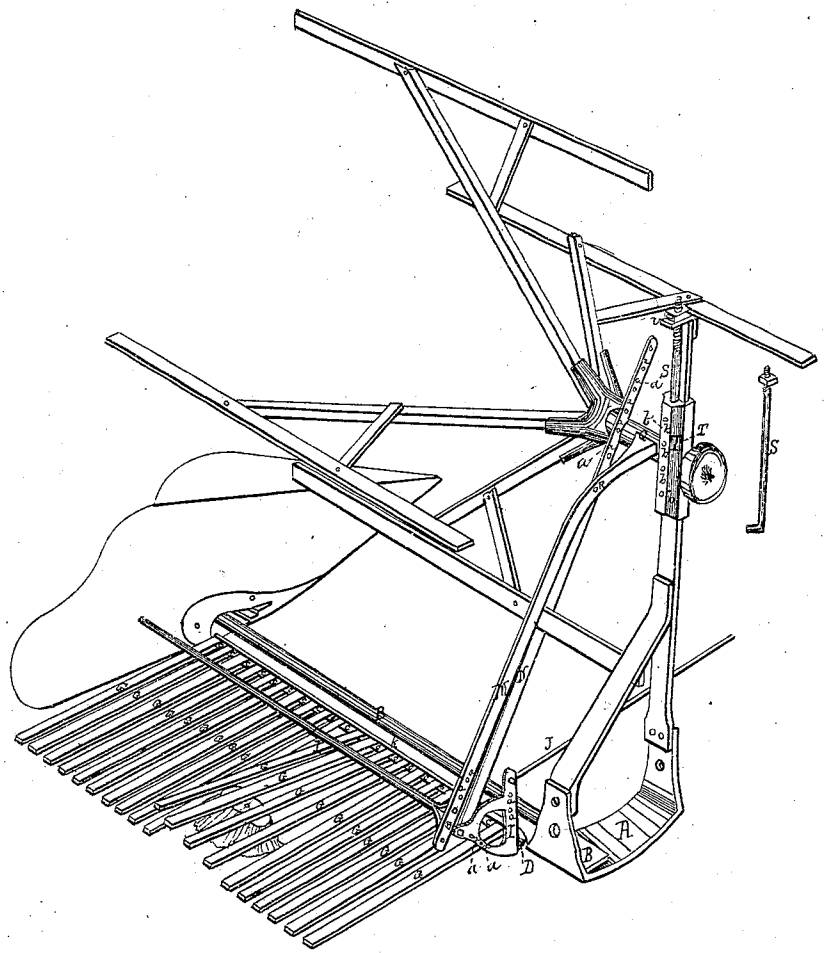
Sheet 1 - 3 Sheets.

W. N. Whiteley.

Harvester Dropper.

No. 95397 Patented Sep. 28, 1869.

Fig. 1.



Witnesses

R. S. Turner

J. S. Brown

Inventor

Wm N. Whiteley

by his atty

R. D. C. Smith

2 Sheets 2.
3 Sheets

W. N. Whiteley.

Harvester Dropper.

No. 95397 Patented Sep. 28, 1869.

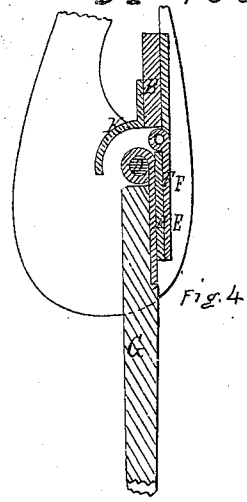


Fig. 4.

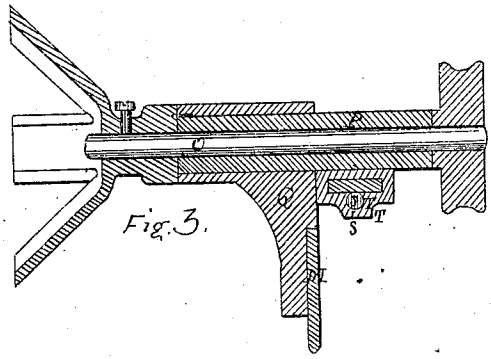


Fig. 3.

