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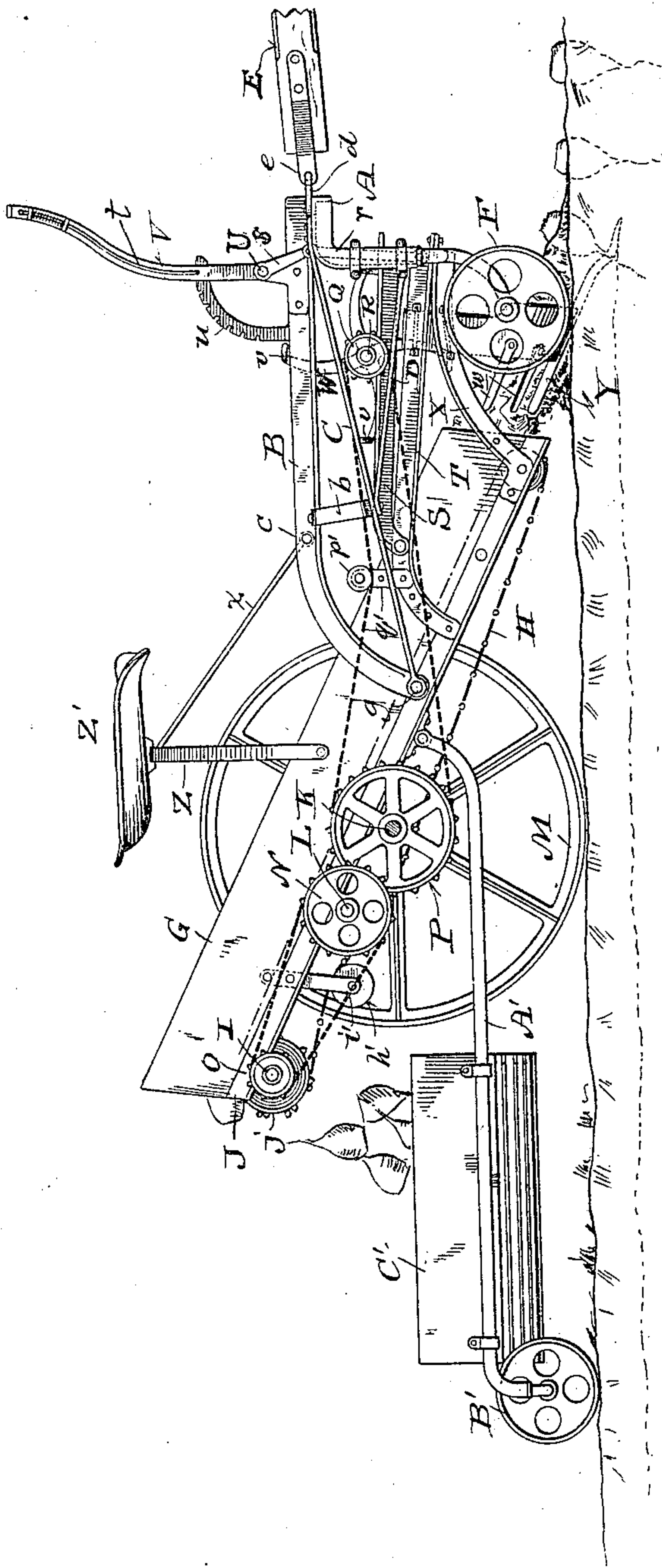
PATENTED DEC. 26, 1905.

L. GETTELMANN.
BEET HARVESTER.

APPLICATION FILED NOV. 7, 1904.

5 SHEETS—SHEET 1.

Fig. 1.



