(No Model.)

H. CAMPBELL.

GRAIN SEPARATOR.

No. 287,756. Patented Oct. 30, 1883.

Fig. 1.

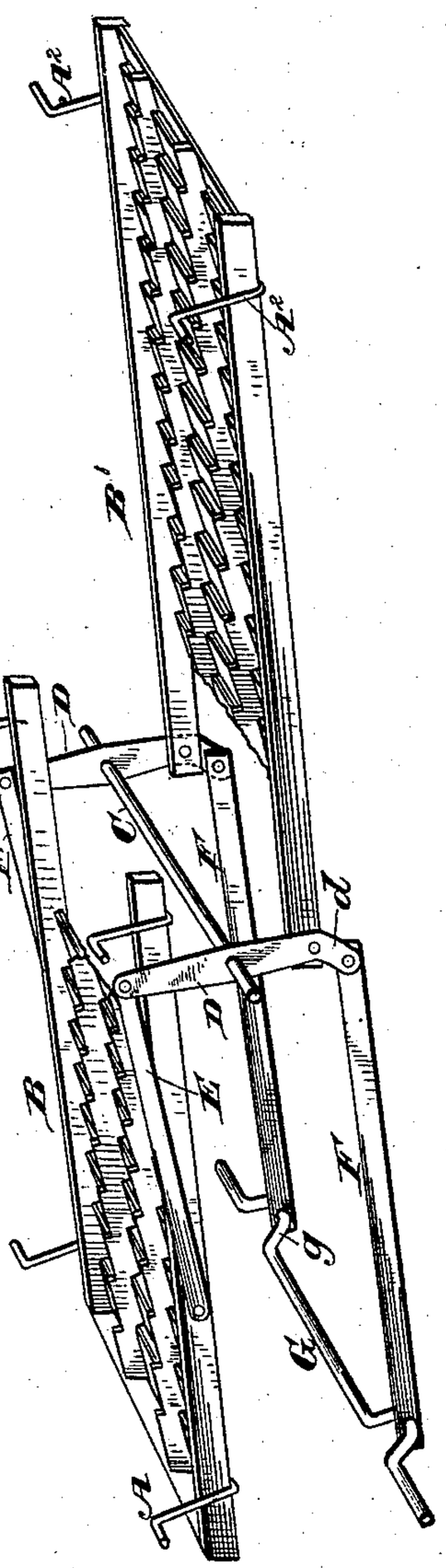
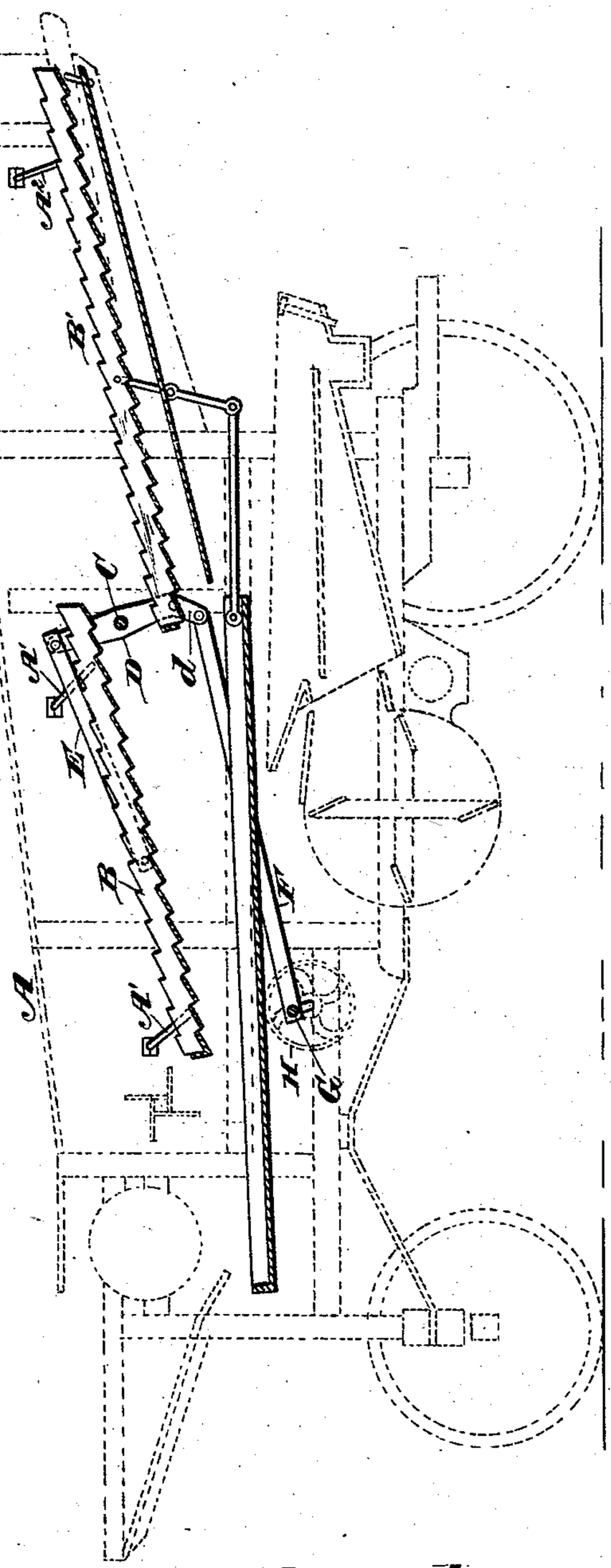


