(No Model.) 2 Sheets—Sheet 1.

N. CLOUSE.

CUTTING APPARATUS.

No. 457,075. Patented Aug. 4, 1891.

Fig. 1.

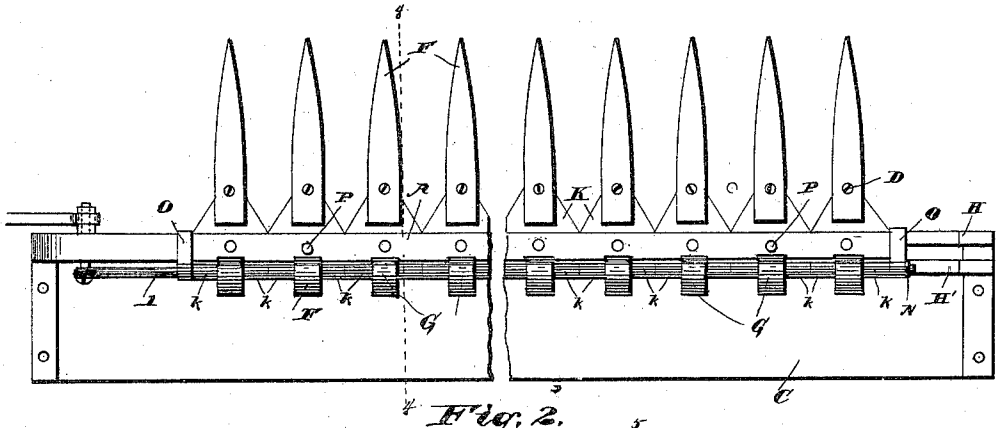


Fig. 2.

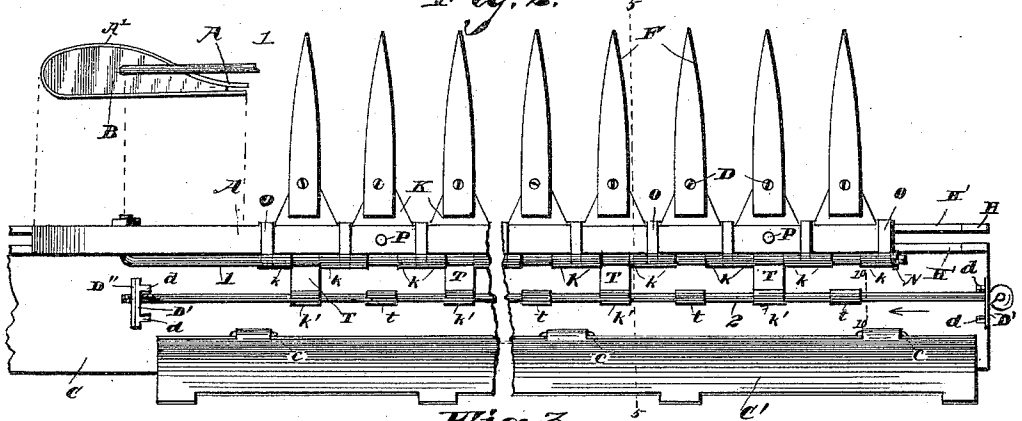
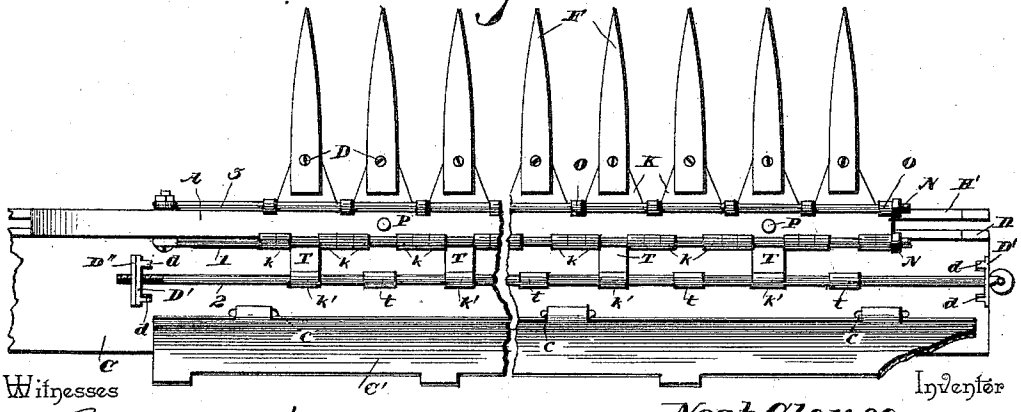


Fig. 3.



