

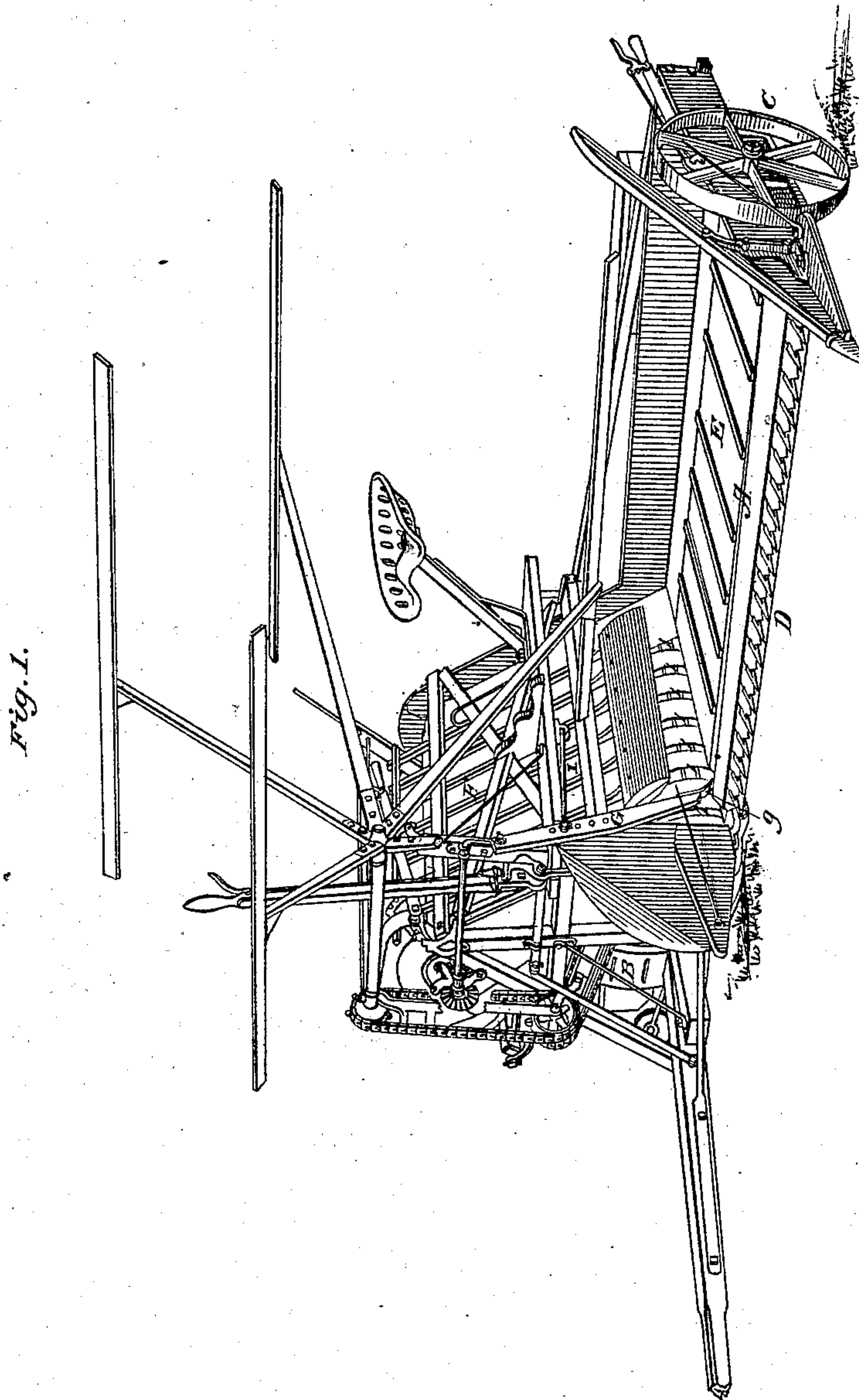
(No Model.)

3 Sheets—Sheet 1.

W. N. WHITELEY.
Harvesting Machine.

No. 239,004.

Patented March 15, 1881.