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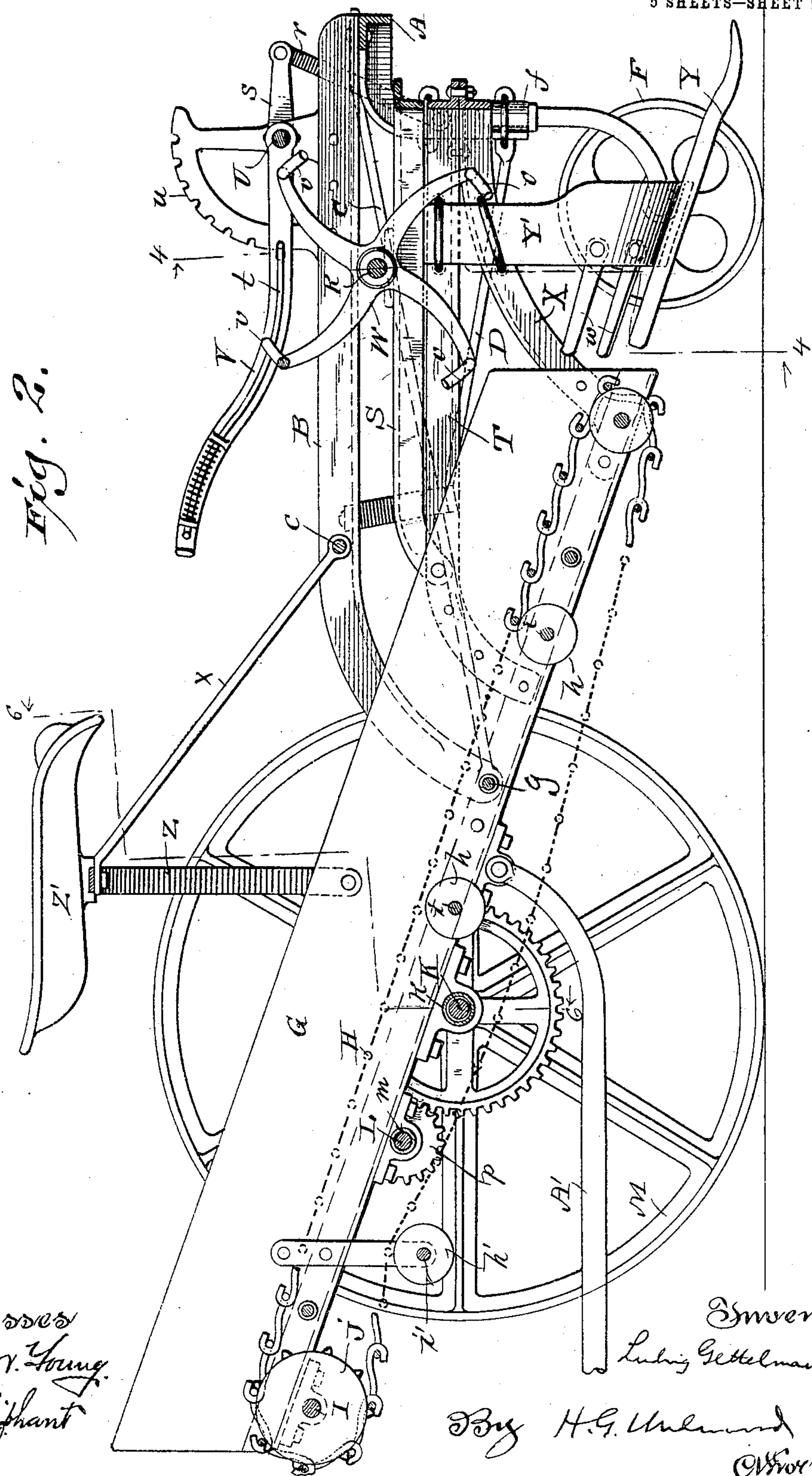
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5 SHEETS—SHEET 2.

Fig. 2.



