

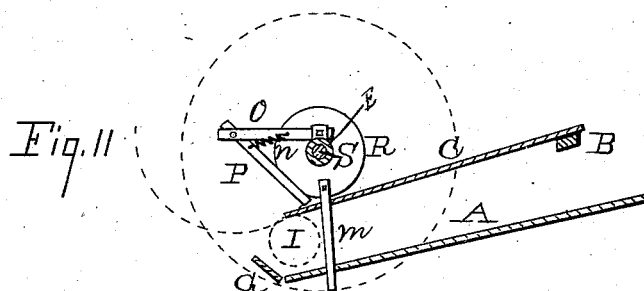
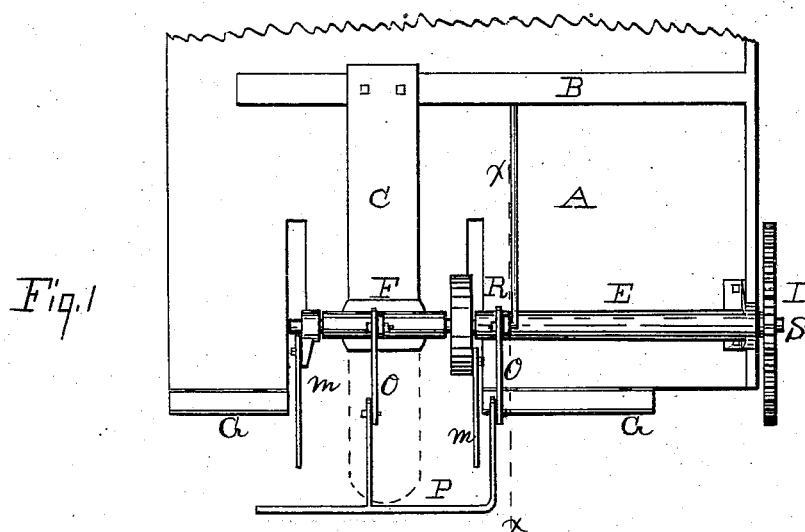
(No Model.)

J. KNOOP.

## SHEAF DISCHARGER FOR GRAIN BINDERS.

No. 261,557.

Patented July 25, 1882.



WITNESSES:

L. M. Lindenberg  
J. A. Davy.

INVENTOR

INVENTOR  
*Joseph Knopf*  
BY

BY

ATTORNEY

# UNITED STATES PATENT OFFICE.

JOSIAH KNOOP, OF LOST CREEK, OHIO.

## SHEAF-DISCHARGER FOR GRAIN-BINDERS.

SPECIFICATION forming part of Letters Patent No. 261,557, dated July 25, 1882.

Application filed March 28, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOSIAH KNOOP, a citizen of the United States, residing in Lost Creek township, in the county of Miami and State of Ohio, have invented a new and useful improvement in the sheaf-discharging device used in combination with an automatic twine-binder of a reaping-machine, of which the following is a specification.

My invention relates to a device for clearing the rotary sheaf-discharging arms of the binder, which device slides over the surface of the arms to prevent the adhesion of the straw or sheaf. The device is used in combination with the Appleby automatic binder or any binder discharging its sheaf in a similar manner. I attain the object in view by the mechanism illustrated in the accompanying drawings, in which—

Figure I is a top view of so much of an Appleby automatic twine-binder as is necessary to illustrate my invention. Fig. II is a longitudinal section on the line *xx* and the parts immediately beyond.

Similar letters refer to similar parts throughout the several views.

A represents the binder-floor, it being in an inclined position, and upon which the grain falls from the endless apron. Sliding down the floor, the packers press the grain into a gavel, where it is bound by the tyer beneath the frame F of the automatic binder.

B is a bar extending laterally from the side of the frame, and C is a brace connecting this bar with the knotter-frame.

E is a sleeve constituting the top of the binder-frame and giving support to the shaft S, which extends through on the sleeve F, constituting the top of the knotter-frame. This shaft is driven by suitable gear, which engages the spur-wheel D.

At a point between the sleeve F and sleeve E of the binder-frame is secured the cam R, which operates the tying device, and to the outer surface of this cam is bolted one of the discharging-arms *m*, the other being attached to the end of the shaft. The only means heretofore provided for cleaning these arms *m* is the inclined extension of the brace C, as indicated by dotted lines. Said arms, as they rotate, press the sheaf against the under side of this brace or board, and thus force it out of the binder.

At the bottom of the platform or floor are hinged two boards, C, which are held at an

angle to the floor to prevent the ends of the grain dropping down, and thereby falling away from the binding device.

My invention consists in attaching to the sleeve F of the knotter-frame and the sleeve E of the support the arms O O in a suitable position, and to these I joint the cleaner P, which is shown fully extended in Fig. I, and fully retracted at Fig. II.

The spiral spring *n*, Fig. II, or other suitable spring, may be used to retract the cleaner.

The dotted lines at Fig. II illustrate the movements of the discharging-arms and the cleaner.

The circular dotted line I shows the position of the sheaf at the commencement of the operation of discharging the same. As the arms rotate from beneath outward, they first engage the sheaf, then the cleaner, which slides along on the arms until the sheaf is cast off and the arms are passed to the cleaner. Then the springs retract the same to its normal condition.

The cleaner may have downward projections *s*, which shall move astride the rotary discharging-arms.

The essential features of my invention are attaching arms O O or an arm to the knotter-frame F or to the sleeve of support E, or to both, and pivoting to said arm or arms a cleaner to move along the surface of the discharging-arms of an automatic binder, and a suitable retracting spring to bring the cleaner back to its normal position. One permanent arm would be sufficient attached to the knotter-frame. Then the cleaner would be the form of an inverted T or inverted V.

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

1. The fixed arms O O, attached to frame F and support E, and cleaner P, with retracting springs *n*, in combination with the discharging-arms *m*, substantially as and for the purpose set forth.

2. In an automatic binder, the combination of the fixed arms O O, carrying the cleaner, with the retracting spring to hold the cleaner in its normal position, said cleaner being adapted to be operated by the sheaf-discharging arms.

JOSIAH KNOOP.

Witnesses:

O. W. BARR,  
L. M. LINDENBERGER.