

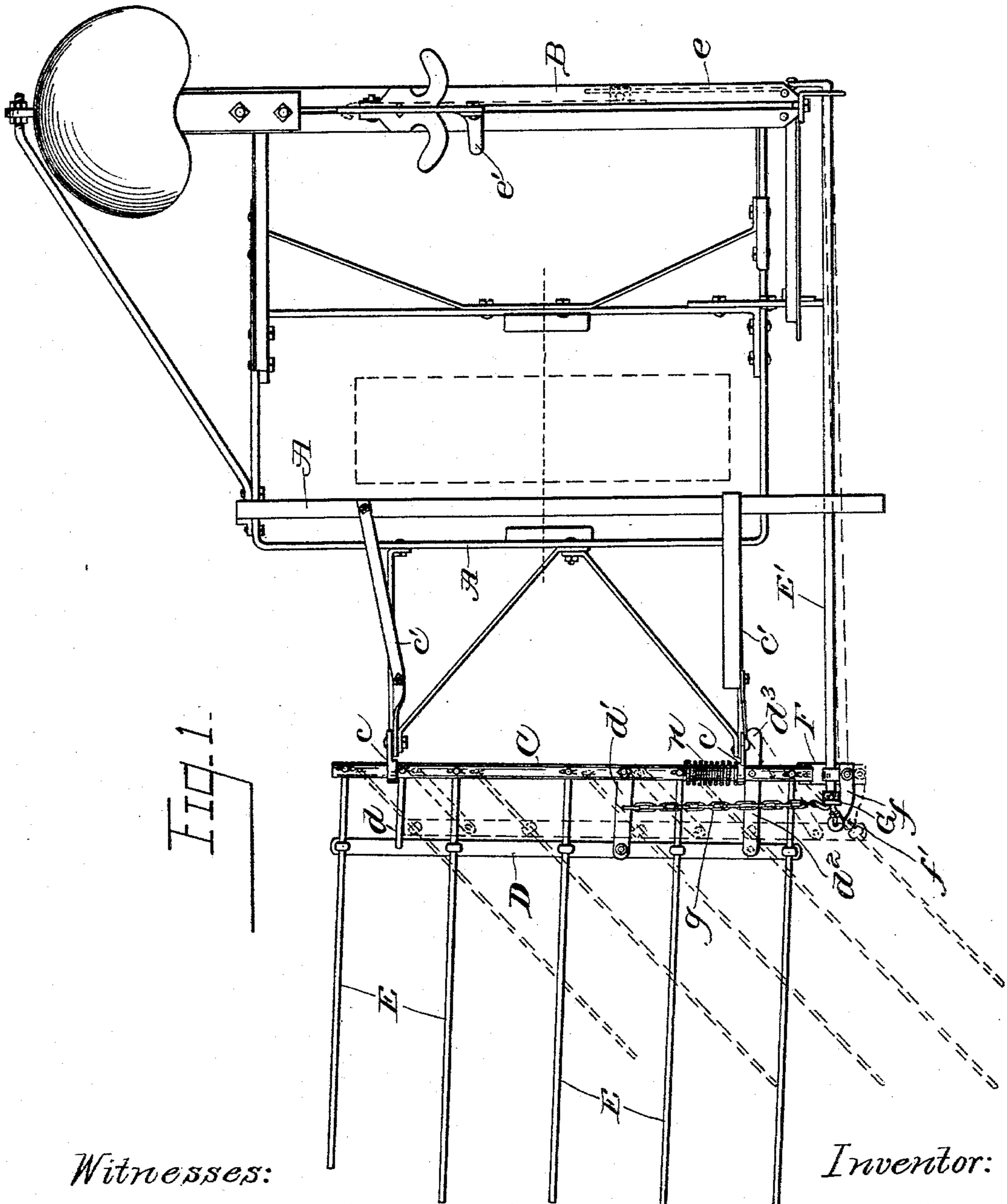
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3 Sheets—Sheet 1.

C. S. SHARP.  
SHEAF CARRIER FOR GRAIN BINDERS.

No. 598,020.