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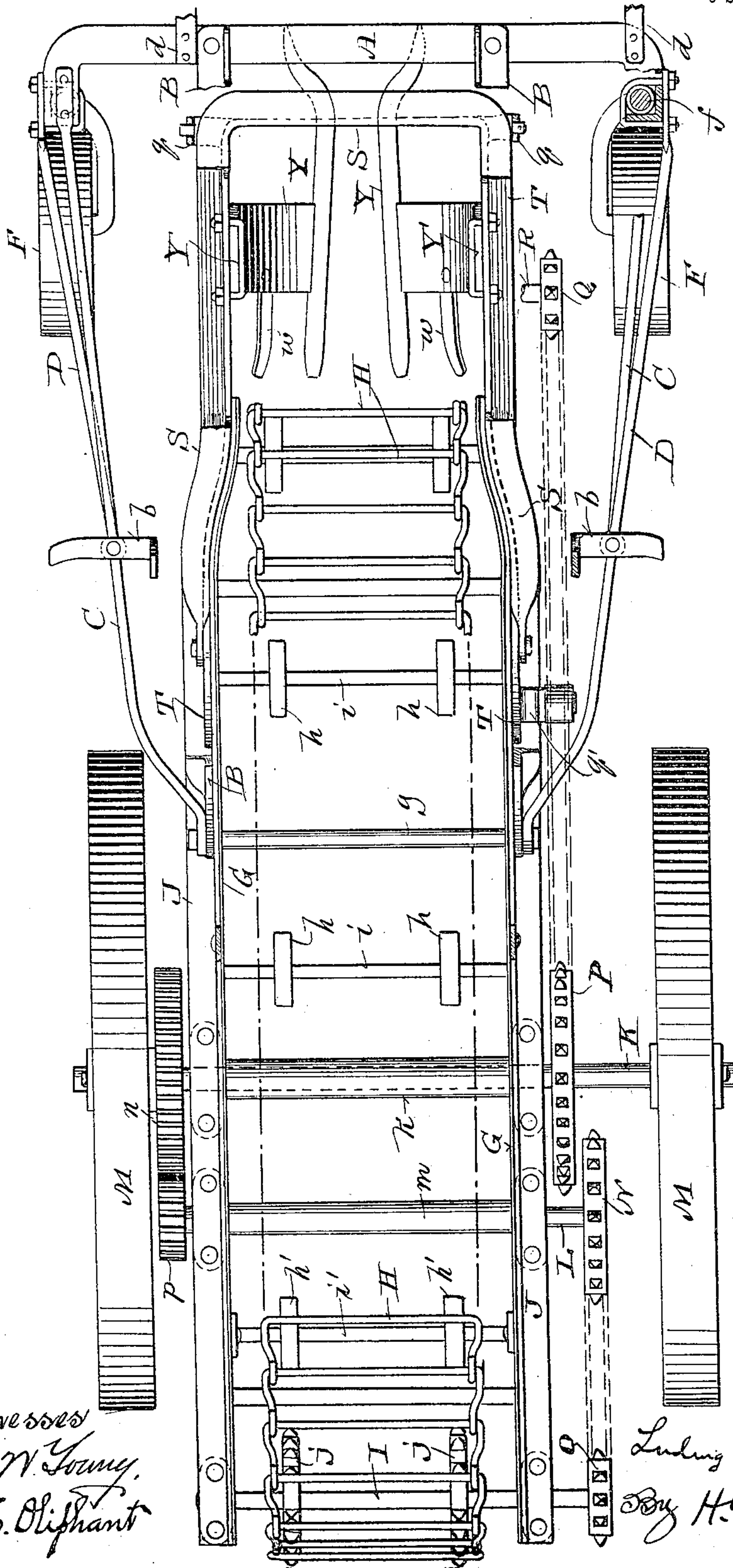
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5 SHEETS—SHEET 3.

Fig. 3.



