

No. 656,784.

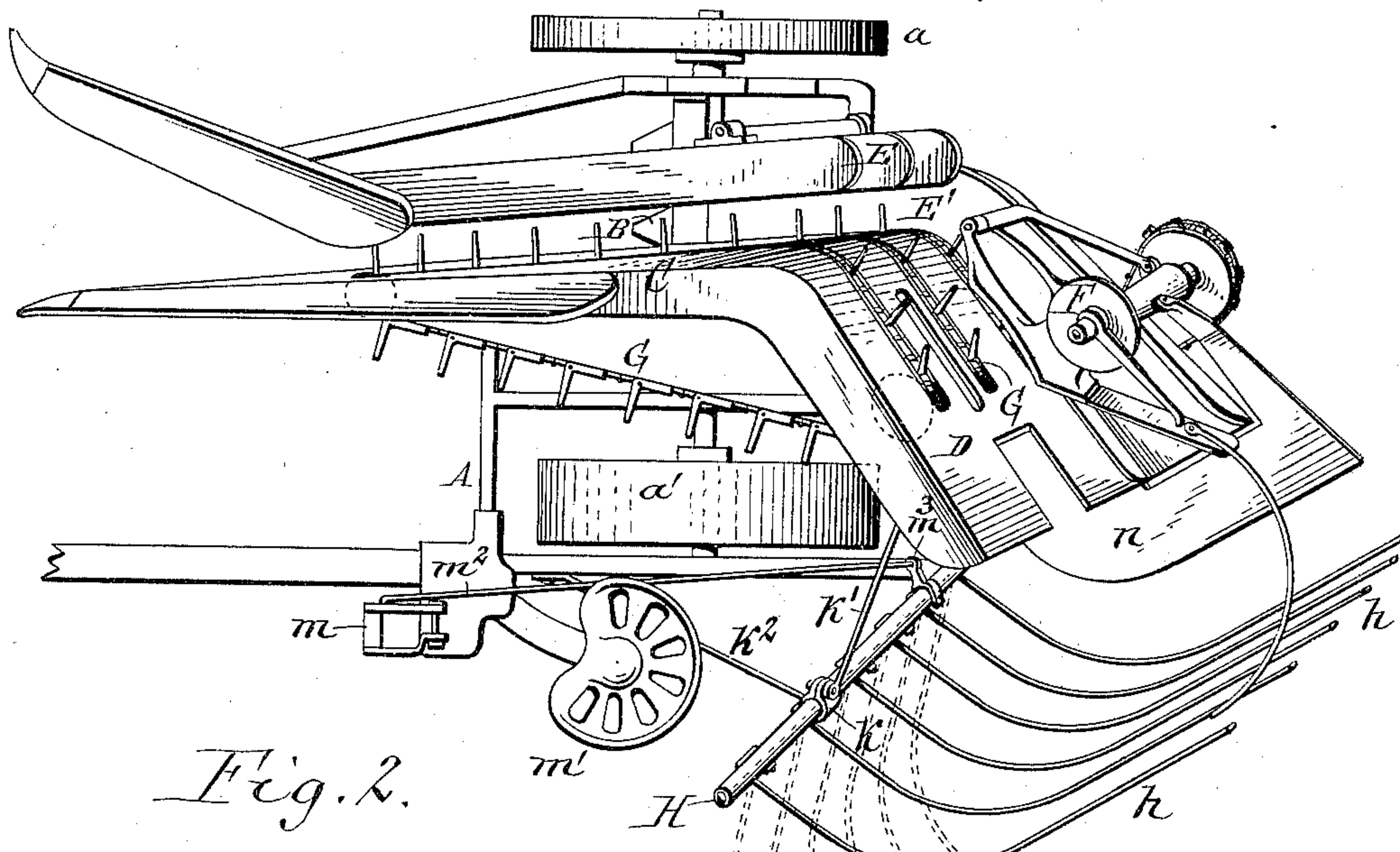
