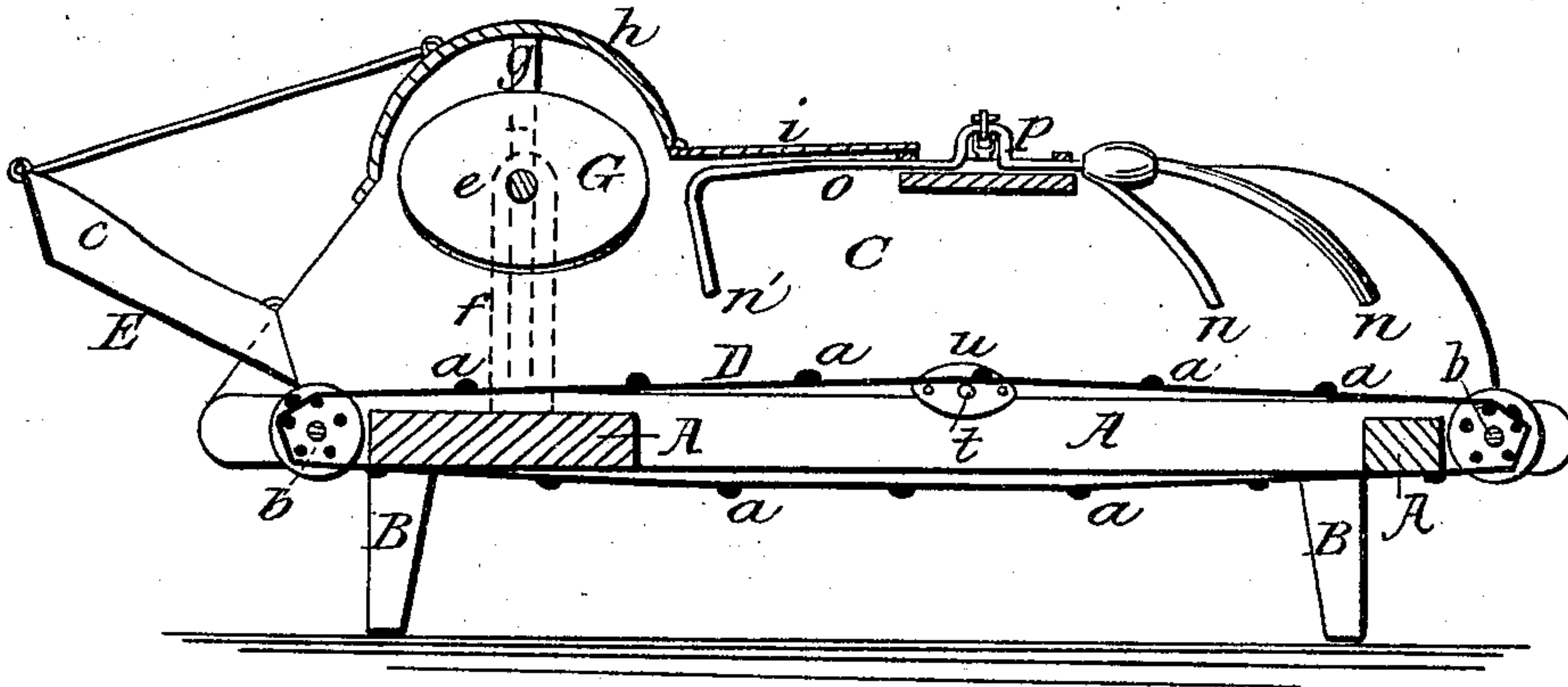


Band Cutter.