Witnesses

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By his Attorneys,

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

(No Model.) 2 Sheets—Sheet 2.

N. CLOUSE.

CUTTING APPARATUS.

No. 457,075. Patented Aug. 4, 1891.

Fig. 4.

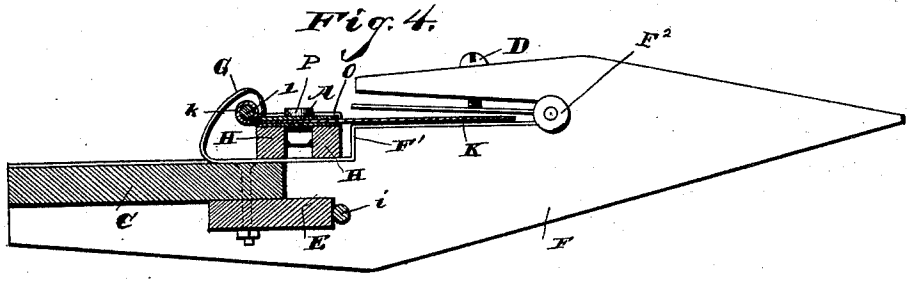


Fig. 5.

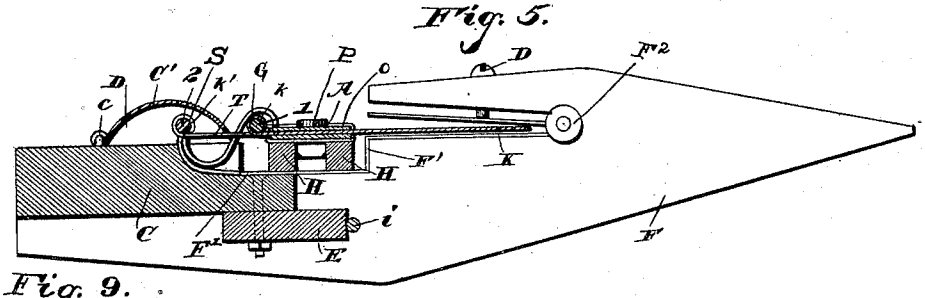


Fig. 9.

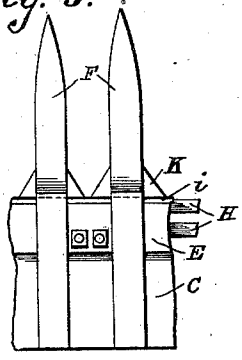


Fig. 6.

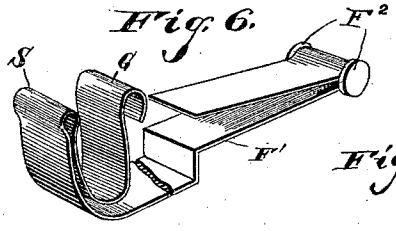


Fig. 8.

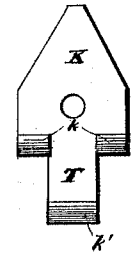


Fig. 10.

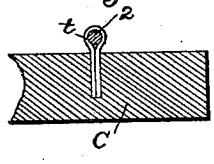


Fig. 7.

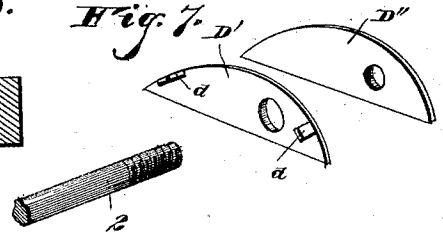
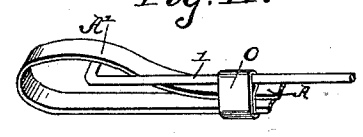


Fig. 11.



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UNITED STATES PATENT OFFICE.

NOAH CLOUSE, OF McPHERSON, ASSIGNOR OF ONE-HALF TO JAMES P. GANDY, OF GANDY, NEBRASKA.

CUTTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 457,075, dated August 4, 1891.

Application filed September 11, 1890. Serial No. 364,674. (No model.)