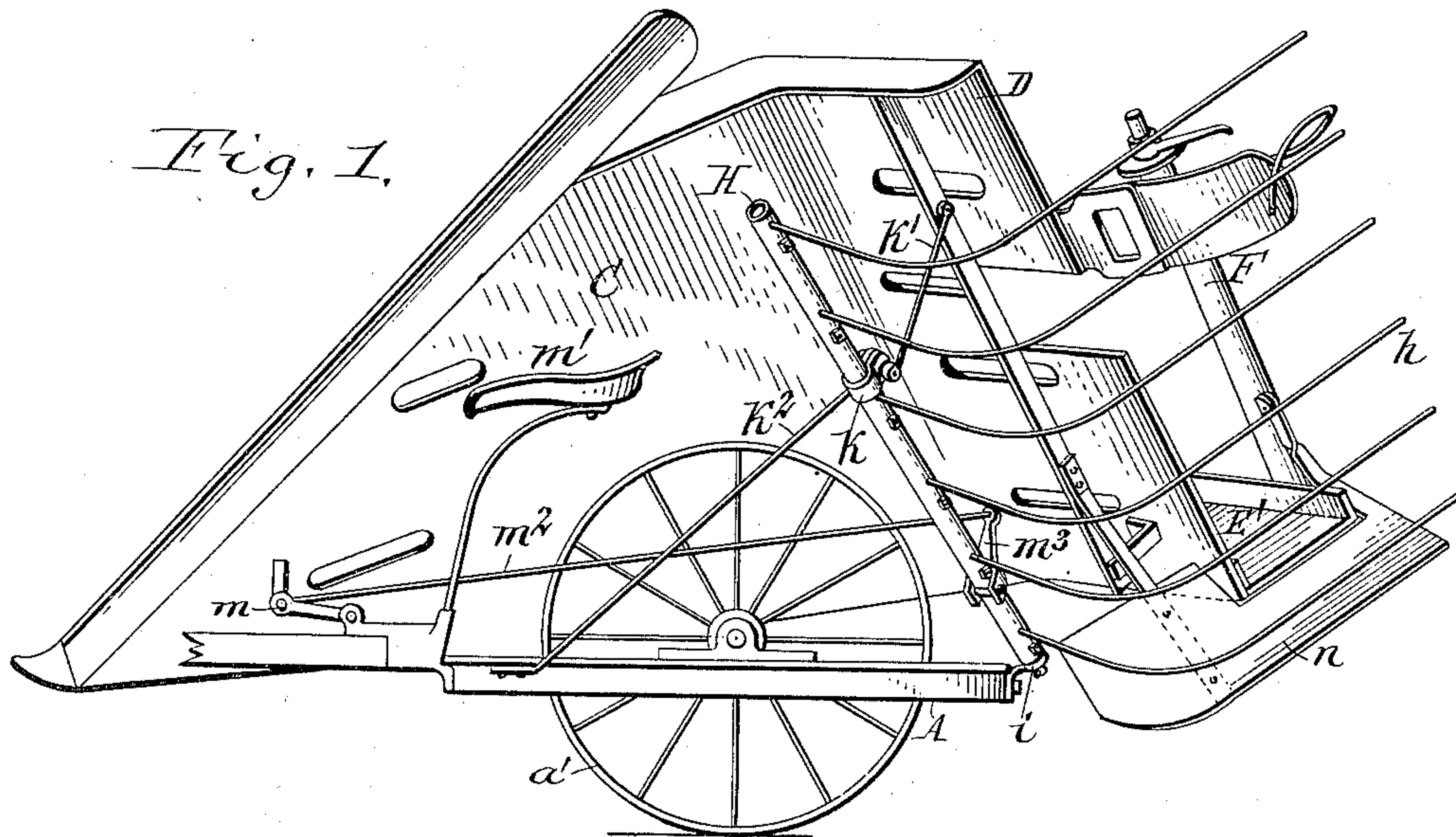
Patented Aug. 28, 1900.

