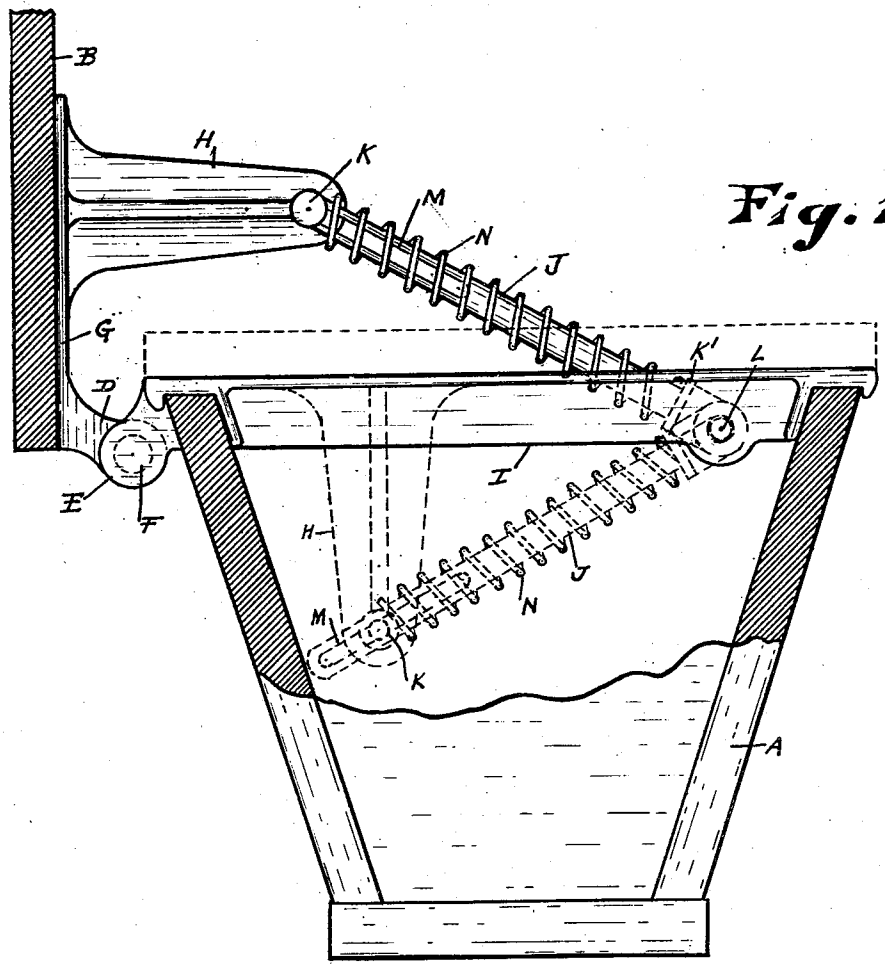


Fig. 1.

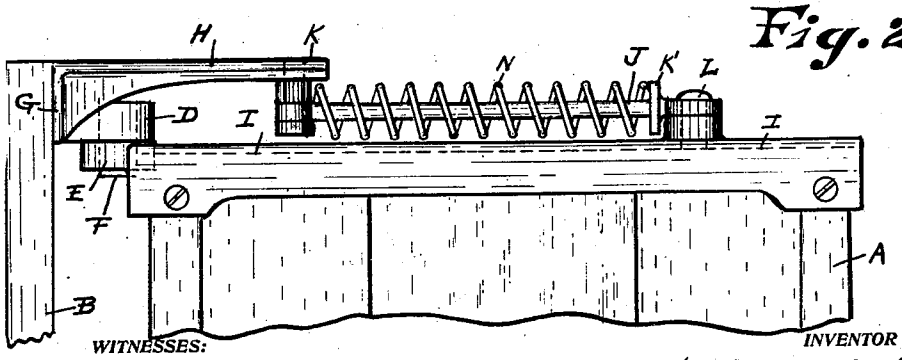


Fig. 2.

WITNESSES:

O. R. Erwin

M. M. DeLutz

INVENTOR

Nicholas R. Nelson

BY

Erwin & Thulin

ATTORNEYS.

UNITED STATES PATENT OFFICE.