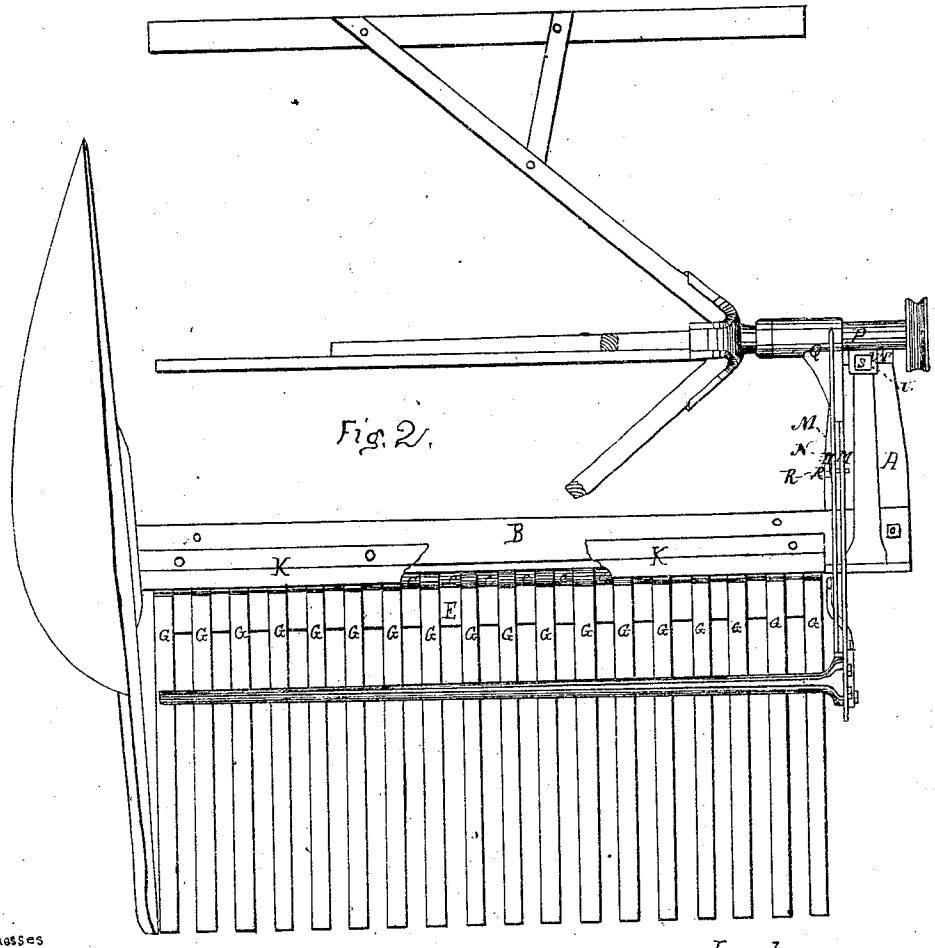


Fig. 2.

Witnesses

R. S. Turner

J. S. Brown.

Inventor

Wm. N. Whiteley

By his Atty

R. D. Smith

Sheet 3 - 3 Sheets.

W. N. Whiteley.

Harvester Dropper.

No 95397 Patented Sep. 28, 1869.