G. A. FARRALL & C. MAUL.
BUNDLE CARRIER FOR HARVESTERS.

(Application filed Dec. 29, 1899.)

(No Model.)

2 Sheets—Sheet 1.



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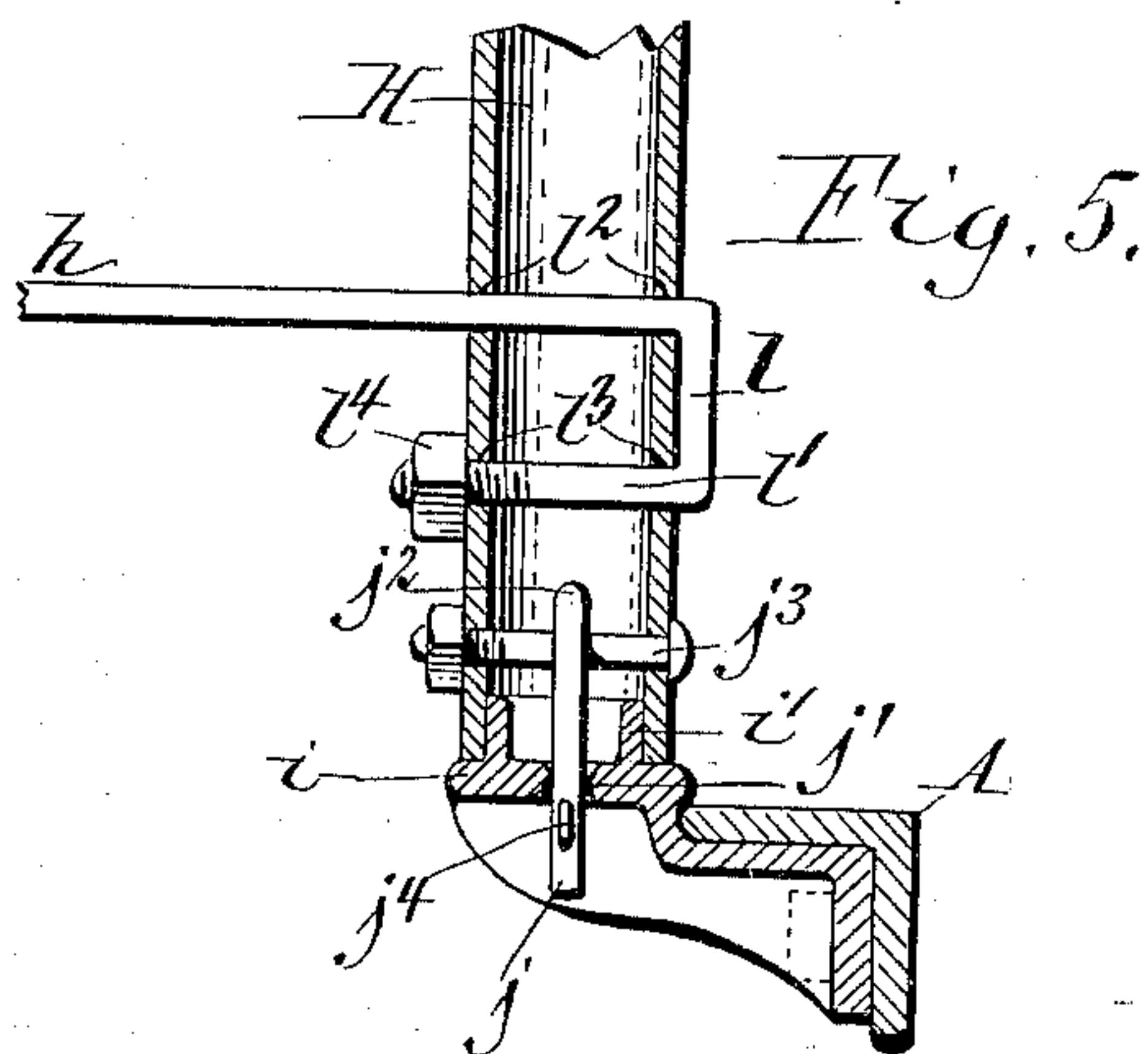