NICHOLAS R. NELSON, OF BEAVER DAM, WISCONSIN.

COVER-RETAINING MECHANISM FOR HOPPERS OF SEEDERS OR GRAIN-DRILLS.

No. 887,834. Specification of Letters Patent. Patented May 19, 1908.

Application filed September 4, 1906. Serial No. 333,047.

To all whom it may concern:

Be it known that I, NICHOLAS R. NELSON, a citizen of the United States, residing at the city of Beaver Dam, county of Dodge, and State of Wisconsin, have invented new and useful Improvements in Cover-Retaining Mechanism for Hoppers of Seeders or Grain-Drills, of which the following is a specification.

My invention relates to improvements in cover retaining mechanism for the hoppers of seeders or grain drills.

The object of my invention is among other things to provide a more simple and efficient device than has heretofore been made for retaining the hinge supported cover of a hopper both in its normally open and closed positions, whereby the liability of the cover being blown down and closed when open, or being thrown upwardly and downwardly and thereby caused to rattle by the vibratory movement of the seeder or drill when in use is avoided.

The construction of my invention is explained by reference to the accompanying drawings in which,

Figure 1 is an end view of the hopper, part in section, provided with my cover retaining device, and Fig. 2 is a top view of my device in connection with a hopper, showing the cover in its open position.

Like parts are identified by the same reference letters in both views.

A represents a hopper of ordinary construction.

B is the cover which is connected with the respective ends of the hopper by hinges, the hinges comprise the lugs D, which are secured to the cover B, lugs E which are secured to the hopper and hinge pins F by which such lugs are pivotally connected together. The lugs D are preferably formed integrally with the fastening plate G and arm H. The lugs E are preferably formed integrally with the stationary end brackets I of the hopper. The outer end of the arm H is connected with the bracket I through the link J and connecting pivots K and L. The link J is provided at one end with a longitudinal slot M for the reception of the pin K which pin K has a longitudinal movement forwardly and backwardly therein as the cover B is closed and opened. N is a spiral spring which is supported upon said link between the pivotal connection K and the shoulder K'. The length and tension of the spring N is such that it is necessarily slightly compressed between said pivots K and L when in place on said link, whereby when the cover is in its open position, as shown in Fig. 1, it is retained in such position by the recoil of said spring acting through said pivot K and arm H.

It will now be understood that when desirous to close the cover of the hopper, said pin K will be caused to bear against said spring and said spring will be thereby compressed until the pivot K has passed the intermediate point between the hinge pin F and the pivot L, when by the recoil of said spring said arm H will be forced downwardly and rearwardly to the position shown by dotted lines in Fig. 1, whereby said cover B is retained in its closed position, as indicated by dotted lines in said Fig. 1. It will be obvious that by the reverse movement of the cover said pivot K will be caused to traverse the opposite direction in the slot M of said link and said spring will be again compressed until the pivot K has again passed said central line between the pivots L and F when said cover will be thrown to and retained in its open position by the recoil of said spring, whereby it is obvious that said spring acting through its connecting parts serves the two fold purpose of retaining the cover in its open and closed positions.

It is a well known fact that when hinges are secured to the covers and hoppers of seeders and grain drills by screws in the ordinary manner they are liable to become loosened and dis-engaged by the severe strain to which they are subjected. To avoid this difficulty I have formed the hinge lugs of the cover integrally with an arm retaining bracket and the hinge lugs of the hoppers integrally with the end bracket of the hopper, whereby the liability of the hinges thus formed becoming detached from the hopper or cover is avoided.

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

In a cover retaining device for hoppers of the described class, the combination with the cover of an integrally formed arm, fastening plate and hinge lug, and with the hopper of an integrally formed end bracket

and lug, a hinge pin connecting the respective hinge lugs of said end bracket and the integrally formed arm and fastening plate together, a link slidably connected at one end by a pivot to said arm and pivotally connected at its opposite end with said end bracket, a spiral spring carried by said link interposed between the pivotal connections of said link with said end bracket and arm, substantially as specified.

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

NICHOLAS R. NELSON.

Witnesses:
J. L. MILTGEN,
EDWARD BEICHL.