

2 Sheets—Sheet 1

BEAM TRUCK.

Patented July 12, 1892.

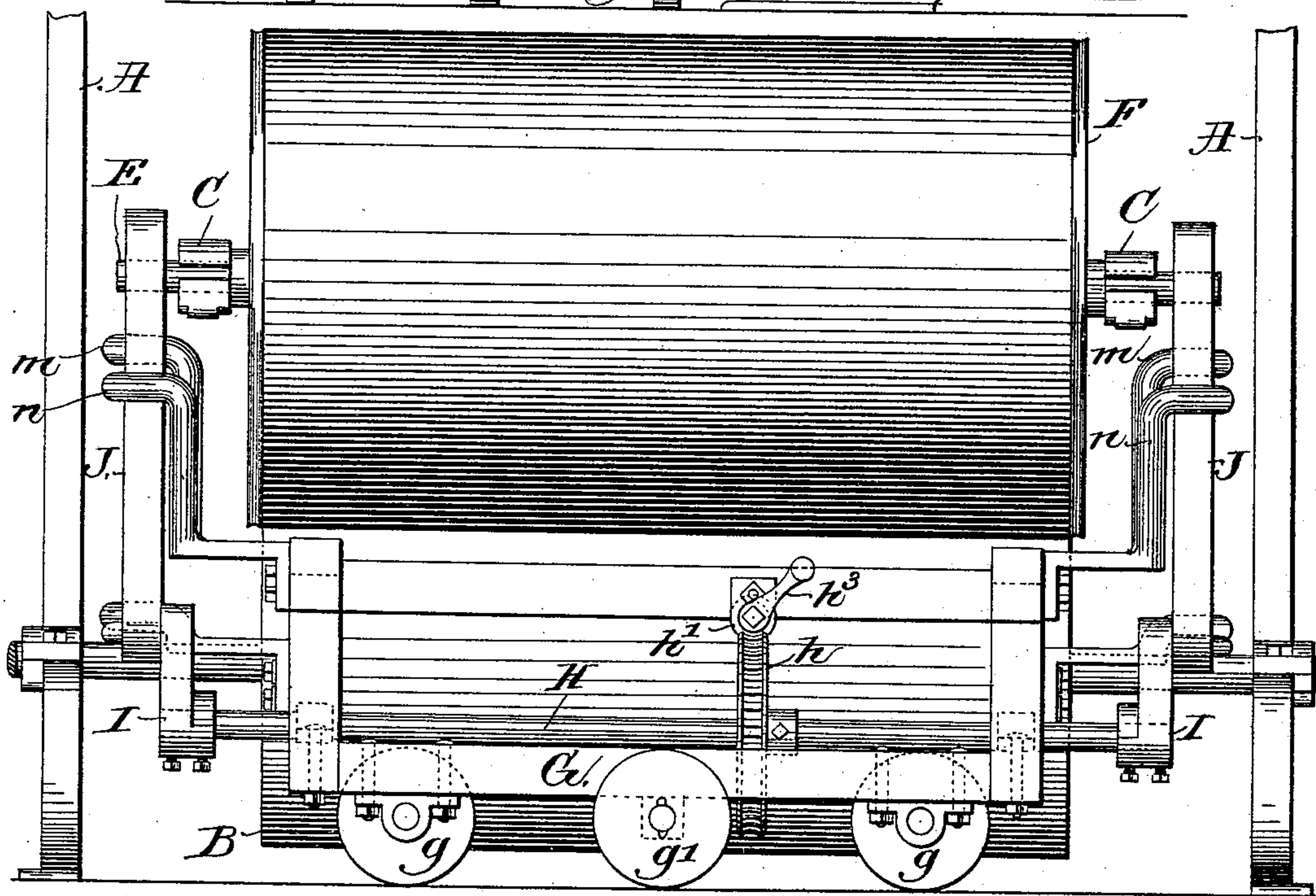


Fig. 1.

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(No Model.)