Attest:
Wm. Jordan
A. P. Cowe

Inventor:
W. N. Whiteley
By his atty. R. D. Smith

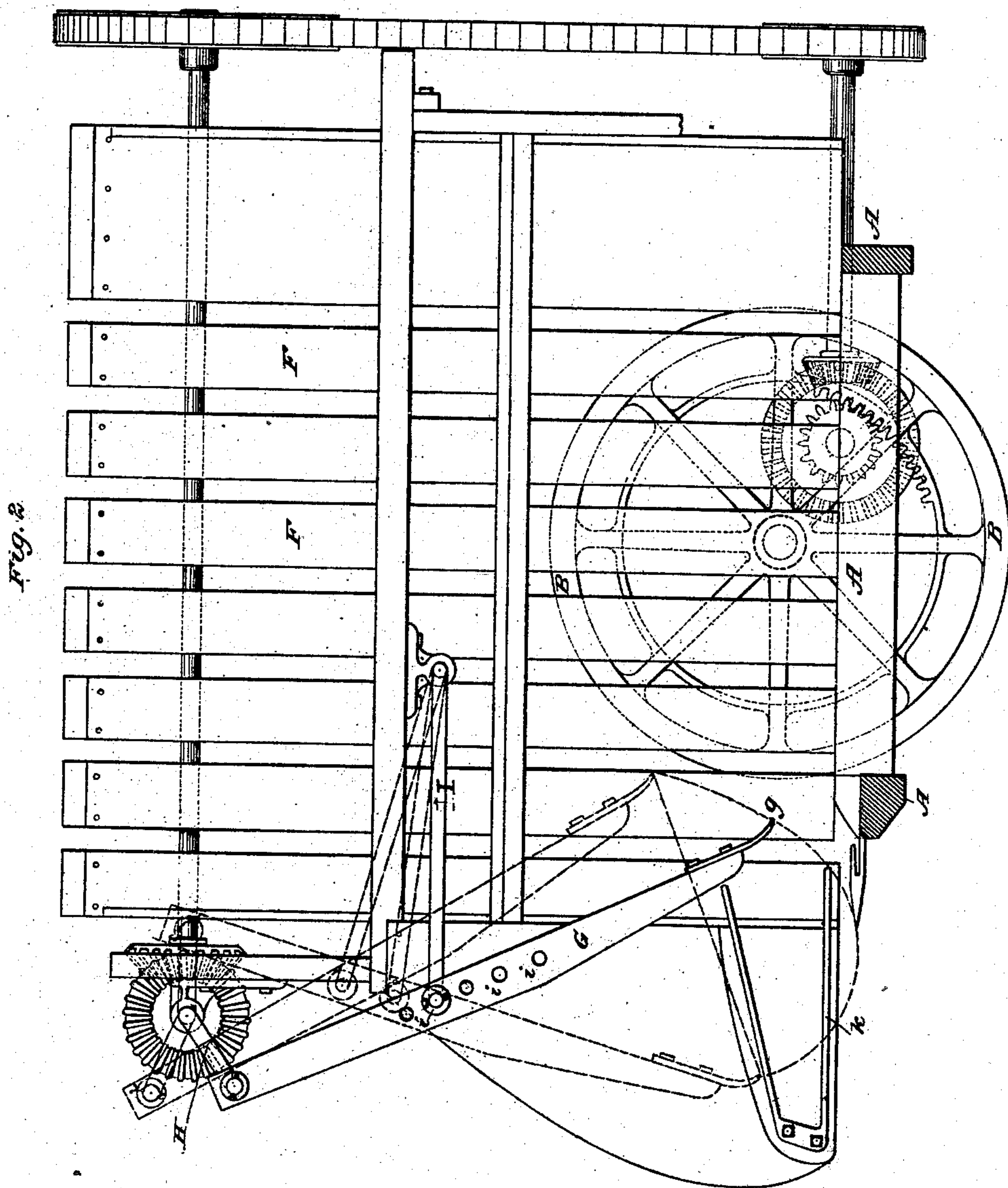
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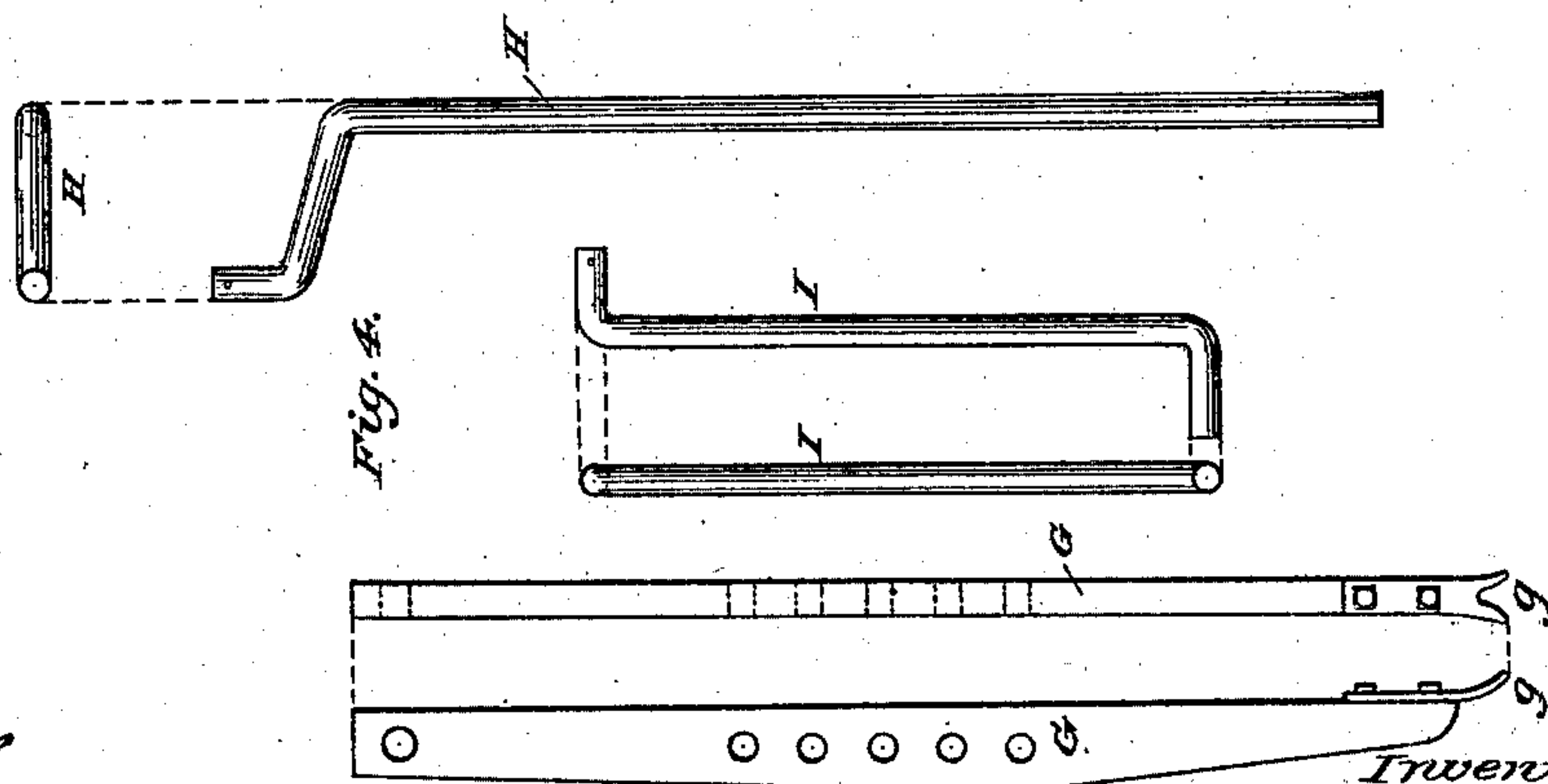