To all whom it may concern:

Be it known that I, NOAH CLOUSE, a citizen of the United States, residing at McPherson, in the county of McPherson and State of Nebraska, have invented a new and useful Cutting Apparatus, of which the following is a specification.

This invention relates to harvesters, and more particularly to the cutting apparatus thereof; and the object of the same is to effect improvements upon devices of this general character heretofore existing.

To this end the invention consists in the details of construction hereinafter more fully described, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a cutter-bar having one rod and with the clamps removed. Fig. 2 is a similar view showing the cutter-bar provided with two rods, and Fig. 3 with three rods. Fig. 4 is a transverse section of Fig. 1 on the line 4 4 thereof. Fig. 5 is a similar, but slightly modified, section on the line 5 5 of Fig. 2, with the shield thereof closed, but with a knife-guide shown in side elevation and in proper position. Fig. 6 is a perspective detail of one of the knife-guides. Fig. 7 shows perspective details of several elements. Fig. 8 is a detail plan view of one of the knives with its extension. Fig. 9 is a bottom plan view of a section of the cutter-bar. Fig. 10 is a section on the line 10 10 of Fig. 2 of one of the eyes *t*. Fig. 11 is a perspective detail of the inner end of the knife-bar.

Referring to the said drawings, the letter C designates the finger-bar carrying the guard-fingers F in the usual manner, which fingers are held at proper distances apart by the section-bars E, as seen in Fig. 9, and may also be connected by a rod *i* just in front of said section-bars, if desired. Within these fingers are located metallic knife-guides F′, which are bent to conform with the shape of the faces of the guard-fingers F, and whose inner ends are adapted to be depressed by screws D, in order that they may more closely fit the knives K. The bends of these guides F′ are provided with buttons F^2, which rest against the ends of the transverse slots in the fingers. The rear ends of these guides are turned over, as shown at G, for a purpose to appear hereinafter, and in some cases their bodies are continued rearwardly for a considerable distance and provided with eyes S, as shown in Fig. 6, also for a purpose to appear farther on. These guides are secured within the guard-fingers in any suitable or preferred manner.

H H designate tracks secured to and connecting the knife-guides in rear of the upper tongues of the guard-fingers, and between these tracks slide the heads or nuts of bolts P, which hold the knives K in the double knife-bar A. The latter comprises a metallic bar passing beneath the bodies of the knives around the block B in a band A′ at the inner end of the knife-bar, Fig. 11, and then outwardly above the bodies of the knives, and bolts P are passed through the upper and lower members of this knife-bar and through holes in the centers of the knives K, as will be understood.

Each knife K is provided with eyes *k* at its two rear corners, and in the construction shown in Fig. 1 a rod 1 passes through these eyes and through eyes in the rear ends of clamps O, which surround the two members of the knife-bar A at the inner and outer ends of the bank of knives, or which clamps may stand between each two knives, and also surround the two members of the knife-bar A, as seen in Figs. 2, 4, and 5, or may stand between each two knives, having eyes at their ends embracing the rods 1 and 3 and passing intermediate these eyes beneath the bar A, as seen in Fig. 3. In all such cases the tracks H H are cut away, as seen at H′, to provide seats for the lower sides of the clamps O to slide on, and in Fig. 1 these seats H′ obviously need not extend the length of the tracks H, because there are only two clamps O, one at each end of the bank of knives. Thus the lower member of the bar A would have a firm bearing directly on the tracks, while the clamps moved on their seats. These details, however, will suggest themselves to the manufacturer, and further description and illustra-