Patented Jan. 25, 1898.



Witnesses:

May E. Foster  
Arthur V. Randall.

Inventor:

Charles S. Sharp  
by B. J. Hayes  
Attorney.

(No Model.)

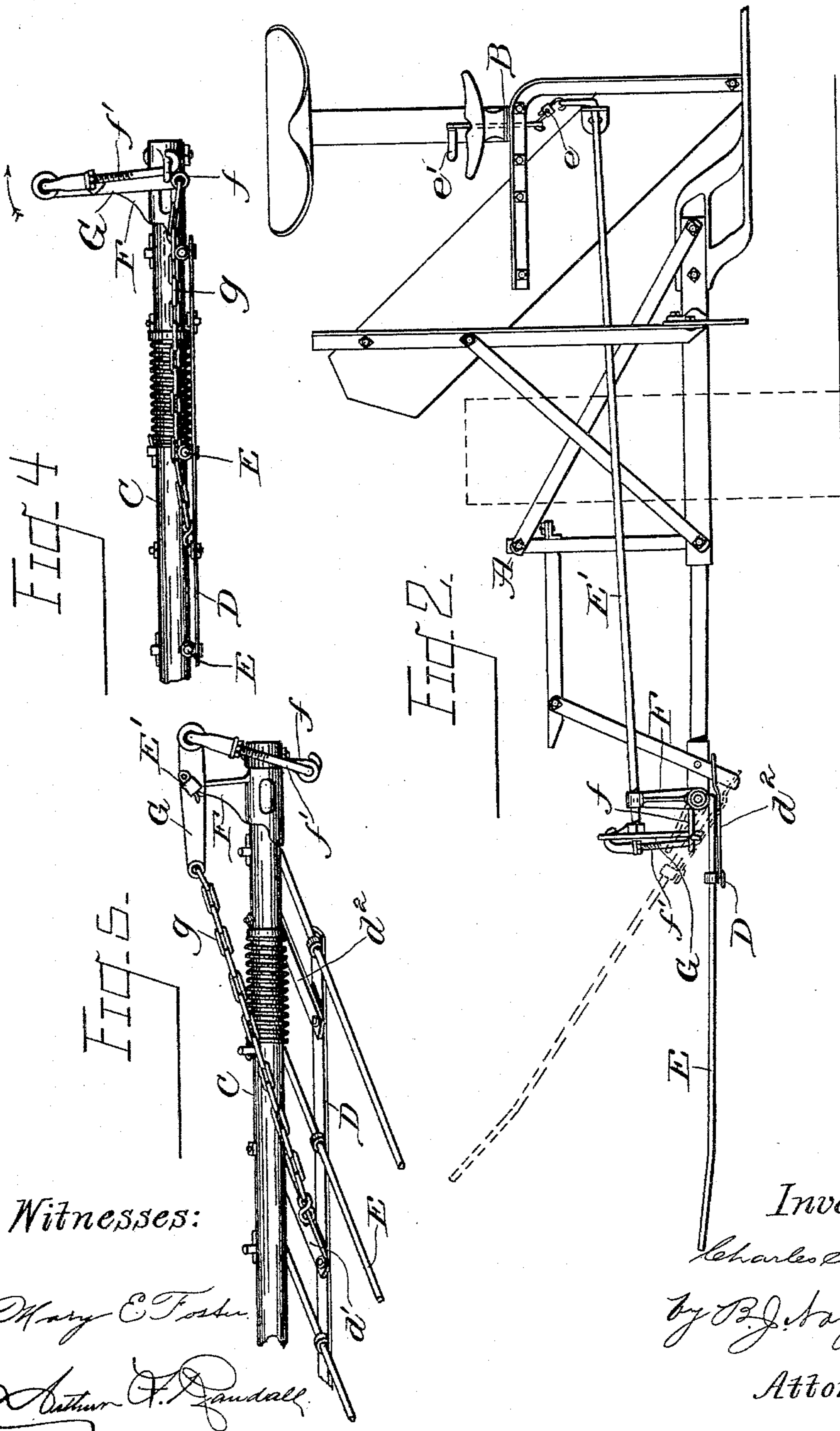