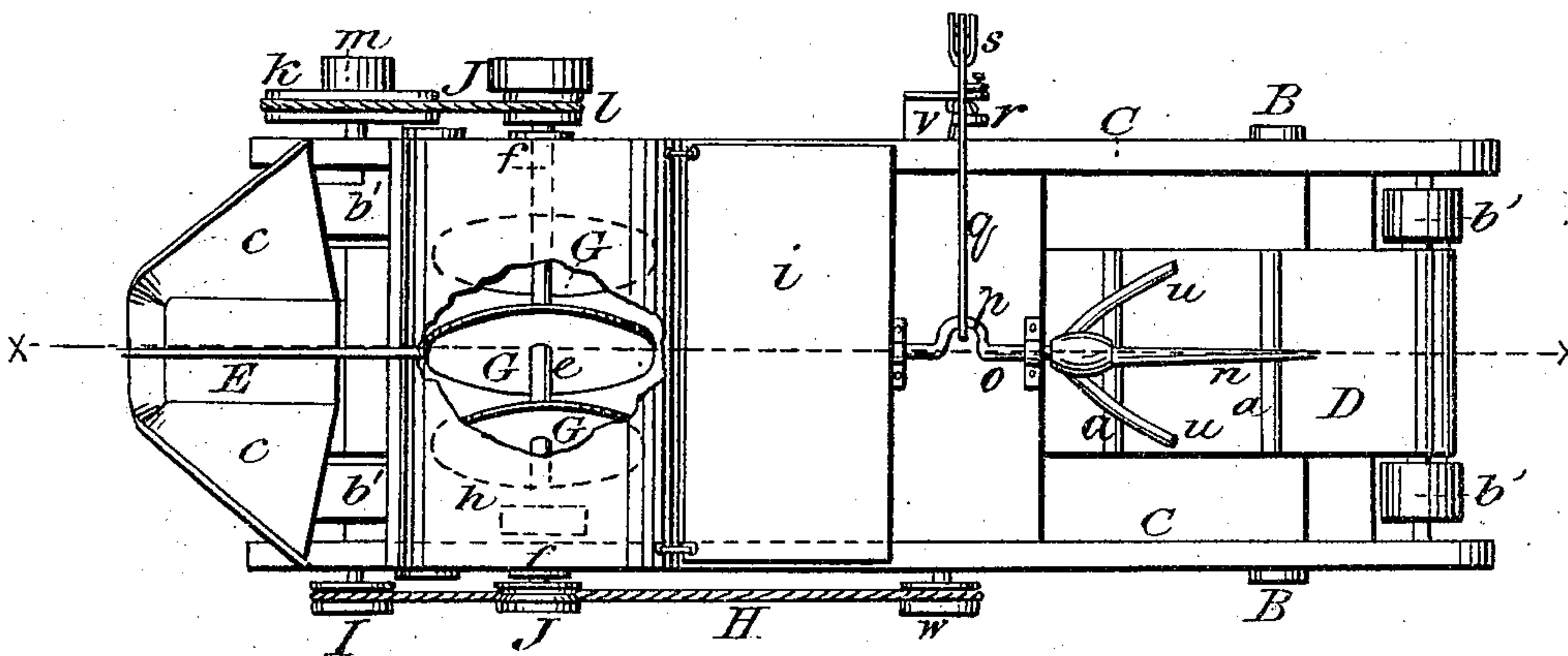
No. 95,414.

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*Fig. 1.*



*Fig. 2.*



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# United States Patent Office.

WESLEY C. BARR AND EDGAR J. HUNKINS, OF MACON CITY, MISSOURI; SAID HUNKINS ASSIGNOR TO SAID BARR FOR HIS RIGHT.

Letters Patent No. 95,414, dated October 5, 1869; antedated September 22, 1869.

## IMPROVEMENT IN BAND-CUTTER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, WESLEY C. BARR and EDGAR J. HUNKINS, of Macon City, in the county of Macon, and State of Missouri, have invented a new and improved Band-Cutter; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal vertical section of our invention, through the line  $x x$  of fig. 2.

Figure 2 is a plan view of the same machine.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a simple and effective machine for cutting the bands of grain-bundles, and loosening up the straw of the bundles as it is fed to the threshing-machine, and is designed as an accessory machine to a threshing-machine.

It consists of the combination of devices as herein set forth.

In the drawings—

A is the bed-frame of the machine, supported by legs B, and provided with side-boards C.

D is an endless web of cloth, provided with batten-strips  $a$ , and driven by drums  $b$ , thus constituting a carrier, by which the bundles of grain are borne through the machine.

The drums  $b$  are constructed of parallel rods, arranged around the shaft of the drums, the ends of the said rods set into rollers, thus forming an open or cage-drum, which permits the batten-strips  $a$  to fit into the intervals between the rods, and thus insure the better performance of the endless carrier.

The bundles of grain are fed into a chute, E, having sloping sides  $c c$ , and arranged at the front end of the machine, at an angle of about forty-five degrees, to give the bundles an impetus toward the band-cutting disks, which the bundles pass under.