2 Sheets—Sheet 2.

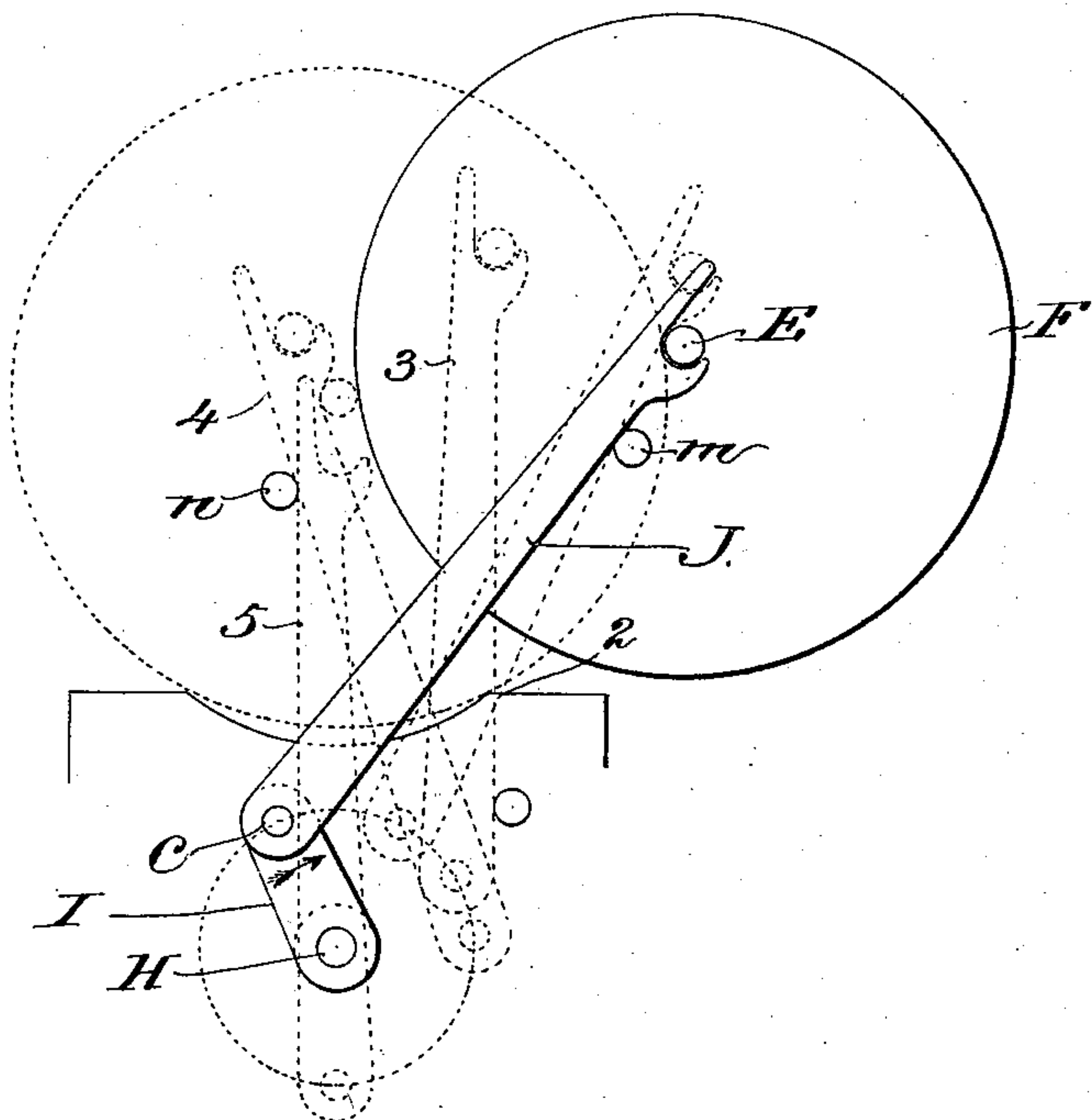
J. B. BANCROFT & A. E. RHOADES.

BEAM TRUCK.

No. 478,731.

Patented July 12, 1892.

Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOSEPH B. BANCROFT AND ALONZO E. RHOADES, OF HOPEDALE, MASSACHUSETTS, ASSIGNORS TO THE HOPEDALE MACHINE COMPANY, OF SAME PLACE.

BEAM-TRUCK.

SPECIFICATION forming part of Letters Patent No. 478,731, dated July 12, 1892.