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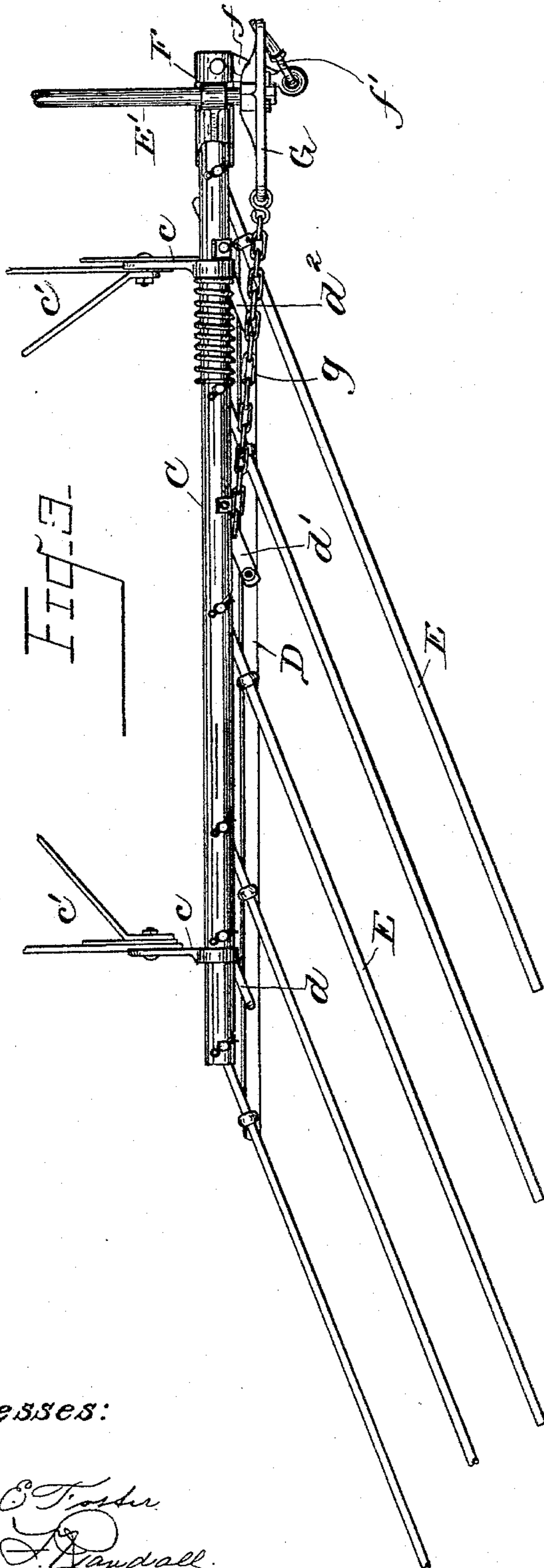
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Attorney.