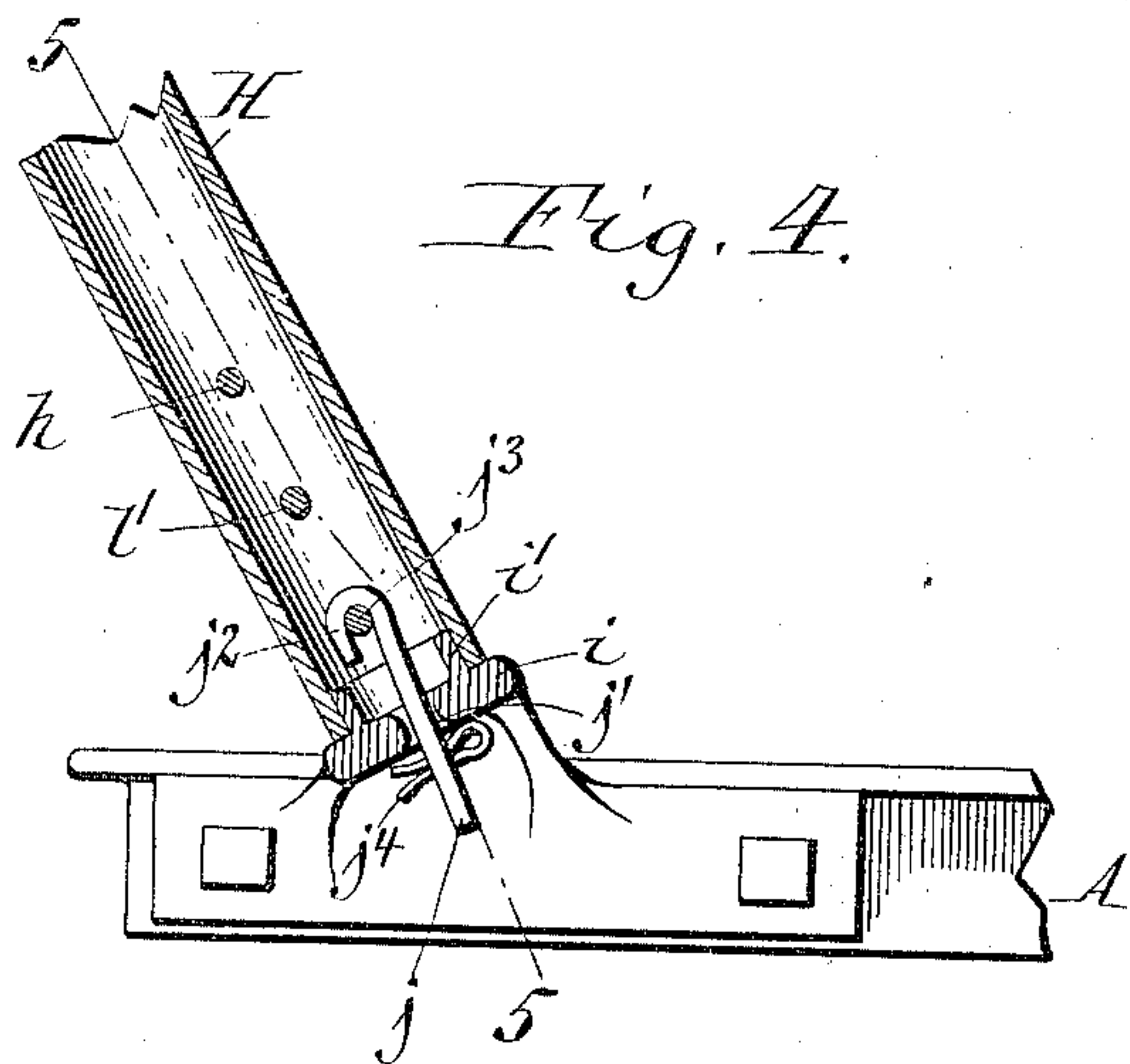
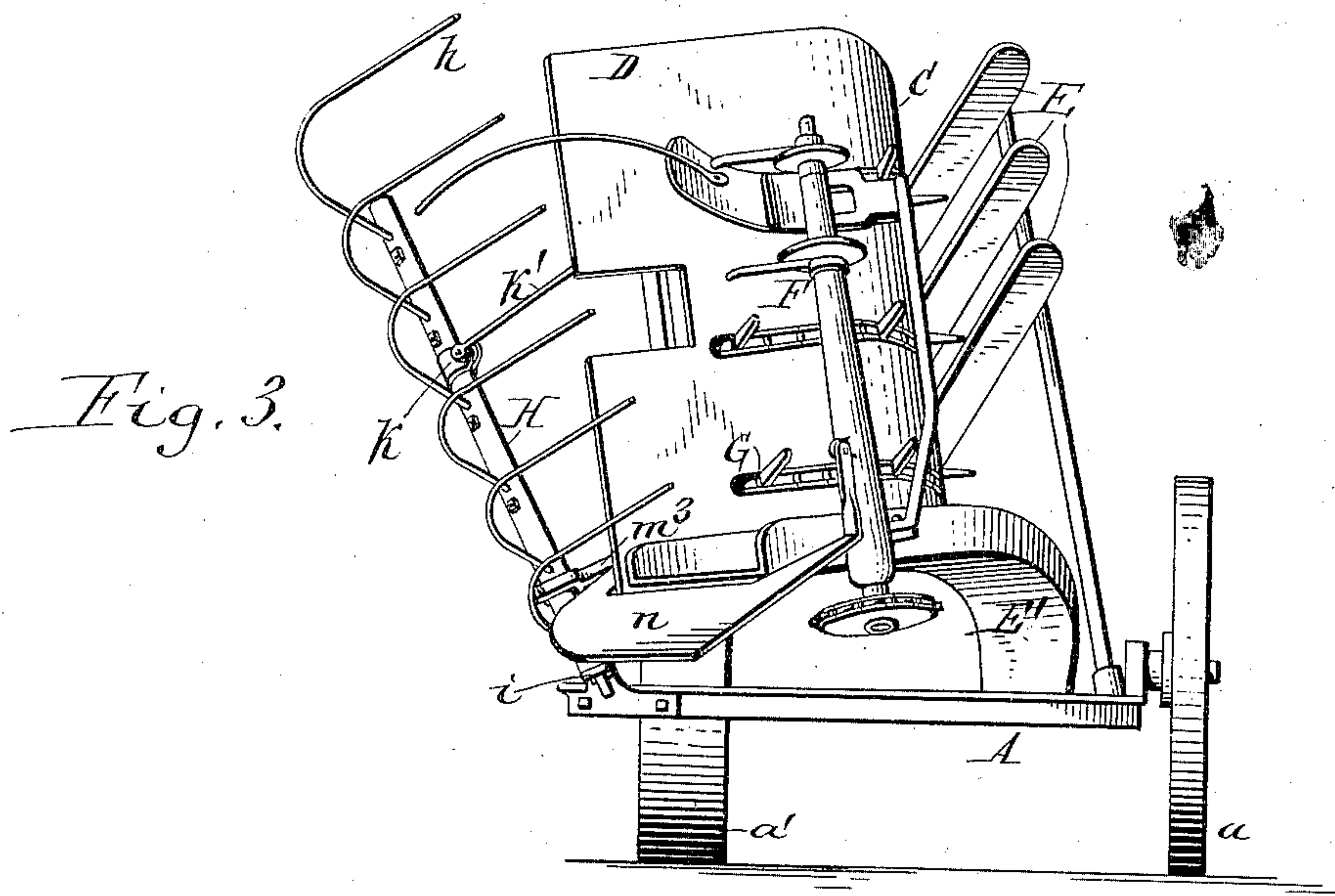
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UNITED STATES PATENT OFFICE.

