No. 617,488. Patented Jan. 10, 1899.

H. E. KOCH.

GRAIN DISLODGING DEVICE.

(Application filed Sept. 6, 1898.)

(No Model.)

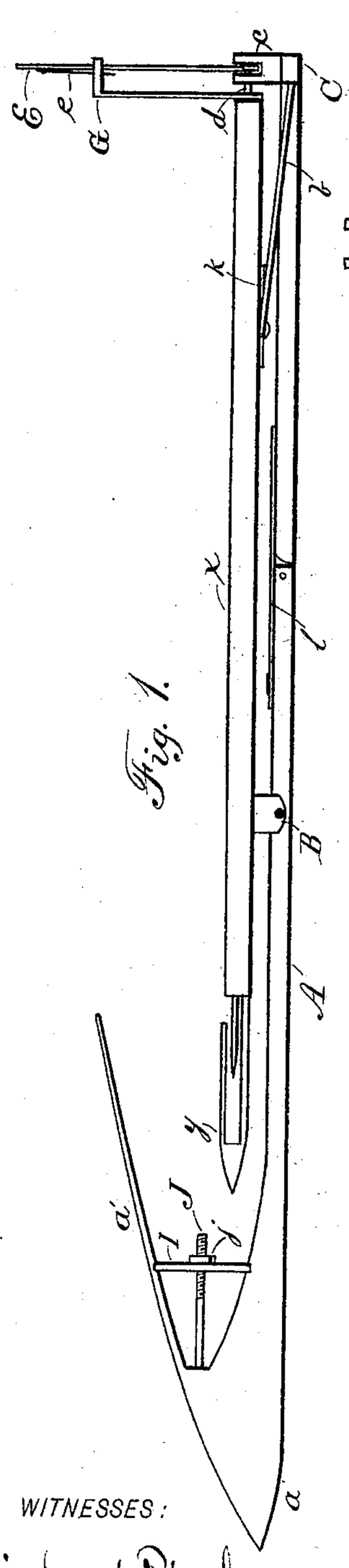

Fig. 1.

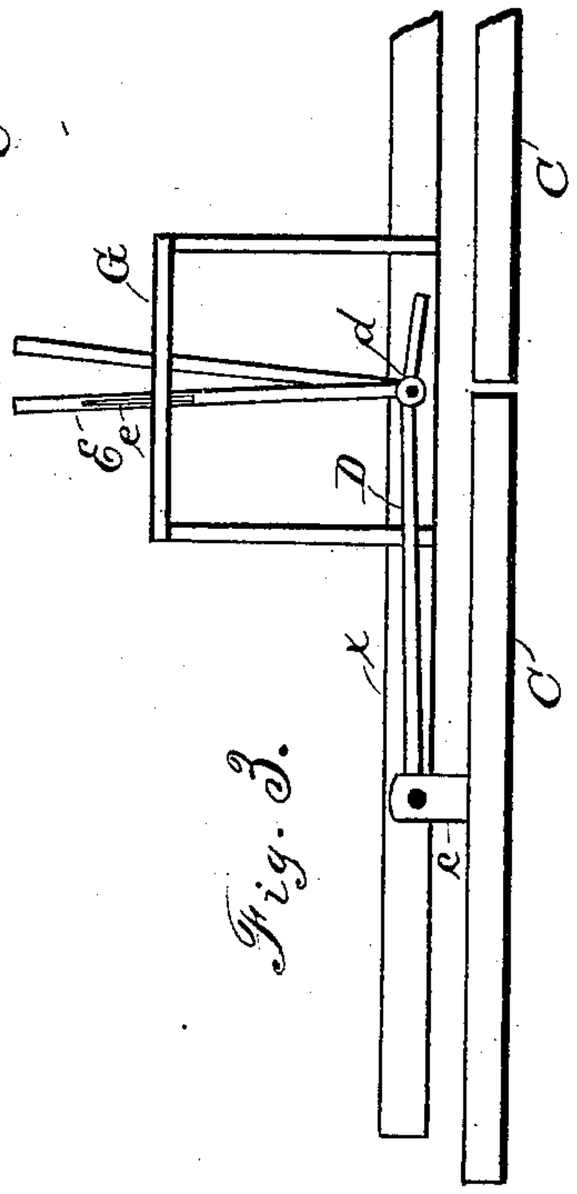

Fig. 3.

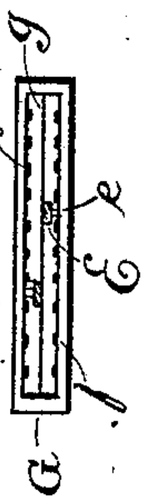

Fig. 5.

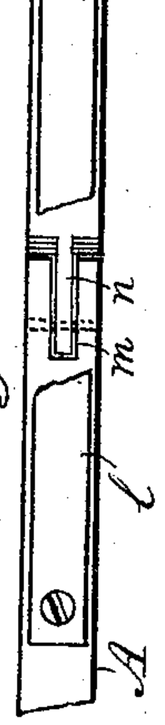

Fig. 4.