Fig. 2.



Witnesses.

Robert Everett.

J. A. Rutherford.

Inventor.

Howard Campbell.

By James L. Norris

Atty.

UNITED STATES PATENT OFFICE.

HOWARD CAMPBELL, OF RICHMOND, INDIANA, ASSIGNOR TO GAAR, SCOTT & COMPANY, OF SAME PLACE.

GRAIN-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 287,756, dated October 30, 1883.

Application filed September 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, HOWARD CAMPBELL, a citizen of the United States, residing at Richmond, Wayne county, Indiana, have invented new and useful Improvements in Grain-Separators, of which the following is a specification.

This invention relates to improvements in grain-separators, and has for its object to provide simple and efficient means whereby the weight of the upper rack of the straw-carrier is entirely removed from the actuating mechanism, and both racks or sections of the straw-carrier driven by the same crank-shaft. This is accomplished in the manner and by the mechanism hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the two-part straw-carrier, with its supports and actuating mechanism detached from the frame of the thrasher. Fig. 2 is a central longitudinal section of the machine, showing the mechanism of Fig. 1 in place.

A in said drawings represents the frame or case of the machine, in which the operative parts are inclosed; and B B′ represent the two sections of the straw-carrier, the former being the upper and the latter the lower section. The upper section, B, is supported by hangers A′ A′, pivoted to the side bars near each end of the section or rack, and having their upper ends pivotally connected with the inclosing-frame A, whereby the weight of the section B is wholly supported and vibratory motion of the rack permitted.

C represents a shaft having bearings in the sides of the frame A. Near each of the end bearings of said shaft is mounted a lever, D, having its upper end extending slightly above the rack B. To the upper extremities of said levers are attached pitmen E, which extend forward, and are connected to the side bars of the rack B, not far from its forward end.

The second section, B′, of the straw-carrier is supported at its rear end by hangers A^2, similar to the hangers A′ of the upper section. Its forward end is, however, pivoted to the lower ends of the vibrating levers D D, by which it is vibrated and in part supported. Said levers have each a lug, *d*, extending below the point of attachment of the lower rack, and to said lugs are connected the pitmen F, which are mounted upon cranks *g g* on the shaft G. The lugs *d d* are inclined at an angle with the body of the levers D D, as shown in Fig. 1.

The operation of these parts is as follows: Motion being imparted to the shaft G, the pitmen F vibrate the levers D upon the shaft C, thereby reciprocating the upper rack, B, by means of pitmen E E, and at the same time vibrating the lower rack, B′, in the opposite direction by means of the pivotal connection of the latter to the lower extremities of the actuating-levers D D. The shaft G is driven by a pulley, H, mounted upon its end outside the frame A, and geared by a belt with the motive power.

The remaining parts of the machine are of the usual construction, and require no specific description.

Having thus described my invention, what I claim is—

1. The combination of an inclosing-frame, upper and lower racks, hangers supporting the latter from the frame, vibrating levers, pitmen connecting the upper portions of the levers with the upper rack, a crank-shaft, and pitmen connecting the crank-shaft with the lower portions of the levers, substantially as described.

2. The combination of the upper rack, hangers supporting the same, vibratory levers, pitmen connecting the said rack with the levers, a crank-shaft, pitmen connecting the latter with the levers, the lower rack pivotally connected at one end with the said levers, and hangers supporting the other end of the lower rack, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HOWARD CAMPBELL.

Witnesses:
E. H. DENNIS,
JONAS GAAR.