# UNITED STATES PATENT OFFICE.

CHARLES S. SHARP, OF AUBURN, NEW YORK, ASSIGNOR TO THE D. M. OSBORNE & COMPANY, OF SAME PLACE.

## SHEAF-CARRIER FOR GRAIN-BINDERS.

SPECIFICATION forming part of Letters Patent No. 598,020, dated January 25, 1898.

Application filed June 11, 1897. Serial No. 640,286. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES S. SHARP, of Auburn, county of Cayuga, and State of New York, have invented an Improvement in Sheaf-Carriers for Grain-Binders, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object to improve the construction of sheaf-carriers for grain-binders, to the end that it shall have the capability of folding forward from its normal or receptive position when the binder is backed and the fingers come in contact with an obstacle in addition to having the ordinary movements now customarily given to sheaf-carriers.

15 The invention consists in a sheaf-carrier having an oscillating bar, supports therefor, and means for manipulating it, and a number of fingers loosely or pivotally connected to said oscillating bar, adapted to move or swing either backward or forward from their normal or receptive position, as occasion requires, and means for automatically restoring said fingers when swung forward and pressure upon them is relieved.

20 Figure 1 is a plan view of a sheaf-carrier for grain-binders embodying this invention; Fig. 2, a front elevation of the same; Fig. 3, a plan view showing the fingers folded rearward; Fig. 4, a detail side elevation of a portion of the carrier with the parts in the position shown in Figs. 1 and 2, and Fig. 5 a similar detail showing the fingers down and swung rearward.

25 A represents a portion of the frame of an ordinary grain-binder, to which is attached the seat-support B.

30 *c c* represent bearings or supports attached to or mounted upon brackets *c' c'*, which are composed of bars attached to the binder-frame, and, as herein shown, two such supports are provided. An oscillating bar C is mounted in said bearings or supports *c c*, which is made long enough to project beyond said supports at each end. Several fingers E, made of any suitable length, are pivoted to the said oscillating bar C in such a manner

as to swing freely either backward or forward, and for simplicity of construction the fingers are pivoted in the following manner, viz: Holes are bored diametrically through said oscillating bar C, and the ends of the fingers E are upturned at right angles, and said upturned ends pass through said holes in the oscillating bar, and split pins are driven through said upturned ends, which project through the bar. The several fingers E, five being herein shown, are connected together by the connecting-bar D, and in order that said fingers may freely swing together they are swiveled to said connecting-bar D.

35 Several straps *d d' d<sup>2</sup>* connect the controlling-bar D with the oscillating bar C, said straps being loosely or pivotally connected at their ends, respectively, to said parts, so that the connecting-bar D will always lie in parallelism with the oscillating bar C in whatever position it may be caused to occupy.

40 A rock-shaft E' has its inner end cranked and connected by an adjustable link *e* to the treadle *e'* and has its outer end supported in a bearing provided for it in a casting F, which is loosely mounted upon the front end of the oscillating bar C, being thereby supported. Fixed to the front end of the oscillating bar C and projecting therefrom at right angles is an arm *f*, and fixed to the outer end of the rock-shaft E' is a cross-bar G, and one end of said cross-bar G is connected by an adjustable link *f'* with the extremity of said arm *f*, so that as the shaft E' is rocked and the cross-bar G, fixed thereto, consequently turned the bar C will be oscillated. The opposite end of the cross-bar G is connected by a chain *g* with one of the straps *d'*, for instance, so that as said bar is turned in one direction the fingers E can be drawn forward from the rearward position shown in Fig. 3 into normal or receptive position.

45 The weight of the driver's foot is sufficient to hold the carrier and its weight of sheaves in normal or receptive position, as shown in Figs. 1 and 4, and when it is desired to dump the load the foot is removed from the treadle, the rock-shaft C turns, and the cross-bar G, which is fixed thereto, turns in the direction of the arrow, Fig. 4, into the position shown

in Fig. 5, and the oscillating bar C turns and drops the fingers to the ground, and as the machine advances the fingers will be drawn rearward by trailing, such rearward movement being permitted by reason of the slackness of the chain *g*. In raising the carrier to its normal or receptive position, Fig. 4, pressure upon the treadle turns the rock-shaft E', thereby turning the cross-bar G in a direction opposite the arrow and gradually into a more or less upright or vertical position, and by means of the link *f'* and arm *f* the oscillating bar C will be turned to raise the fingers as the cross-bar G is thus turned, and during the latter part of such movement of the cross-bar G, or just as it resumes its normal upright or vertical position, the chain *g* will be tightened and will draw the fingers forward into their normal or receptive position. The cross-bar G is turned until it not only resumes a vertical position, but until it passes the center for a short distance, to thereby better adapt it to hold up the carrier. With the fingers in elevated position above the ground and projecting as shown in Figs. 1 and 4 they will all easily fold backward if they should strike an obstacle as the machine advances without necessarily dropping onto the ground.

The oscillating bar C is movable longitudinally in its bearings or supports *c c*, and a strong spiral spring *n* is provided, which preferably encircles it for a short distance, which bears at one end against one of the supports of the oscillating bar and at the other end against a pin on said oscillating bar, the tendency of said spring being to hold the oscillating bar in its rearward position, yet permitting it to be moved longitudinally for a short distance forward.

