

(No Model.)

J. F. STEWARD.

SHEAF CARRIER.

No. 368,981.

Patented Aug. 30, 1887.

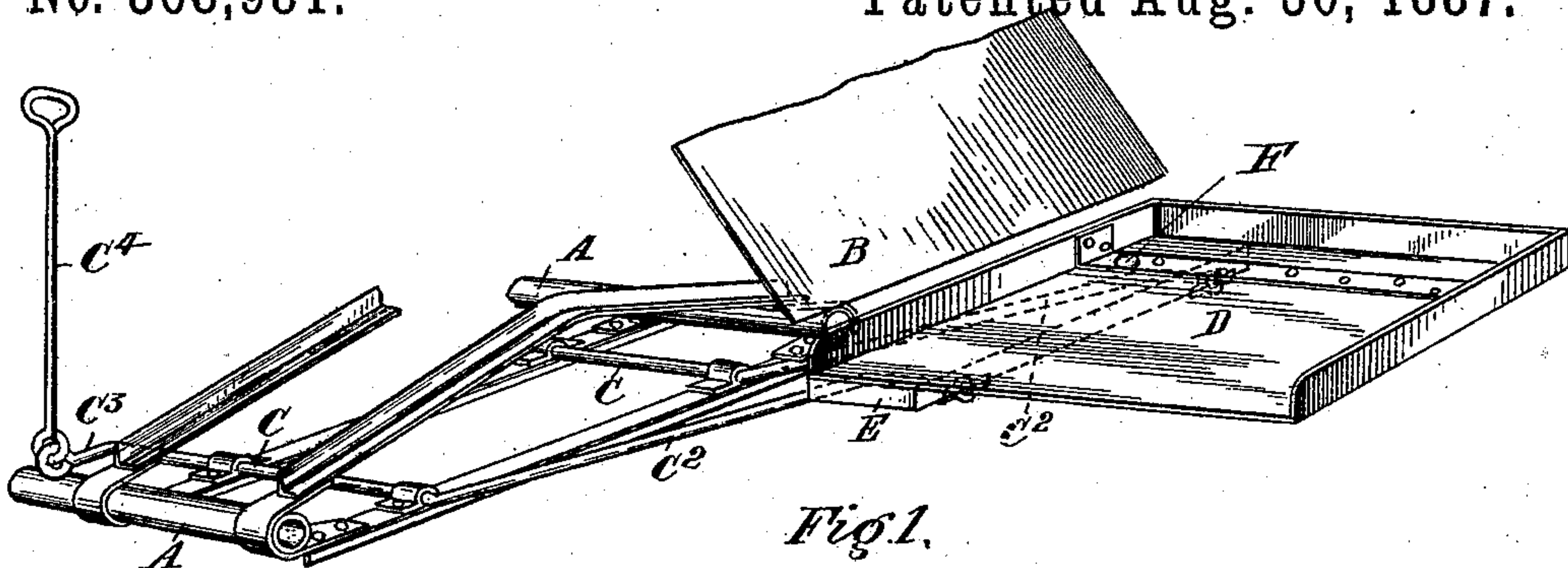


Fig. 1.