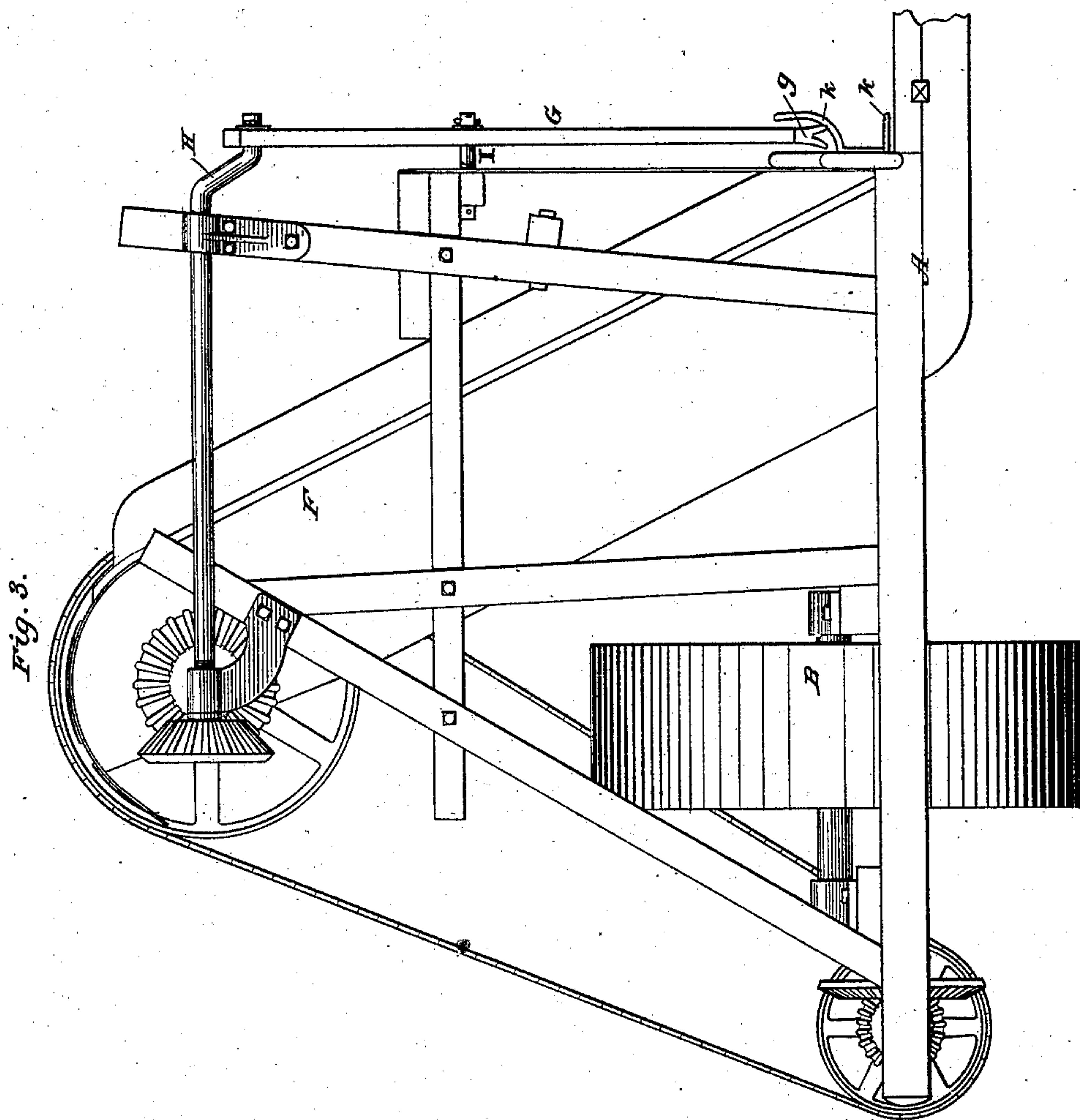
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Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM N. WHITELEY, OF SPRINGFIELD, OHIO.

HARVESTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 239,004, dated March 15, 1881.

Application filed August 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. WHITELEY, of Springfield, Clarke county, in the State of Ohio, have invented a new and useful Improvement in Harvesting-Machines; and I do hereby declare that the following is a full and accurate description thereof.

This invention relates to that class of reaping-machines known as "harvesters," wherein the cut grain is received upon the moving endless apron, and is thereby conveyed sidewise across the machine and delivered to the elevator, which discharges it into the receptacle of the binder, either hand or automatic.

In all machines of this class the grain, in being conveyed across the machine, encounters resistance at the butts in contact with the incoming and falling grain and with the stationary finger-bar, &c., and the heads of the grain which lie wholly upon the moving apron do not encounter any similar resistance, so that as the grain travels across the machine the heads are gradually carried faster than the butts, and when it reaches the elevator it is in a position inclined to the line of its movement, the heads being seized by the elevator before the arrival of the butts. Being therefore carried by the elevator in an inclined position, it is more likely to choke at the discharge and is more difficult to separate into gavels when it arrives in the receptacle of the binder. To remedy this difficulty I provide a device which automatically and at periodic times engages the butts of the grain, just before they are seized by the elevator, and forcibly moves them endwise and upward in a line oblique to the plane of the elevator, so that the butts are cleared from resistance, and the grain is straightened as and before it encounters the elevator.

I am aware that a supplemental belt or similar device has been placed at the front edge of an elevator and moved at a speed greater than that of the elevator for the purpose of carrying the butts faster than the body of the grain is moved; but said belt does not have power to straighten the mass of grain upon the elevator, and is otherwise lacking in desirable positiveness of action.