The strap *d*<sup>2</sup> is formed or provided with a projection *d*<sup>3</sup> or projecting end portion, which bears against the support or bearing for the forward end of the oscillating bar, or it may be any other fixed abutment, and if the fingers strike an obstacle when the machine is backed they will fold or swing forward from their normal or receptive position, and the projecting end *d*<sup>3</sup> of the strap *d*<sup>2</sup>, bearing upon or against said abutment, will draw forward or slide longitudinally said oscillating bar C, as shown by dotted lines, Fig. 1, carrying with it the parts which are connected thereto, compressing the spring *n*, and slackening chain *g*; but as soon as the pressure upon said fingers is relieved the spring *n* will act as a restoring-spring to restore the parts to their normal or receptive position.

It is obvious that many ways may be devised for thus adapting the fingers E to fold forward from their normal or receptive position when the machine is backed and said fingers strike an obstacle; but, believing myself to be the first to construct a sheaf-carrier for a grain-binder in any manner adapted to fold forward from its normal or receptive position when the machine is backed and the fingers strike an obstacle, I desire to broadly include

within the spirit and scope of this invention any form or construction of mechanism whereby such result is accomplished.

I claim—

1. In a sheaf-carrier for grain-binders, a support, a set of fingers loosely connected therewith and movable backward and forward from their normal or receptive position, substantially as described.

2. In a sheaf-carrier for grain-binders, an oscillating bar, a set of fingers pivoted thereto which swing backward and forward from their normal or receptive position, substantially as described.

3. In a sheaf-carrier for grain-binders, a support, a set of fingers loosely connected therewith and movable backward and forward from their normal or receptive position, and means for automatically restoring said fingers to their normal position when folded forward and the pressure upon them is relieved, substantially as described.

4. In a sheaf-carrier for grain-binders, an oscillating bar, a set of fingers pivotally connected thereto, which swing backward and forward from their normal or receptive position, and automatic means for returning said fingers to normal position when swung forward and pressure upon them is relieved, substantially as described.

5. In a sheaf-carrier for grain-binders, an oscillating and longitudinally-movable bar, and a set of fingers loosely connected therewith, movable backward and forward from their normal or receptive position, substantially as described.

6. In a sheaf-carrier for grain-binders, an oscillating and longitudinally-movable bar, a set of fingers loosely connected thereto, movable backward and forward from their normal or receptive position, treadle-operated mechanism for controlling the oscillating movement of said bar, means for moving said bar longitudinally as the fingers move forward, and automatic means for returning said bar and fingers connected thereto to normal position, when pressure upon the fingers is relieved, substantially as described.

7. In a sheaf-carrier for grain-binders, an oscillating and longitudinally-movable bar, a set of fingers loosely connected thereto which fold backward and forward from their normal or receptive position, means for moving said bar longitudinally operated by the fingers when moving forward, and a spring for returning said bar and fingers connected thereto to normal position, substantially as described.

8. In a sheaf-carrier for grain-binders, a set of fingers, the oscillating and longitudinally-movable bar C to which they are pivotally connected, supports for said bar, a connecting-bar D, and straps *d*, *d'*, *d*<sup>2</sup>, connecting it with said oscillating bar, one of said straps having a projection *d*<sup>3</sup> which bears against a fixed abutment and operates to move said bar C forward when the fingers fold for-

ward, and a restoring-spring connected with said bar C, and means for holding the carrier in receptive position, substantially as described.

5 9. A sheaf-carrier for grain-binders having fingers which fold backward and forward from their normal or receptive position, and which drop and fold rearward to dump the sheaves, substantially as described.

10 10. In a sheaf-carrier for grain-binders, an oscillating bar, a set of fingers pivotally connected thereto, which swing backward and forward from their normal or receptive posi-

tion, means for holding said bar with the fingers in receptive position, and means for restoring the fingers to normal or receptive position when moved forward and pressure upon them is relieved, substantially as described. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 20

CHARLES S. SHARP.

Witnesses:

FREDERICK M. EVERITT,  
FRANK S. JACQUES.