The sloping sides  $c c$ , of the chute, guide the bundles toward the central line of the carrier, where they will not fail to encounter the cutting-disks G, one or more, but preferably three, as shown.

The cutting-disks are not plane circular sheets of metal, but have elliptical perimeters to obtain a shear-cutting action upon the band. They are arranged on the shaft, at right angles to it, but are either set at a greater or less angle with the shaft, or are bent to form warped surfaces, so called, or helical surfaces.

The object of this formation is to obtain a lateral action upon the band and bundles, as their edges cut the band, which conduces to a more certain cutting-action, and at the same time serves to loosen the straw. This feature, however, is simply an improving feature, and is not indispensable to the operation of the cutting-disks, which would cut reasonably well if they were plane surfaces merely.

The shaft  $e$ , bearing the disks, is arranged across the machine, above the carrier D, as shown, and has its bearings in plates  $f$ , arranged against the outside or inside of the side-boards C, which latter have vertical slots  $g$ , through which the shaft  $e$  projects.

The plates  $f$  are slotted, as shown in dotted lines in fig. 1, and set-screws, passing through the slots into the side-boards, serve to clamp the plates firmly thereto, at any position permitted by the slots.

The object of this device is to enable the cutting-disk to be adjusted to different heights above the carrier D, in order to cut different-sized bundles of grain with better results, although the adjustable character of the cutting-disk is not an indispensable feature.

The cutting-disks are enclosed by a sheet of metal,  $h$ , affixed to circular cheeks cut on the side-boards. A portion of this sheet is broken away in fig. 2, to exhibit the cutting-disks.

$i$  is a hinged lid, which can be raised to examine or clear the machine of tangled straw, if desired.

The shaft of the cutting-disks, by a bolt,  $j$ , running on a pulley,  $k$ , on the shaft of the front drum, and a pulley,  $l$ , on the shaft of the cutting-disks.

A belt from some suitable driving-pulley runs on the smaller pulley J, on the cutting-disk shaft, to drive the machine.

The straw is loosened and spread, after the band is cut, by means of a spreading-fork, consisting of the tines  $n n n n'$ , bent downward within the side-boards from a shaft,  $o$ , having a crank,  $p$ , to which is connected a rod,  $q$ , pivoted to a bell-crank lever,  $s$ , pivoted to a block,  $v$ , the lower arm of which lever is connected by a rod to a wrist-pin in the crank-boss  $r$ , on a shaft,  $t$ , arranged across the machine under the carrier, and bearing at its opposite end a pulley,  $u$ , which is driven by a belt, H, from the pulley I, on the shaft of the front drum  $b$ .

When the machine is running, the lines  $n' n n n$  will be vibrated laterally, which operation will cause the loosening up of the bundle, and the spreading of the straw in a manner suitable for feeding into the threshing-machine.

The carrier is agitated, as it passes over the shaft  $t$ , by means of cams  $u$ , mounted on the said shaft. This agitation of the carrier is beneficial in shaking up the straw, and conducing to its better delivery to the threshing-machine.

We desire to be understood as not limiting ourselves to the precise arrangement of the pulleys and belts as herein shown and described, or to the exclusive use of belts and pulleys for the cutting-disks. The carrier and other moving parts of the machine may be easily adjusted to be driven by cog-wheels.

We claim as new, and desire to secure by Letters Patent—

1. The combination, in a band-cutting machine, of the carrier D and elliptical cutting-disks G, one or more, arranged across and over the carrier, substan-



tially as described, with the vibrating tines  $n n n'$ , arranged to operate as described, and the accessory belts and pulleys for driving the same, all as set forth.

2. The combination, in a band-cutting machine, of the inclined chute E, having sloping sides  $cc$ , substantially as described, with the carrier D and cutting-disks G, all as set forth.

3. Vibrating tines  $n n n'$ , arranged to operate substantially as described, in combination with the carrier D of a band-cutting machine.

4. The combination of the frame A, side-boards C, carrier D, and cutting-disks G, either plane or helical, when operating together, substantially as described.

5. The adjustable bearing-plates  $f$ , substantially as described, for adjusting the height of the cutting-disks over the carrier D, all as set forth.

6. A band-cutting machine, constructed and operating substantially as shown and described, and for the purpose set forth.

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Witnesses:

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