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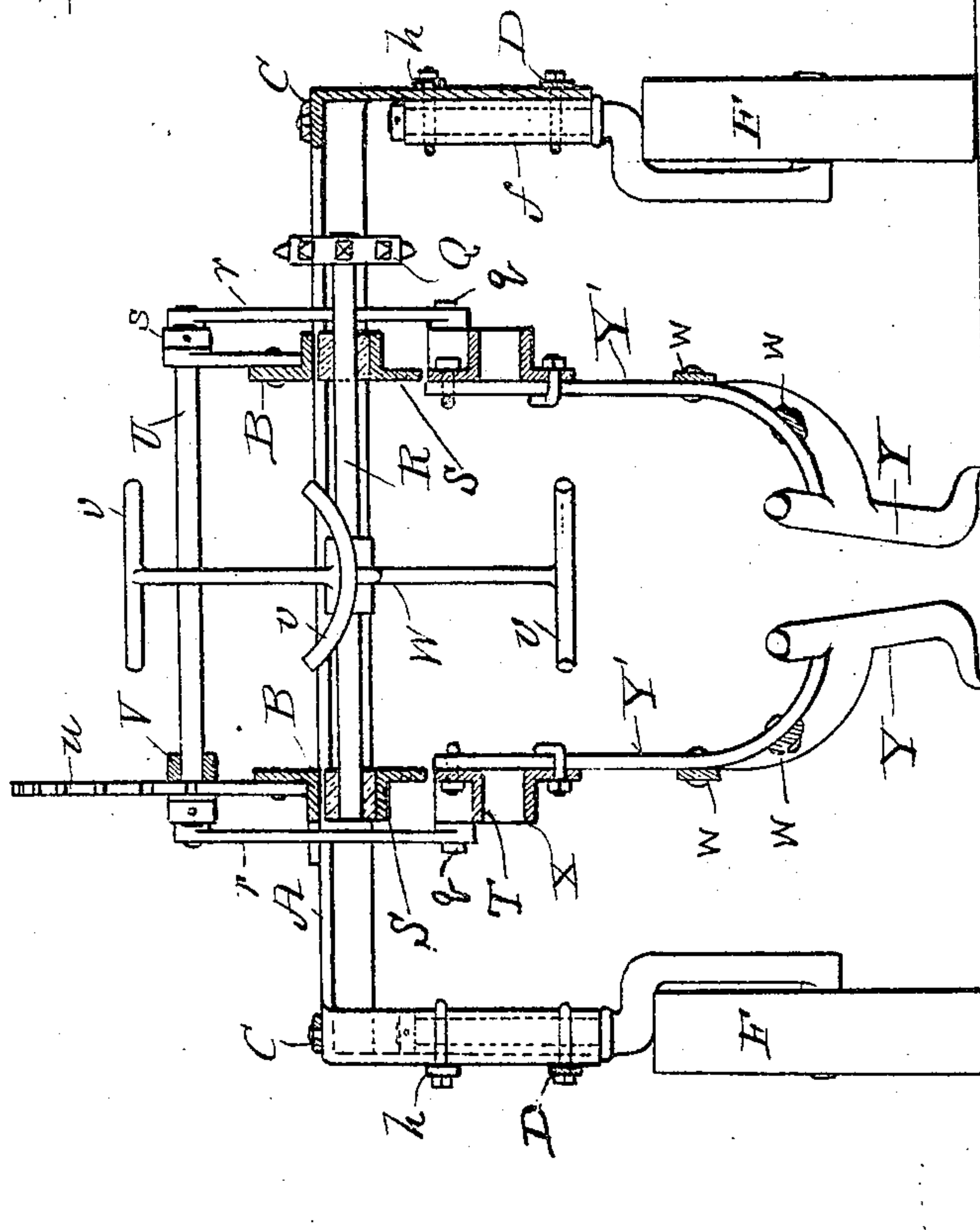
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5 SHEETS—SHEET 4.

Fig. 4.