tion thereof are not considered essential. In the construction shown in Fig. 2 the bodies of certain of the knives between their eyes *k* are continued rearwardly, as shown at T, and provided with an additional eye *k'* at the rear end of the extension, and eyes *t* are seated in the upper side of the finger-bar C in rear of the tracks H, and through the eyes *t* and *k'* is passed a second rod 2, which I call the "slide-rod." Over this rod is a curved shield or cover C', provided with hinges *c* along one edge. Against the ends of the cover are seated washers D', having inwardly-extending tongues *d*, and through these washers passes the slide-rod 2, one end of which is enlarged and the other end screwed into the nut D''. In the construction shown in Fig. 3 the arrangement of parts is substantially similar to that in Fig. 2, just described, except that a third rod 3 is passed along the outer upper corner of the knife-bar A, and the clamps O have eyes at each end engaging, respectively, the rods 1 and 3. The turned-over portions G of the guides F' bear upon the upper face of the upper member of the knife-bar A, as shown in Fig. 1; but in the constructions shown in Figs. 2 and 3 these turned-over portions are omitted. In such cases, however, the eyes S in the rear ends of said guides loosely embrace the rod 2, as shown in Fig. 5, and about four of the guides throughout the length of the cutter-bar are provided with such eyes, which may, in fact, take the place of the eyes *t*, if desired, as seen in Fig. 5. A similar number of the knives K are provided with the extensions T, and the stroke that such extensions have between the eyes S or *t* is the limit of the stroke of the knife-bar. The inner ends of the rods 1 and 3 are connected in any suitable manner, as by a transverse bolt, with the block B, and their outer ends are provided with nuts N, which screw against the outmost clamp O. The block B will be reciprocated by suitable mechanism carried upon the harvester in the ordinary and well-known manner, all as will be clearly understood by a person skilled in the art.

What I claim is—

1. The herein-described cutter-bar, consisting of a double bar A of metal bent around the block B at its inner end, knives K, whose bodies stand between the upper and lower members of said bar and have eyes *k* at their rear corners, a rod 1, secured at its inner end to said block and passing through said eyes, a nut on the outer end of said rod, and bolts through the knives at proper intervals and the two members of the double bar A, substantially as set forth.

2. The herein-described cutter-bar, consisting of a double bar A, of metal, bent around the block B at the inner end of the cutter-bar, knives K, whose bodies stand between the upper and lower members of said bar and have eyes *k* at their rear corners, bolts through the knives at proper intervals and the two members of the bar, clamps O, embracing said bar members and having eyes in alignment with the eyes *k*, a rod 1, secured at its inner end to said block and passing through all said eyes, and a nut on the outer end of said rod, substantially as set forth.

3. In a harvester cutting apparatus, the combination, with the finger-bar C, having the tracks H and the guard-fingers F, of the knife-bar A, comprising a double bar of metal bent around a block B at the inner end of the bar, the knives K, whose bodies stand between the upper and lower members of said bar, and the bolts P, whose nuts move between said tracks and whose bodies pass through the knives and the members of the knife-bar, substantially as and for the purpose set forth.

4. In a harvester cutting apparatus, the combination, with the reciprocating knife-bar carrying the knives, of the guard-finger F, surrounding said knives, the knife-guide F', inclosed within said finger, and the screw D for depressing the end of said guide, substantially as and for the purpose set forth.

5. In a harvester cutting apparatus, the combination, with the reciprocating knife-bar carrying the knives, of the guard-finger F, surrounding said knives, the knife-guide F', inclosed within said finger and having a turned-over rear end G bearing upon the upper face of said knife-bar, and bolts connecting said guide to the finger, substantially as and for the purpose set forth.

6. The herein-described knife-bar, the same consisting of a double bar of metal bent around a block at the inner end of the bar, knives provided with eyes at their inner corners and their bodies bolted between the members of said bar, clamps passing beneath said bar and turned up and provided with eyes at their front and rear ends, a rod 1, passing through all said eyes at the rear edge of the bar, and a rod 3, passing through the eyes of the clamps at the front edge thereof, substantially as described.

7. The herein-described knife-bar, the same consisting of a two-part bar, knives bolted between the members of said bar and provided with eyes at their inner corners, certain of said knives having rearward extensions provided with eyes at their ends, a rod 1, passing through said corner-eyes, and a second rod 2, passing through the eyes of said extension, substantially as set forth.

8. In a cutting apparatus, the combination, with the cutter-bar A, composed of a two-part bar, knives bolted between the members of said bar, and extensions from the rear of certain of said knives, provided with eyes, of the finger-bar C, the fingers F thereon, a slide-rod 2, carried by said finger-bar and upon which said eyes slide, and a shield C', covering the same, substantially as described.

9. In a cutting apparatus, the combination, with the cutter-bar A, certain of the knives of which have rearward extensions provided

with eyes, of the finger-bar C, the fingers F thereon, the eyes *t*, also thereon, a slide-rod 2, passing through all said eyes, a shield C′, covering the same, and nuts and washers upon the ends of said rod engaging the ends of the shield and holding the same in place, substantially as hereinbefore described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

NOAH CLOUSE.

Witnesses:
D. P. WILCOX,
I. W. CLOUSE.