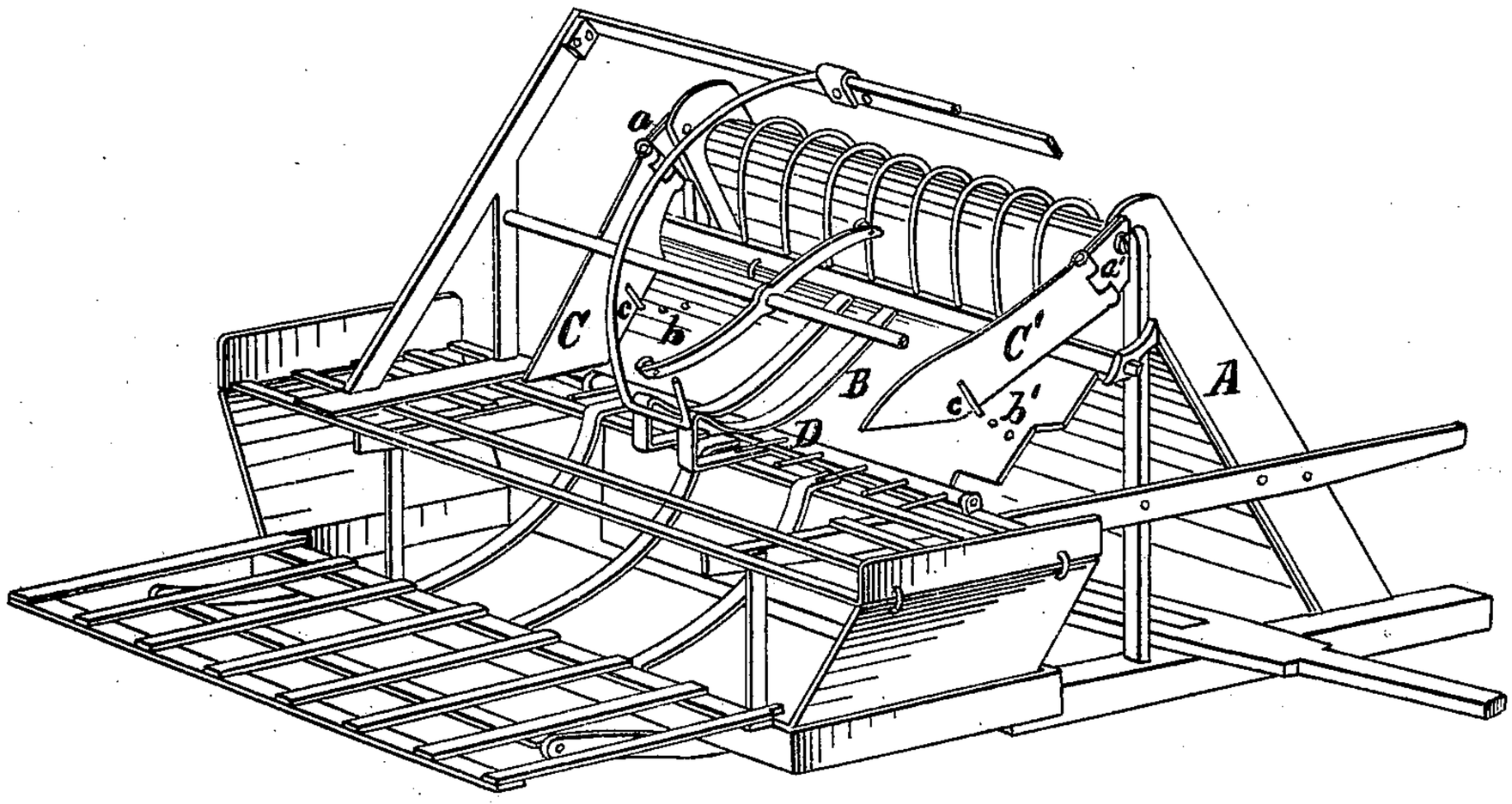
J. H. ELWARD.

HARVESTER.

No. 193,112. Patented July 17, 1877.



Witnesses:

Wm. H. Sinnock

John G. Center.

Inventor:

John H. Elward

by A. M. Smith

attorney

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. ELWARD, OF ST. PAUL, MINNESOTA, ASSIGNOR TO ST. PAUL HARVESTER WORKS.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **193,112**, dated July 17, 1877; application filed May 3, 1876.

To all whom it may concern:

Be it known that I, JOHN H. ELWARD, of St. Paul, county of Ramsey, State of Minnesota, have invented a new and useful Improvement in Harvesting-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification, which represents a perspective view of a part of a harvesting-machine embracing my improvement.

My invention relates to the means for directing the grain properly to the bundling or binding devices connected with the grain-receptacle; and consists in the combination, with said grain-receptacle, of swinging shields, which may be adjusted forward or backward at their lower ends, according to the length of straw of the grain operated upon, for the purpose of depositing the straw in the receptacle always in about the same relation to the bundling or binding devices, or to the position of the binders riding on the machine.

The machine, in its general organization and arrangement of parts, as also the particular arrangement of the bundling devices referred to, is particularly described in another application, filed March 14, 1876, of which this is a division, and need not, therefore, be described here.

To the upper end of the elevator-frame A, in front and in rear of the elevator, are secured plates or bars *a a'*, overhanging the inclined delivery or chute board and shield B, and to these bars or plates pendent shields C C' are secured in such manner as to permit their lever ends to be adjusted and swung forward or backward relative to the delivery-board and receptacle D.

The shields are represented as consisting of plates hinged at their upper ends to the bars or plates *a a'* for permitting the adjustment or vibration described; but they may consist of canvas, or other flexible material, which will permit the adjustment of the lower ends referred to without the aid of hinges, said shields in this latter case being connected at their lower ends with suitable rods or bars for holding them taut and effecting their adjustment. The delivery-board is provided with two series of perforations, *b b'*, arranged in the arcs of circles conforming to the movement of retaining-pins *c* on the inner edges of the shields C C', in any one of which said pins may be inserted for holding the shields at the desired point of adjustment.

Instead of the perforations and pins, slots, and set-screws, or other equivalent means, may be employed for effecting the adjustment of the shields.

By the arrangement of adjustable shields, in connection with the grain-receptacle, as described, the attendant is enabled to regulate with precision the delivery of the grain relative to the bundling or binding devices, or to the position of the binders. Thus, where the bundling devices described in another application are employed, and the machine is operating upon short grain, in order to deposit in the receptacle with the center of its length of straw in the same transverse plane with said bundling devices, it is necessary to swing the lower end of the forward shield C' backward, in order to move the grain backward in its descent, into the proper relation to said devices, and, to prevent its being carried too far, the rear shield C may be swung forward and secured at the desired point.

Where the straw is long the shields will be correspondingly moved outward or away from each other, in order to deposit the grain in the proper relation to the binders or to the bundling or binding devices.

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

The swinging adjustable shields, in combination with the grain-receptacle for directing the grain to the proper point for binding, substantially as described.

In testimony whereof I have hereunto set my hand this 28th day of April, A. D. 1876.

JOHN H. ELWARD.

Witnesses:

H. L. PILKINGTON,

W. J. DEAN.