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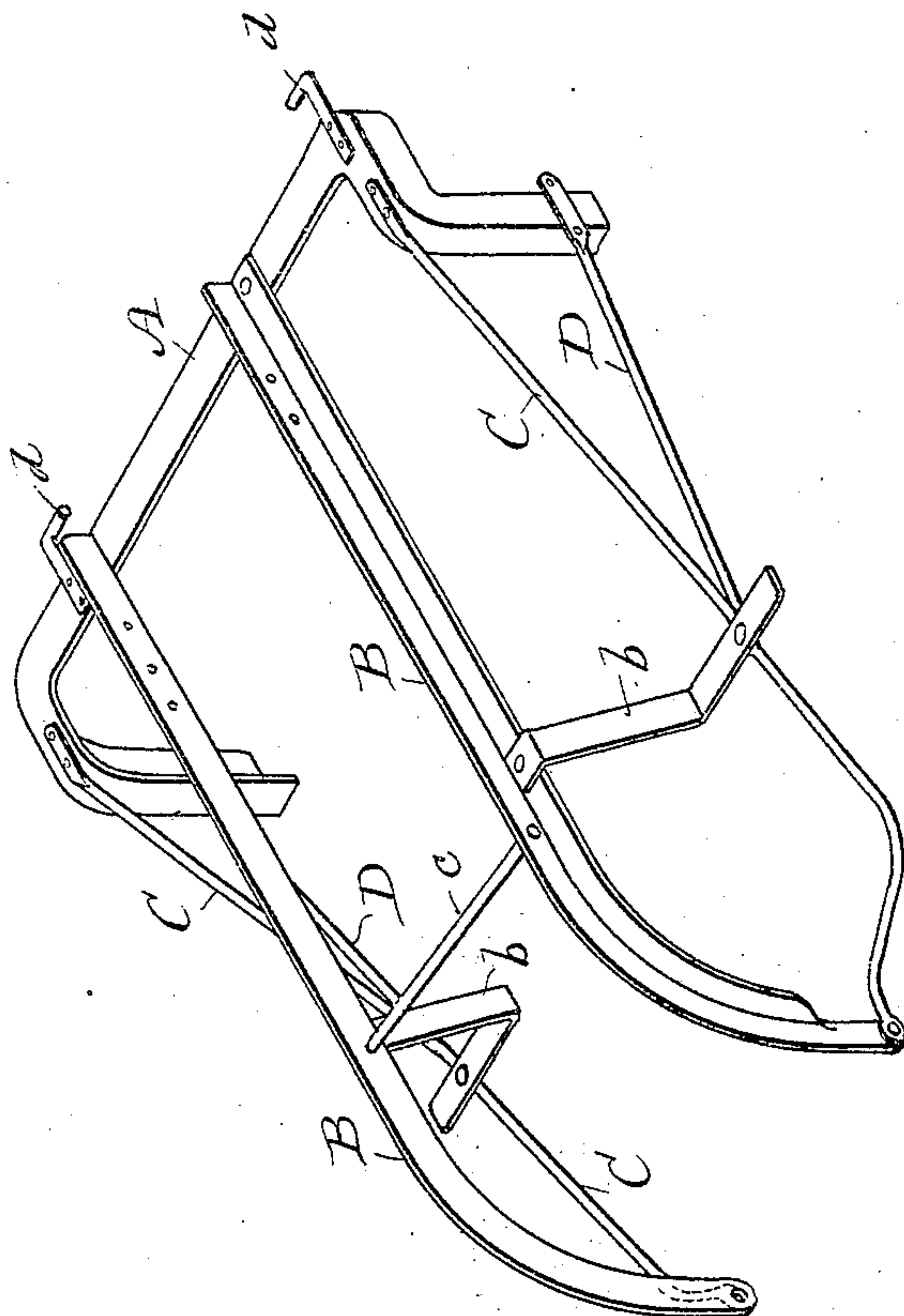
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5 SHEETS—SHEET 5.

Fig. 5.



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UNITED STATES PATENT OFFICE.

LUDWIG GETTELMANN, OF SOUTH GERMANTOWN, WISCONSIN.

BEET-HARVESTER.

No. 808,281.

Specification of Letters Patent.

Patented Dec. 26, 1905.

Application filed November 7, 1904. Serial No. 231,647.

To all whom it may concern:

Be it known that I, LUDWIG GETTELMANN, a citizen of the United States, and a resident of South Germantown, in the county of Washington and State of Wisconsin, have invented certain new and useful Improvements in Beet-Harvesters; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 The object of my invention is to provide simple, economical, and efficient beet-harvesters, said invention consisting in certain peculiarities of construction and combination of parts hereinafter particularly set forth with
15 reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a side elevation of a beet-harvester in accordance with my invention having a rear attachment
20 in the form of a cart; Fig. 2, a vertical longitudinal sectional view of the machine; Fig. 3, a plan view of the machine having parts thereof broken away; Fig. 4, a transverse sectional view indicated by lines 4 4 in Fig. 2,
25 and Fig. 5 a perspective view of the draft-frame of the machine.

Referring by letter to the drawings, A indicates a transverse forward beam having rearwardly-extended and vertically-depending terminals. Fastened at their forward
30 ends to the beams A are parallel beams B, the rear ends of which are bent downward and provided with eyes in register with those in the rear ends of stringers C, that are lapped
35 at their forward ends on the rearwardly-extending portions of the beam first aforesaid. Braces D lap the depending portions of the beam A and are bolted with angular brackets b to the stringers C, these brackets being also
40 connected to the beams B. Back of the brackets a rod c is made fast at its ends in the beams B, and fast on the beam A are hooks d, to which the hounds e of a draft-tongue E are connected, the several beams, stringers,
45 braces, and brackets constituting what is hereinafter termed the "draft-frame" of the machine, said brackets serving as foot-rests for the operator of said machine.