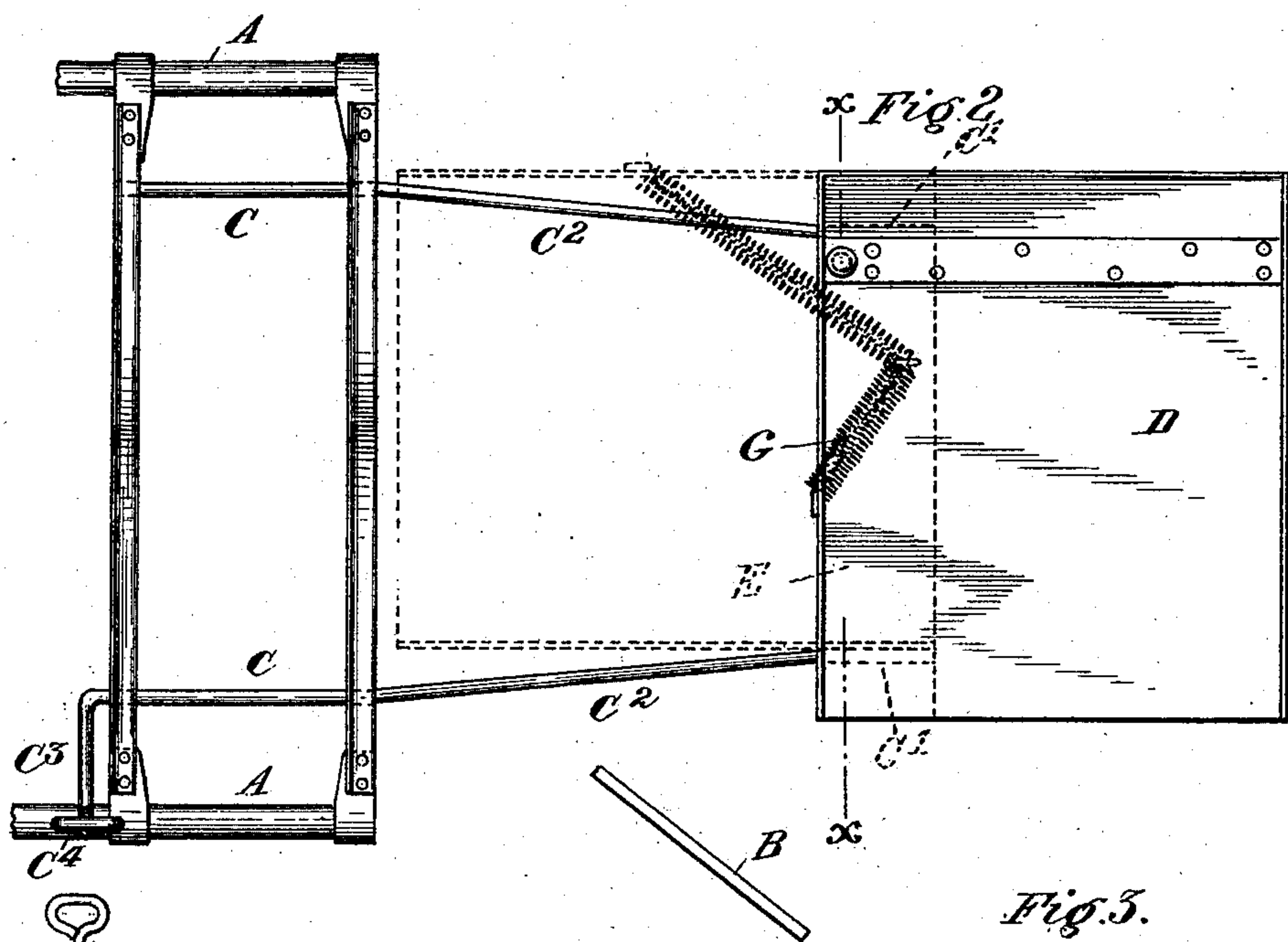


Fig. 2.

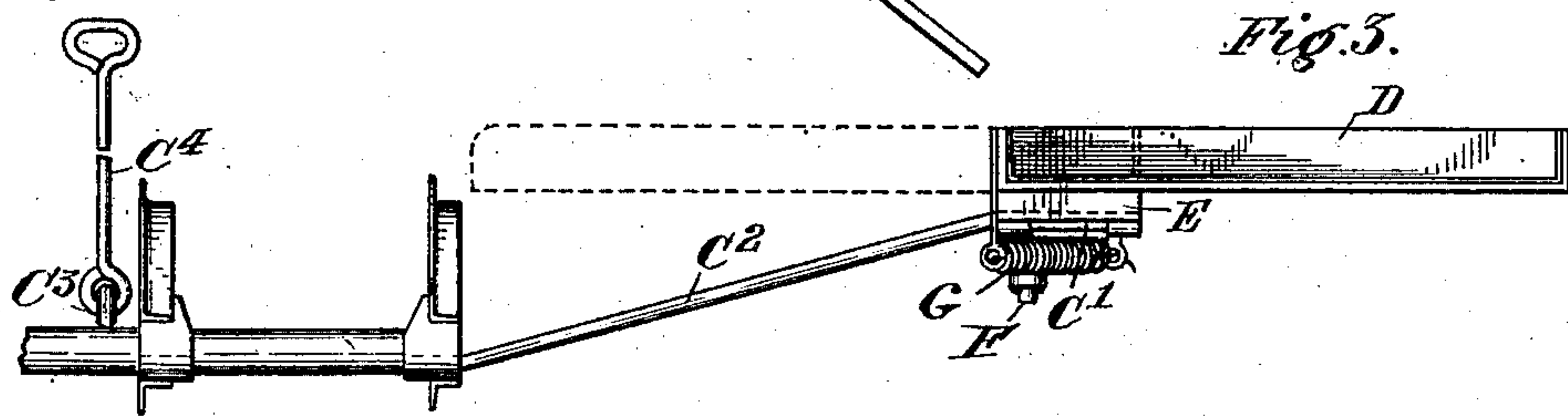


Fig. 3.