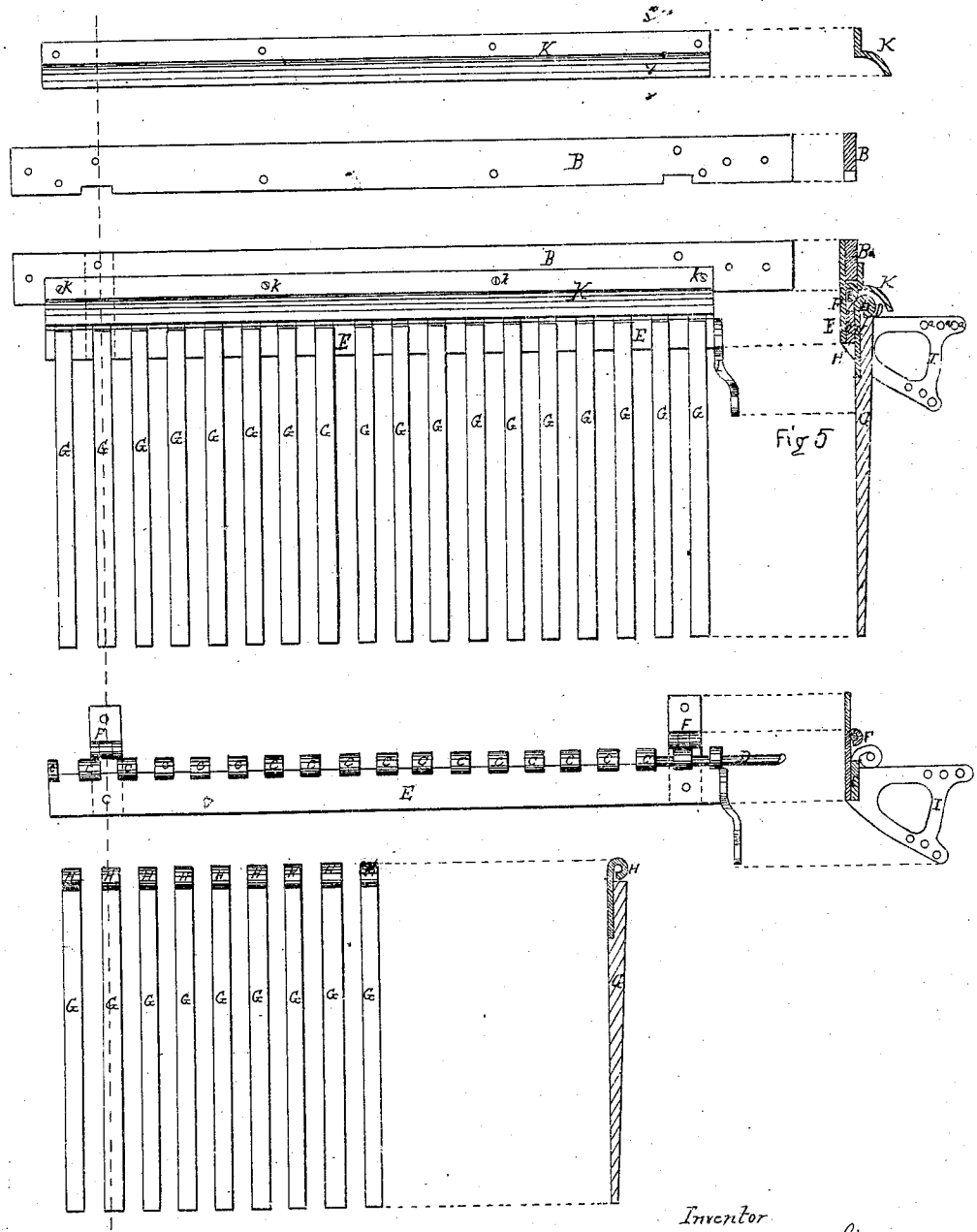


Fig 5

Witnesses

R. S. Turner

J. S. Brown.

Inventor

Wm N. Whiteley

By his atty

R. O. Smith

UNITED STATES PATENT OFFICE.

WILLIAM N. WHITELY, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN HARVESTER-DROPPERS.

Specification forming part of Letters Patent No. **95,397**, dated September 28, 1869.

To all whom it may concern:

Be it known that I, WILLIAM N. WHITELY, of Springfield, in the county of Clarke and State of Ohio, have invented a new and useful Improvement in Harvesters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my invention as it appears while in operation. Fig. 2 is a plan view of the same. Fig. 3 is a horizontal section through the axis of the reel-head, enlarged. Fig. 4 is a vertical cross-section through finger-bar and its attachments near outer shoe. Fig. 5 represents, in plan and elevation, the various parts of the dropper assembled and detached.

My invention consists, first, in making the dropper with independent slats, either of which may rise or fall upon its individual joint without affecting the position of the other slats; second, in the shield to prevent the straw from becoming entangled in the dropper-joints; third, in the mode of attaching the cut-off rod, so that it shall move in the arc of a circle of which the axis of the reel-shaft shall be the center; fourth, in the mode of adjusting the height of the reel.

That others may understand the construction and operation of my invention, I will particularly describe it.

A is the inner shoe of the cutting apparatus, and is attached to the carriage which supports the gearing and driving mechanism by any one of the usual modes. These parts of the machine are not shown in the drawings, because no part of the invention claimed in this patent has reference to or depends for its operation upon the construction or arrangement of the carriage or driving mechanism.

B is the finger-bar of the cutting apparatus, and in practice suitable fingers and cutters would be attached, though not shown in the drawings. The bar E is attached to the rear edge of the finger-bar B by means of hinges F, so that it may be turned up or down upon the pivot-pins of said hinges. Attached to the front edge of the bar E are the lugs C C, each of which is perforated in the direction of the length of the bar E, and in such uniform manner that said perforations will all be coincident in axis and permit a suitable rod, D, to pass through all of them. (See Fig. 5.) The dropper-slats G G are arranged between the lugs C C, so that the rod D shall pass through a suitable perforation in the end of each slat, and thus become a joint-bolt, upon which each slat may play up and down at its rear portion independent of the other parts of the dropper.