The draft-frame beams are preferably angle-iron, and clipped in the depending ends
50 of beam A are sleeves f, that serve as bearings for the stocks of caster-wheels F, the forward flattened ends of the braces D being parts of the lower clips.

55 The bent-down rear ends of the draft-frame beams B and the corresponding ends

of the stringers C have their registering eyes engaged by a bolt-rod g, that extends through intermediate walls G, set edgewise longitudinally of the machine, and between which the
60 upper stretch of an endless conveyer H has its travel on revoluble supports consisting of disks h, fast on spindles i, that have their bearings in said walls. The conveyer is preferably a chain having each link thereof in the
65 form of a rod bent at its ends to form hooks engaging the next adjacent link, and said conveyer turns on sprocket-wheels j, fast on a shaft I, that has its bearings fastened to angle-iron bars J, secured to the walls G afore-
70 said outside the same adjacent to their lower edges. The slack of the conveyer is supported by disks h', fast on a spindle i', having its bearings in hangers suspended from the connected walls G and bars J, that constitute
75 side shields for said conveyer. Other bearings for an axle K and a shaft L are bolted to the bars J, and sleeves k m, covering said axle and shaft, between the walls G, are closed at their ends by said bearings to exclude dirt
80 and trash. Traction-wheels M and a spur-wheel n are fast on the axle, and the spur-wheel meshes with a spur-pinion p, fast on the shaft L, that is also provided with a sprocket-
85 wheel N, connected by a link belt with a similar wheel O on the shaft I, this gearing serving as the means for driving the conveyer.

A sprocket-wheel P is fast on the axle K and connected by a link belt with a similar wheel Q, fast on a shaft R, that has its bear-
90 ings on an angle-iron yoke S in pivotal connection with another angle-iron yoke T, that is fastened to the shield-walls and bars G J and provided with lateral lugs q, connected by links r to cranks s of a shaft U, for which
95 the draft-frame is provided with bearings, and a hand-lever V, fast on the crank-shaft, is provided with a spring-controlled latch t, that engages a notched quadrant u, rigid on said draft-frame, the adjustment of the yoke T
100 and parts in connection therewith being regulated by means of the lever. The upper stretch of the link belt connecting the sprocket-wheels P Q is depressed by means
105 of a tightener-roller p', supported by a bracket q', made fast to a shield-wall G and a branch of the yoke T aforesaid. Fast on the shaft R is a reel W, the arms of which have their outer ends in the form of bows v, extending laterally in opposite directions there-
110 from.

Made fast to the transverse portion of the

yoke T, under the same, is a yoke X, the branches of which are curved downward and made fast to the walls and bars of the conveyer-shields, these shields and the intermediate conveyer being varied as to the degree of inclination by adjustment of the lever V aforesaid. Clipped to the connected yokes are the partly inwardly-curved and otherwise vertically-disposed shanks Y' of inclined fingers Y, that extend in opposite directions from said shanks longitudinally of the machine, these fingers being divergent at their forward and rear ends. Bolted to the curved ends of the shanks Y' are rearwardly-extended prongs w, arranged at suitable intervals apart, these prongs and the rear extensions of the fingers Y forming a cradle for the lifted beets. The above-described connection of the beet-straddling fingers Y with the yoke X is such that said fingers are independently adjustable in a vertical direction, the clips holding the same being loosened to permit the adjustment.

A bow Z is made fast to the walls G, and mounted on the bow central of same is a seat Z' for the operator of the machine, said bow and seat being connected by a brace x with the rod c of the draft-frame.

In Fig. 1 thills A' are shown pivotally connected at their forward ends to the bars J, and the stocks of caster-wheels B' are in connection with downwardly-bent ends of the thills. Supported between the thills is a receptacle C' under the rear end of the conveyer, the bottom of the receptacle being rounded and slatted.