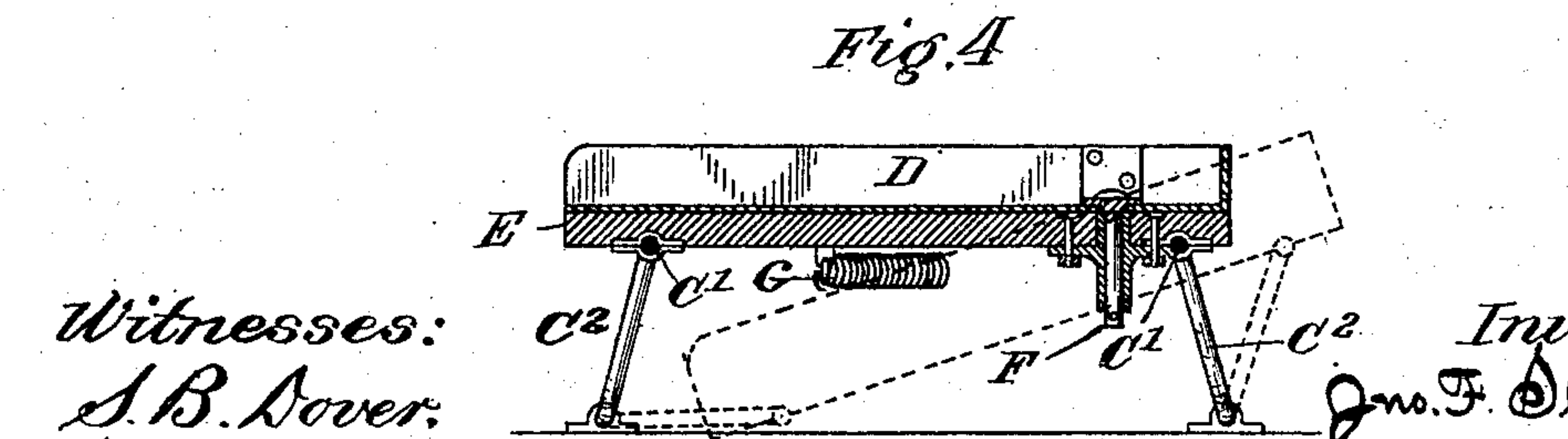


Fig. 4.

Witnesses:
S. B. Dover.
Francis W. Parker

Inventor.
Jno. F. Steward.
by Chas. S. Burton
attys.

UNITED STATES PATENT OFFICE.

JOHN F. STEWARD, OF CHICAGO, ILLINOIS.

SHEAF-CARRIER.

SPECIFICATION forming part of Letters Patent No. 368,981, dated August 30, 1887.

Application filed January 29, 1887. Serial No. 225,942. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. STEWARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sheaf-Carriers, which are fully described in the following specification, reference being had to the accompanying drawings, forming part thereof.

This invention is an improvement on a sheaf-carrier invented by Frank G. Middlekauff, for which his application, No. 213,246, was filed in the United States Patent Office September 10, 1886; and its purpose is to adapt a sheaf-carrier of the construction shown in Middlekauff's said application to yield to the rear in order to clear any obstructions which may be met with during travel.

In the drawings, Figure 1 is a perspective portion of a harvesting-frame and a sheaf-carrier attached thereto embodying my invention, the point of view being on the stubble side and from the rear corner, the position of the sheaf-carrier being that in which it stands when receiving the sheaves from the binder. Fig. 2 is a plan showing in dotted lines the position into which the receptacle may be forced upon encountering an obstacle. Fig. 3 is a rear elevation of the same. Fig. 4 is a sectional elevation of the same, the section being taken at X X, Fig. 2.

I will describe only so much of the general construction of the invention of Middlekauff as may be necessary to make intelligible the character and purpose of my improvement thereupon.

A A are front and rear sills of a harvester-frame; B, the binder-deck.

C C are cranked rock-shafts journaled on the front and rear sills, respectively, and having the wrists C' C', upon which the immediate support of the sheaf-receptacle D is pivotally secured.

The invention of Middlekauff relates to certain relations between the crank-arms C² C³, whereby the receptacle is dumped by rocking the shafts C; and this part of the operation I will herein briefly explain.

The distance between the crank-wrists C' C', pivoted on the under side of the sheaf-receptacle D, is less than the distance between the rock-shafts C on the harvester-frame. One

of said rock-shafts, preferably the rear, has, in addition to the crank-arm C², a short crank-arm, C³, to which is connected a suitable link-handle, C⁴, by which the said rock-shaft may be operated and the crank-arm C² thrown over forward, which will cause the receptacle D to assume the position shown in dotted lines in Fig. 4 and discharge its contents. This operation will be perfectly performed when the sheaf-receptacle is pivotally secured directly upon the crank-wrists C'.