If preferable, the dropper-slats may be provided with metal hinge-plates, as shown at H, Fig. 5, instead of being perforated as above set forth.

When the plate E is raised upon its hinges F the slats G G will rest upon the upper surface of and will all be raised up with said plate. At the end of the plate E is a bell-crank lever, I, to the front arm of which is attached a rod, J, which thence passes forward to a position convenient to the foot or hand of the driver, so that the position of the dropper-slats G may be regulated and controlled by him. The arms of the lever I are each provided with a series of holes for the adjustment of the parts connected therewith. The shield-plate K is a metallic strip of suitable width, bent in the form shown in K section, Fig. 5. The curved portion of the said plate projects upward and backward from the finger-bar B, so as to cover the joints of the hinges F and the slat-hinges and perfectly protect said joints from the intrusion of straw or other matters from above. The front edge of the plate K is made flat, and is secured to the finger-bar by bolts *k k*.

When the machine is in operation the dropper-slats will be maintained in a horizontal position by means of the rod J, except when it is desired to deposit the gavel. At that time, the front end of said rod being released by the attendant, the rear ends of the dropper-slats will be permitted to descend to the ground, and the grain will be discharged.

It is well known, however, that it is necessary to catch and support the grain which may be cut while the dropper is in the act of discharging its gavel by some means which shall prevent the straggling delivery which would ensue if the falling grain could mingle with that just being discharged. To that end a cut-off rod, L, has been generally employed. This rod descends to a position above and a little in rear of the finger-bar, and receives the grain as it falls after being severed by the knife during the time when the dropper is dis-

charging the gavel. When the dropper has resumed its horizontal position the cut-off rod is removed, and permits the cut grain to fall upon the dropper as before. For convenience, this cut-off rod has been connected with the dropper, so as to make the movements of the two coincident. This has sometimes been effected by attaching the cut-off rod L to an arm jointed to the reel-post or some elevated part of the frame forward of the cutting apparatus. This jointed arm was, in turn, connected by a rod to the dropper, so that when the latter should move up and down the former would do so also.

I have employed a similar combination in the jointed arm M and the connecting-rod N; but in order to secure a more uniform action of the parts, as well as to obtain durability and cheapness of construction, I make the axis of the reel-shaft O the axis of motion of the cut-off rod L also. This is easily accomplished by making the long box P of the reel-shaft cylindrical on its outer surface and making a box, Q, to fit thereon, as shown in Figs. 2 and 3. To this box Q is secured, in a rigid manner, the arm M, which carries the cut-off rod L at its lower end. The connecting-rod N is jointed to the crank-lever I and to the arm M at R, so that said rod will partake of the up-and-down movements of the dropper; and in order to adjust the position of the dropper and cut-off rod in regard to each other and in regard to their relative movements, the change-holes *a a a* are made in the various parts, so that the joints can be shifted nearer to or farther from their centers of motion.

Different qualities or conditions of grain require the reel to be set at different heights above the cutting apparatus, and I secure its easy and exact adjustment in this respect by means of a screw-rod, S, which is provided with a screw thread and nut at one end and an L-hook at the other. The principal adjustment is effected by removing the cap U, when the head T may be raised and the rod S unhooked from one of the holes *b* in the sliding head I and placed in another of said holes *b*, as may be desired, and the cap U replaced. The screw-nut may then be turned to raise or lower the head T slightly to fix the reel at the desired point.

It appears evident that the shield-plate K is equally useful in connection with any other kind of dropper which is hinged to the rear edge of the finger-bar.

Having described my invention, what I claim as new is—

1. The independent hinged dropper-slats G G, substantially as and for the purpose set forth.

2. The plate E, hinged to the finger-bar B, and provided with lugs C C, in combination with the independent dropper-slats G G, for the purpose of raising said slats simultaneously and supporting them, as set forth and described.

3. The shield-plate K, to cover the joint between the finger-bar and dropper, as set forth.

4. In combination with the sliding head T and reel-shaft box P, the L-hook screw-rod S, as and for the purpose set forth.

W. N. WHITELY.

Witnesses:
CHAS. EVANS,
CHAS. H. PIERCE.