In practice the finger-shanks Y' are suitably adjusted, and the lever V is swung upward to lower the adjustable frame, comprising the connected yokes S T, from which the beet-cradle is adjustably suspended. The fingers Y run in the ground astraddle of beets grown in rows, the conveyer and its shields being tilted to the same angle as said cradle. Incidental to forward movement of the machine the beets are lifted one after another by the fingers Y and crowd up between the same in approximately vertical position. The reel W operates to tilt the beets to the angle of the cradle and sweep said beets, with adhering soil, onto the conveyer, from which they are discharged at the upper rear end of same onto the ground or into a cart appendage of the machine, such as is herein shown and described. The cart being slat-bottomed, dirt still adhering to the beets has an opportunity of escape, as it is dislodged from the vegetables by the jolting of said cart. The rear prongs w of the cradle prevent premature dropping of the beets that may escape laterally from the fingers Y of said cradle, and the striking of the upper carrying-stretch of the conveyer H on the rotary supporting-disks h results in a vibratory

motion of said conveyer to loosen dirt and trash carried up with the beets.

The yoke S being pivotally connected to the adjustable frame aforesaid, it automatically yields with the rotary reel W to resistance of the mass of material crowded back on the cradle aforesaid, and thus bruising of the beets is prevented, said reel being the most important feature of the machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a beet-harvester a draft-frame having caster-wheel supports, another frame in lever-controlled adjustable connection with the one aforesaid, beet-straddling fingers having shanks in connection with the adjustable frame, an endless conveyer and supports for the same intermediate of side shields that are pivotally connected to the draft-frame and have rigid connection with said adjustable frame back of the fingers, an axle on which traction-wheels and said shields are mounted, a support in pivotal connection with the aforesaid adjustable frame, a reel mounted on the pivotal support over said fingers, and means by which motion is imparted to the conveyer and reel when the machine is in operation.

2. In a beet-harvester, a draft-frame having caster-wheel supports, another frame in lever-controlled adjustable connection with the one aforesaid, beet-straddling fingers having shanks in independent vertically-adjustable connection with the adjustable frame, an endless conveyer and supports for the same intermediate of side shields that are pivotally connected to the draft-frame and have rigid connection with said adjustable frame back of the fingers, an axle on which traction-wheels and said shields are mounted, a support in pivotal connection with the aforesaid adjustable frame, a reel mounted on the pivotal support over said fingers, and means by which motion is imparted to the conveyer and reel when the machine is in operation.

3. In a beet-harvester, a draft-frame having caster-wheel supports, another frame in lever-controlled adjustable connection with the one aforesaid, inclined beet-straddling fingers having partly-curved shanks in connection with the adjustable frame and provided with rearwardly-projecting prongs, an endless conveyer and supports for the same intermediate of side shields that are pivotally connected to the draft-frame and have rigid connection with said adjustable frame back of the fingers, said fingers, shanks and prongs forming a cradle forward of the conveyer; an axle on which traction-wheels and said shields are mounted, a support in pivotal connection with the aforesaid adjustable frame, a reel mounted on the pivotal support over

said fingers, and means by which motion is imparted to the conveyer and reel when the machine is in operation.

4. In a beet-harvester, a draft-frame consisting of a transverse beam having rearwardly-extending and depending ends attachable to bearings for caster-wheel stocks, rearwardly-extended beams fast at their forward ends to the one aforesaid having downturned rear ends for pivotal connection with other parts of the machine, stringers extending from the rear terminals of the rearwardly-extending beams to the transverse beam, braces connected at their ends to the stringers and said transverse beam, foot-rests in connection with said rearwardly-extending beams and said stringers back of said braces, and tongue-hound hooks fast on the aforesaid transverse beam.

5. In a beet-harvester, an axle, traction-wheels fast on the axle, shields provided with bearings for said axle, an endless conveyer

having its upper stretch between the shields, a draft-frame in pivotal connection with said shields, another frame in rigid connection with the aforesaid shields, link-and-lever mechanism connecting said frames, means for holding the lever in adjusted position, caster-wheels supporting the draft-frame, beet-straddling fingers in connection with the adjustable frame forward of the conveyer, a support in pivotal connection with said adjustable frame, a reel mounted on the support over said fingers, and means for driving the conveyer and reel from the axle of the machine.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

LUDWIG GETTELMANN.

Witnesses:

N. E. OLIPHANT,
GEORGE FELBER.