GEORGE ALBERT FARRALL AND CHRISTIAN MAUL, OF BATAVIA, NEW YORK, ASSIGNORS TO THE JOHNSTON HARVESTER COMPANY, OF SAME PLACE.

BUNDLE-CARRIER FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 656,784, dated August 28, 1900.

Application filed December 29, 1899. Serial No. 741,906. (No model.)

To all whom it may concern:

Be it known that we, GEORGE ALBERT FARRALL and CHRISTIAN MAUL, citizens of the United States, residing at Batavia, in the
5 county of Genesee and State of New York, have invented new and useful Improvements in Bundle-Carriers for Harvesters, of which the following is a specification.

This invention relates to a bundle-carrier
10 for corn-harvesters designed for collecting a number of bundles of cornstalks which have been successively tied by the binder mechanism and for delivering the collected bundles from time to time.

15 In corn-harvesters the binder mechanism and the bundle-carrier are usually arranged in rear of the axis of the supporting and driving wheels. As cornstalks are of considerable height and weight the accumulation of
20 bundles of cornstalks on the bundle-carrier causes the rear part of the machine to overbalance the front part. This produces an upward pressure on the draft devices when the bundle-carrier is loaded and a downward
25 pressure on the draft devices when the bundle-carrier is light, thereby causing the draft-animals to be subjected alternately to an upward and a downward pressure, which causes very objectionable straining and chafing.