I am also aware that a reciprocating bar having projecting lugs has been placed along the front edge and in the plane of the eleva-

tor to catch the butts of the grain and raise them, the object being to prevent the dragging and catching of said butts as they move upward with the elevator; but I am not aware that any device has ever been applied to lift the butts of the grain in a plane oblique to the plane of the elevator, and therefore independent of the elevator-teeth, whereby said butts can be advanced and caused to be straightened upon the elevator.

Having set forth the nature and purpose of my invention, I will particularly describe an apparatus whereby it may be carried into effect, without, however, designing to limit myself to the precise details of structure shown, because they may be varied without departing from the principle of the invention.

In the following description reference is had to the accompanying drawings, wherein—

Figure 1 is a perspective view of my machine. Fig. 2 is a transverse section of the machine through the cutting apparatus, showing my invention and the elevator in elevation. Fig. 3 is a front elevation of the inner end of the machine, showing my invention. Fig. 4 are the details of the parts constituting my invention, as particularly shown and described in this specification.

A is the harvester-frame, supported upon the wheels B and C, having the cutting apparatus D along the front edge and the endless apron or conveyer E, all in the usual way.

At the inner end of the machine the elevator F is placed, as usual, to take the grain from the conveyer and deliver it over the wheel B to the binder-receptacle, whence it is taken to be bound by hand or by an automatic machine, as desired.

The device to effect the object of my invention is located at or near the heel of the cutter-bar, at the intersection of the conveyer E and elevator F, and for the purpose set forth I have placed at said point the lever G, having a palm or fork, g, at its lower end to engage the grain, and having imparted to said palm a circulatory movement in a plane oblique to the plane of the elevator, whereby it strikes the butts of the grain below and moves them backward and upward, so that they are straightened upon the elevator at or before the time of delivery thereto and independent of said elevator. The described movement of the le-

ver G, as shown in the drawings hereto attached, is the product of the rotary movement imparted to the upper end of said lever and a vibratory movement of the fulcrum-point at
 5 or near the center of the same, and I have therefore applied to the upper end of said lever a revolving crank, H, driven by suitable gearing, deriving its movement more or less directly from the main wheel and a swinging
 10 arm, I, jointed at one end to said lever G, at or near its center of length, and at its other end to the stationary part of the elevator-frame, so that as the upper end of said lever is carried around by the crank H in a circular
 15 path the center of said lever, where it is jointed to the arm I, will rise and fall in a circular arc, and the palm or fork *g* will have imparted to it the irregular circulatory path, as set forth. The range of motion of the palm or fork *g* will
 20 vary in accordance with the difference of length between the long and short arms of the lever G, and may be varied by adjusting the fulcrum point or joint of the arm I up or down on said lever G, for which purpose it is convenient to provide a series of holes, *i*, into either one of which
 25 the end of the arm I may be inserted. During its forward and descending movement the fork *g* is prevented from contact with the incoming grain by the guide or shield rods *k*, behind
 30 which the said palm or fork descends.

The vibrating rod I might be dispensed with and a stationary fulcrum and slot substituted, or the crank H might be coupled with the lever G by a connecting-rod, and the palm or
 35 fork *g* might be jointed to said lever to enable

it to yield on its return-stroke; and other methods of imparting the desired movement to the butts of the grain will readily suggest themselves to the skilled mechanic.

Having described my invention, what I claim 40 as new is—

1. The conveyer E and elevator F of a harvester, combined with mechanism whereby the butts of the grain are forcibly lifted in a plane oblique to the plane of the elevator at about 45 but before the times of transference from said conveyer to said elevator, to straighten the grain as it is delivered to the elevator, substantially as and for the purposes set forth.

2. The conveyer E and elevator F of a harvester, combined with the palm or fork *g* and mechanism whereby an irregular circulatory movement in a plane oblique to the plane of the elevator is imparted thereto, to strike beneath the butts of the grain at or near the intersection of the conveyer and elevator and to 55 move the same upward to deliver it straight upon the elevator, substantially as and for the purposes set forth.

3. The conveyer and elevator of a harvester, 60 combined with a lever, G, swinging in a plane oblique to the plane of the elevator, provided at its lower end with a palm or fork, *g*, and impelled by a crank, H, substantially as and for the purposes set forth.

WILLIAM N. WHITELEY.

Witnesses:

JOHNSON MORTON,
 AUGUSTUS N. SUMMERS.