My improvement consists in providing an intermediate connection between the crank-wrists and the sheaf-receptacle, so that independently of the dumping movement before described, which is a peculiarity of Middlekauff's invention, the sheaf-receptacle may have a swinging movement in a horizontal plane, whereby it may clear obstructions either with or without dumping its contents; and to this end I make the crank-arms C' much shorter than they would be if the sheaf-receptacle were secured directly upon them, and upon said short crank-arms I secure pivotally a narrow plank, E. To this plank, which, with the supporting crank-arms, may be considered as constituting the carrier-frame, the sheaf-receptacle D is pivoted on a vertical pivot, F, as near the forward end of the receptacle as possible, in view of the limitation hereinafter pointed out. The receptacle is also connected to the plank E by a spring, G, so connected to the plank and to the receptacle that it tends to draw the latter into the position shown in Fig. 1 relative to the plank.

It will be noticed that the rear rock-shaft, C, dumps the carrier by tipping the crank-arm C² forward, and that the crank-arm C³ may form a stop against the sill to prevent rocking the shaft in the opposite direction. When, therefore, in the course of travel the receptacle D encounters an obstacle, since the force thus applied to it to move it rearward cannot have that effect by rocking the supports—viz., the crank-arms C²—it will cause the receptacle to swing about its vertical pivot F, the portion rearward of the pivot moving around and standing inward of said pivot and projecting under the binder-deck and the portion forward of the pivot moving outward thereof. It will be seen that the lateral compass of the machine will be diminished by this change of

position only as much as the distance from the pivot F to the forward edge of the receptacle is less than the distance from said pivot to the outer edge, and the pivot is so located as to take advantage of all the space which is available under the deck into which the carrier may be swung, so that only so much of the length shall project beyond the pivot F as cannot be accommodated inward therefrom—that is, the pivot is placed about as far from the rear end of the receptacle as it is outward from the stubble end of the harvester-frame. This rule of construction allows considerable range of choice for the exact position of the pivot; but I have found it convenient to place it about eight inches back of the forward edge, and this brings it about two inches outward from the inner edge, as shown in the drawings.

I am aware that heretofore sheaf-carriers have been constructed whose supporting frame-work was connected to the harvester-frame by vertical pivots which permitted the receptacle and such supports to swing horizontally and avoid obstructions, the receptacle itself, when it is a structure separate from the supports, being hinged horizontally upon its supports, so that it might be dumped by swinging vertically; but such construction necessitates the movement of both the receptacle and its supports when obstructions are encountered, and prevents the employment of many desirable forms of supporting frame-work and dumping mechanism, and would practically prevent the use of the supporting and dumping mechanism patented to Middlekauff, and herein shown; and I do not claim, broadly, providing the carrier-receptacle with supports by means of which it is capable of horizontally swinging and vertically dumping; but in this respect I claim only the arrangement of the two pivots, vertical and horizontal, as herein described—that is, the horizontal pivot being the connection of the carrier-supporting frame to the harvester-frame, and the vertical pivot being the connection of the sheaf-receptacle to the carrier-supporting frame.

I claim—

1. In combination with the harvester-frame, a sheaf-carrier-supporting frame rocking over horizontal pivots to dump the carrier, and the sheaf-receptacle connected to the carrier-supporting frame by a vertical pivot, whereby the receptacle has a dumping movement with the

carrier-supporting frame and a horizontal swinging movement independent of said frame, substantially as and for the purpose set forth.

2. In combination with the harvester-frame and the sheaf-carrier-supporting frame connected thereto, substantially as described, whereby the carrier moves longitudinally forward in order to depress its rear end, the receptacle of such carrier connected to its supporting-frame by a vertical pivot and adapted to swing about such pivot rearward, whereby rearwardly-operating pressure against the forward end of receptacle tends to swing it on its vertical pivot in toward the side of the harvester without dumping it, substantially as set forth.

3. In combination with the harvester-frame and the carrier-supporting frame pivoted thereto, the receptacle connected to the latter by a vertical pivot, and provided with a spring connected to the carrier-frame and to the receptacle, tending to swing the receptacle relatively to the frame to cause it to assume a position to receive the bundle, substantially as set forth.

4. In combination with the harvester-frame, a sheaf-carrier-supporting frame rocking over horizontal pivots to dump the carrier, and the sheaf-receptacle connected to the carrier-supporting frame by a vertical pivot and provided with a spring tending to resist rearward movement of the receptacle about such pivot, substantially as set forth.

5. In combination with the harvester-frame, the rocking supports pivoted thereto and adapted to rock forward, and provided with a stop to limit their rearward rocking, the bar E, connecting said supports nearer together than their bearings on the harvester-frame, the carrier-receptacle connected to said bar by a vertical pivot and adapted to swing rearward thereabout, and a spring reacting between the receptacle and the bar to resist the rearward movement of the former and retract it after such movement, substantially as set forth.

In testimony whereof I have hereunto set my hand, in the presence of two witnesses, at Chicago, Illinois, this 8th day of January, A. D. 1887.

JOHN F. STEWARD.

Attest:

IRA R. STEWARD,
CHAS. S. BURTON.