30 The object of this invention is to provide a bundle-carrier for this class of harvesters which is so constructed that the weight of the bundles accumulating on the carrier is brought over the axis of the supporting and
35 driving wheels, whereby the balance of the machine is preserved and chafing and straining of the draft-animals produced by the rocking of the machine is avoided.

In the accompanying drawings, consisting
40 of two sheets, Figure 1 is a side elevation of a corn-harvester provided with our improved bundle-carrier viewed from the stubbleward side of the machine. Fig. 2 is a top plan view of the same. Fig. 3 is a rear elevation of the
45 same. Fig. 4 is a fragmentary vertical section, on an enlarged scale, of the bundle-carrier and the support at the lower end thereof. Fig. 5 is a vertical section in line 5 5, Fig. 4.

Like letters of reference refer to like parts in the several figures.

A represents the main frame of the harvester, which is supported on the grainward side by a supporting-wheel *a* and on its stubbleward side by a driving or master wheel *a'*.

B represents the cutter, arranged on the lower portion of the frame in front of the axis of the supporting and driving wheels.

C represents the conveyer-platform, which is arranged lengthwise of the frame, with its lower portion adjacent to the stubbleward side of the cutter and which leans laterally toward the driving-wheel, so that the grainward bearing-surface of the platform faces slightly upward. The platform and frame are arranged partly in front and partly in rear of the axis of the supporting and driving wheels and the platform slopes downwardly from its wide rear portion to its tapering front portion.

D represents the binder-deck, which is arranged at an angle to the platform and which extends rearwardly and stubbleward from the rear end thereof. The binder-deck leans stubbleward at the same angle as the platform and also forwardly toward the axis of the supporting and driving wheels, so that its bearing-surface faces partly upward, rearward, and grainward. The platform and binder deck form the stubbleward side of the throat, through which the cornstalks are carried during the gathering, cutting, conveying, and binding operations. The grainward side of this throat is formed principally by guide-bars *E*, arranged on the main frame along the platform. The throat is provided with a bottom *E'*, which supports the butt or lower ends of the stalks.

F represents the knotter mechanism, which is arranged opposite the binder-deck and which forms part of the binder mechanism, whereby the band is tied around the bundle of stalks.

G represents the conveyer or feed belts whereby the stalks are carried through the throat to the binder mechanism.

The construction and operation of the har-

vesting mechanism thus far described are substantially the same as that shown in Letters Patent No. 603,759, granted to George A. Far-
rall May 10, 1898, to which reference may be
5 had for a detail description thereof.

After the band has been tied around the bundle of stalks the bundle is passed from the rear end of the binder-deck upon a bundle-carrier, which is constructed as follows: H
10 represents an inclined rock-shaft, which is arranged adjacent to the rear end of the binder-deck and which is provided with a number of rearwardly-extending tines or arms h , which support the bundles. The rock-shaft is ar-
15 ranged with its lower end adjacent to the lower end of the binder-deck and leans stubbleward and also forwardly toward the axis of the supporting and driving wheels at substantially the same angle as the binder-deck,
20 as shown in the drawings. The rock-shaft turns with its lower end in a step-bearing, which is arranged on the lower rear part of the frame. The rock-shaft is preferably hollow, and the step-bearing consists, prefer-
25 ably, of a perforated base or bracket i , supporting the shaft at its lower end, and an upwardly-projecting boss or sleeve i' , fitting into the lower end of the shaft and holding the same against lateral movement on the
30 base. The shaft is held in engagement with its step-bearing by a suitable attaching device—for instance, as shown, by a retaining-rod j , passing through a central opening j' in the base of the step-bearing, a hook j^2 , formed
35 at the upper end of the rod and engaging over a cross piece or bolt j^3 in the lower end of the rock-shaft, and a spring-pin j^4 , passing through the retaining-rod below the bearing, as shown in Figs. 4 and 5. This means of
40 pivotally supporting the lower end of the rock-shaft is very simple and reliable and permits the same to be readily attached to or detached from its step-bearing. The rock-shaft is journaled near its upper end in a
45 bearing or sleeve k , which is detachably connected by braces k' k^2 with the adjacent parts of the main frame. Each of the tines h is curved or bent in such manner that the several tines together form a receptacle for the
50 bundles delivered from the binder-deck. The tines are secured to the rock-shaft, preferably, by the following means, (shown most clearly in Fig. 5:) Each tine has its end by which it is secured to the rock-shaft con-
55 structed with a return-bend composed of a part l , which stands at right angles to the tine or thereabout, and an end portion l' , which stands parallel to the tine. The rock-shaft is provided with two pairs of openings
60 l^2 l^3 , one pair arranged above the other pair for the reception, respectively, of the tine h and the end portion l' of the return-bend. The tine and the end portion are inserted into these openings and the tine is secured in
65 place by a screw-nut l^4 , applied to the thread-