Application filed March 11 1892. Serial No. 424,486. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH B. BANCROFT and ALONZO E. RHOADES, of Hopedale, county of Worcester, State of Massachusetts, have
5 invented an Improvement in Beam-Trucks, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

10 Wound beams, the product of warping-machines, frequently weigh several hundred pounds, and two or three men are required to take the said beams from their journals and put them on the usual truck to be taken to
15 the next machine where the beam is to be used.

In our studies to devise a practical means by which one man or a boy may remove one of these large wound beams from a warping-
20 machine and transfer it to a suitable point to be used we have made a truck and provided it with lifting-arms and actuating devices therefor, whereby the arms when made to engage the beam-journals may be actuated to
25 gradually lift the beam from its bearings and deposit the same on the truck.

Figure 1 represents an end view of a warping-machine having a full beam ready to be removed, said figure also showing the truck.
30 Fig. 2 is a right-hand end view of the parts shown in Fig. 1, and Fig. 3 is a diagram showing some of the different positions assumed by the lifting-arms.

In the drawings, let A represent part of the frame-work of a warping-machine of usual construction; B, the beam-rotating drum; C,
35 arms pivoted at D and having bearings for the reception of the shaft E of the beam F on which the warp is wound, the said parts being all as common.

40 The drawings show the warp-beam as full, ready to be removed.

We have provided a truck G, having suitable wheels $g g' g'$, the former being at the
45 ends of the truck and the latter opposite each other between one and the other end of the truck. The truck is provided with a shaft H, provided with two like cranks I, to which are attached lifting-arms J, suitably forked or
50 notched to engage the ends of the shaft or

beam to be handled, the notches of the arms being located at any desired distance from their ends. On the shaft H is a worm-wheel h , engaged by a worm h' on a worm-shaft h^2 ,
55 provided with a suitable handle or projection h^3 , by which to rotate the said worm-shaft. The truck is shown as provided with a fulcrum m for each lifting-arm and with a back-stop n for said arms.

Assuming the beam as having been filled, 60 the operator (a man or boy) will run the truck up to the end of the warping-machine, as shown in the drawings, and will let the lifting-arms rest against the shaft E. This done, the operator will commence to turn the worm-
65 shaft to thus rotate the crank-shaft H, and this will cause the lifting-arms to be raised and enable the notched parts of the arms to embrace the shaft E, as in full lines, Figs. 2 and 3. Then in the further rotation of the crank-
70 shaft the arms will slide upwardly on the fulcrum and at the same time lift the shaft, and the arms G will swing upwardly about their pivots D until the open mouth of the bearings of the arms G come into a position to re-
75 lieve the shaft E, and then the lifting-arms, acted upon at their lower ends by the cranks, will be rocked on the fulcrum into the dotted-line position marked 3, Fig. 3, and then the
80 lifting-arms will be moved or permitted to turn about their pivots c , and carrying the beam come to rest against the back-stop n in the position marked 4, and then in the further
85 rotation of the crank-shaft into the position marked 5, the beam will be deposited on the truck ready to be taken away. The truck having the lifting-arms and operative devices therefor enables one man or a boy to do the
work of two or three men.

It is not intended to limit this invention to 90 the exact mechanical devices employed to actuate the lifting-arms or to control the same during their movements.

Having described our invention, what we claim, and desire to secure by Letters Patent, 95 is—

1. In a beam-truck, lifting-arms adapted to engage the journals of the beam to be lifted, combined with actuating devices for said lifting-arms, substantially as described. 100

2. The truck, its crank-shaft, and connected lifting-arms, combined with devices to rotate the crank-shaft, substantially as described.

3. The truck, its crank-shaft, and connected
5 lifting-arms, combined with devices to rotate the crank-shaft and with the fulcrum over which the lifting-arms slide, substantially as described.

4. The truck, its crank-shaft, and connected
10 lifting-arms, combined with devices to rotate the crank-shaft and with the fulcrum over which

the lifting-arms slide, and a back-stop for the arms, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of 15 two subscribing witnesses.

JOSEPH B. BANCROFT.
ALONZO E. RHOADES.

Witnesses:

WM. A. KNIGHTS,
C. E. LONGFELLOW.