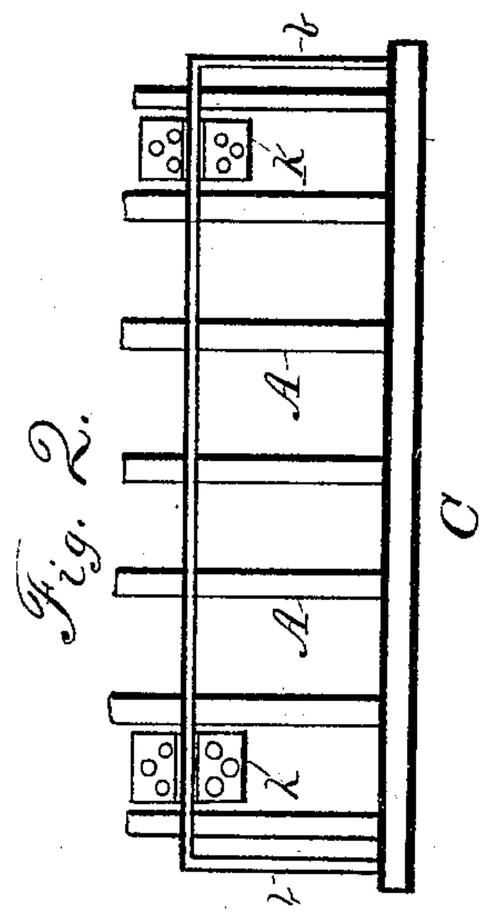

Fig. 2.

WITNESSES:

J. Richard Riggles.

Otis D Swett

INVENTOR

Henry E. Koch.

BY

Chas. O. Swett.

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY E. KOCH, OF HARTINGTON, NEBRASKA.

GRAIN-DISLODGING DEVICE.

SPECIFICATION forming part of Letters Patent No. 617,488, dated January 10, 1899.

Application filed September 6, 1898. Serial No. 690,260. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. KOCH, a citizen of the United States, residing at Hartington, in the county of Cedar and State of Nebraska, have invented certain new and useful Improvements in Grain-Dislodging Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Grain-dislodgers have heretofore been attached to the finger-bars of cutting-machines, adding considerably to the weight of the front of the platform, and means have not been provided for controlling these devices. My invention is hung beneath the reaper-platform, so that its weight falls upon the running-gear, and its dip is regulated by hand-lever connections. It is also to a limited extent made self-adjusting.

In the drawings, Figure 1 is a side elevation of the invention in operative position attached to a reaper-platform. Fig. 2 is a plan of the rear portion of one set of runners. Fig. 3 is a rear elevation of a part of the invention. Fig. 4 is an enlarged plan of a runner-joint with a portion of the spring broken away, and Fig. 5 is a plan of the lever-guide.

Like letters of reference denote corresponding parts in the several views.

The letter A indicates a runner of my invention. It is pivotally hung to a transverse beam B beneath the reaper-platform *x* and by arms *b b* to journal-hangers K near the rear of the platform. These connections allow the runner a limited vertical motion. The front end *a* of each runner is in vertical line with and projects beyond the sickle-guard *y* and is provided with rearwardly-inclined flexible guides *a'*, extending back as far as the sickle. These runners may be all united to a single bar at their rear and all be operated by a single lever; but I prefer to arrange them in two sets, each set having three or more runners, which are secured to a horizontal bar C. The arms *b b* above mentioned are connected to this bar C and swung to the under side of the platform *x*. This contrivance is economically constructed by bending a rod to form three sides of a quadrangle, with the base journaled in hangers K K on the platform and the tips fixed to the bar C. The desired inclination of the runners is secured by providing on each bar C a central vertical shoulder *c*, to which is jointed the horizontal member of a bell-crank D, fulcrumed at *d* to the rear edge of the platform *x*. The vertical member of the crank is formed into a hand-lever E and provided with spring-ratchets *e* to self-engage notches *f f* in the lever-guide G. I use a double guide, with a dividing-strip *g* to separate the levers, each of the latter having its own ratchet-notches. Each runner is also made self-adjusting by dividing it vertically back of the beam B and forming a joint consisting of a horizontal projection *n* on one member pivoted in a horizontal recess *m* in the other member. The upper shoulder of one or both members is rounded off and the lower shoulder of each is squared and normally in contact with its opposite. By this construction flexure of the joint is possible downward only, so that when the upwardly-curved point of the runner strikes an obstruction it passes over it, the joint just described yielding for this purpose. A strong leaf-spring *l*, fixed on the upper side of one member, overlaps the joint and restores the members to their normal alinement when the obstruction is passed. The inclination of the flexible guides *a'* is fixed as desired by means of a block I, having top and bottom grooves adapted to engage the upper edge of the runner and the lower side of the guide and perforated to admit the horizontal threaded rod J, which bears a threaded adjusting-nut *j*, by which the block is moved and the guide is raised or lowered.

What I claim and desire to secure is—

1. In a cutting-machine grain-dislodger a runner tiltably hung beneath the platform, its point preceding the sickle-guard, a rearwardly-inclined guide on said runner and lever connections to effect vertical adjustment of the runner substantially as described.

2. In a grain-dislodging device a runner pivotally suspended beneath the reaper-platform and having a vertically self-adjusting joint for the purpose specified.

3. In the runner of a grain-dislodger hav-

ing a rearwardly-extended guide a block on a horizontal threaded rod and movable between the runner and its guide and a threaded nut on said rod to adjust said block for the purpose herein specified.

4. In a cutting-machine a plurality of runners arranged in sets and pivotally hung beneath the binder-platform, a rearwardly-inclined flexible guide on each runner, a bar connected to the rear end of each set of runners and held by arms swung to the platform, a vertical shoulder on each bar to pivotally engage the end of a crank-lever, fulcrumed at the edge of the platform and a spring-ratchet on said lever to engage notches in the lever-guide substantially as described.

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

HENRY E. KOCH.

Witnesses:

W. H. MARTIN,

OTTO H. KUHL.