ed end portion l' . This means of fastening the tine to the rock-shaft is very simple and securely holds the tine against turning.

In the position of the carrier in which the tines are ready to receive the bundles the
70 tines project across the outlet of the stalk-passage or throat at the discharge end of the binder-deck, as represented in full lines, Figs. 1, 2, and 3. The tines are held in this posi-
75 tion by the foot of the operator pressing against a treadle m , which is pivoted to the front part of the frame adjacent to the driver's seat m' and connected by a rod m^2
80 with a rock-arm m^3 on the rock-shaft. As the bundles are delivered from the binder-deck they fall upon the tines of the bundle-carrier. When the desired number of bundles has
85 been collected on the carrier, the operator releases the treadle m . The weight of the bundles now depresses the tines and swings or rocks the shaft into the position shown by
90 dotted lines in Fig. 2, whereby the load of bundles is discharged from the carrier upon the ground in a pile. The operator now depresses the treadle m , and thereby raises or
95 swings the tines back into their operative position to receive the next batch of bundles. When the bundles are accumulating on the carrier, they are prevented from sliding off the tines by a supporting-plate n , which is
100 attached to the frame adjacent to the discharge end of the binder-deck and which supports the butt-ends of the bundles. The bundles of stalks resting on the carrier lean or incline stubbleward and also forwardly or
105 toward the axis of the supporting and driving wheels, owing to the inclination of the bundle-carrier in this direction. This brings the weight of the accumulated bundles near to or over the axis of the supporting and driv-
110 ing wheels, whereby the balance between the front and rear parts of the machine is preserved whether the carrier is light or loaded. The fore-and-aft rocking of the machine every time the bundles are collected and dis-
115 charged and the chafing and straining of the draft-animals which would result therefrom are thereby avoided.

We claim as our invention—

1. The combination with the main frame, the supporting and driving wheels, and the binder mechanism arranged on the frame in rear of said wheels, of a bundle-carrier arranged to receive the bundles from the binder mechanism and inclining stubbleward and
120 forwardly and upward, toward the axis of said wheels, substantially as set forth.

2. The combination with the main frame, the supporting and driving wheels, and the binder mechanism arranged on the frame in rear of said wheels, of a bundle-carrier com-
125 posed of a rock-shaft journaled on the frame adjacent to the binder mechanism and inclining forwardly and upward toward the axis of said wheels and tines secured to said shaft
130

and projecting stubbleward and rearwardly, substantially as set forth.

3. The combination with the main frame, and the supporting and driving wheels, of a conveyer-platform arranged lengthwise of the frame and inclining stubbleward and upward, a binder-deck extending stubbleward from the platform in rear of the axis of said wheels and inclining stubbleward and forwardly and upward, and a bundle-carrier composed of a rock-shaft arranged adjacent to said deck and inclining stubbleward forwardly and upward and tines secured to said shaft and projecting stubbleward and rearwardly, substantially as set forth.

4. The combination with the hollow rock-shaft of the bundle-carrier, of a step-bearing on which said shaft rests, and a connecting-hook pivotally arranged in said bearing and

engaging with said rock-shaft, substantially as set forth.

5. The combination with the shaft of a bundle-carrier having two sets of perforations, of a tine having a return-bend which bears against one side of said shaft between said perforations, the tine passing through one set of perforations and the end portion of the return-bend through the other, and a fastening device applied to the end of the return-bend on the opposite side of the shaft, substantially as set forth.

Witness our hands this 12th day of December, 1899.

GEORGE ALBERT FARRALL.
CHRISTIAN MAUL.

Witnesses:

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