

(No Model.)

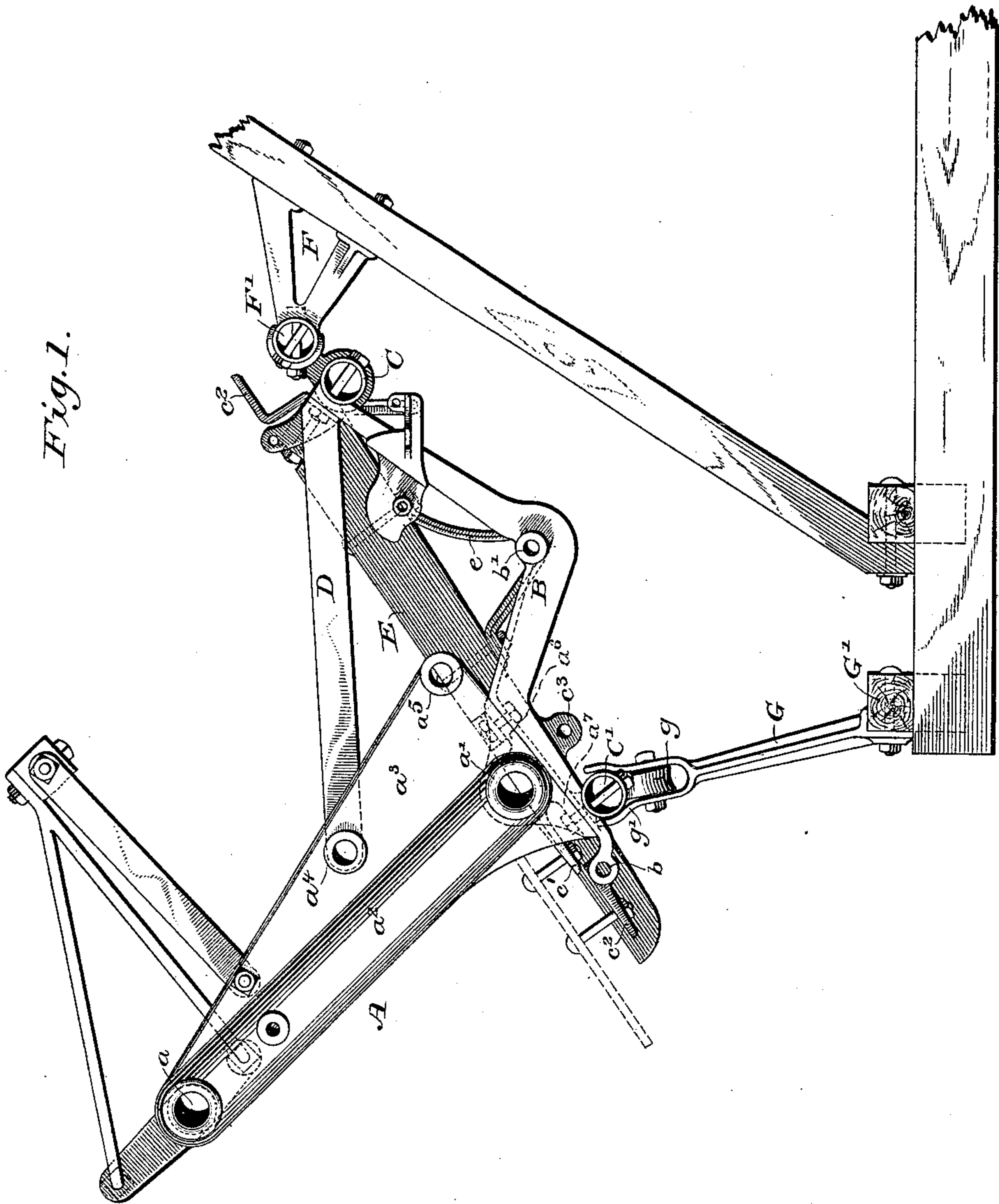
2 Sheets—Sheet 1.

W. R. BAKER & H. E. PRIDMORE.

GRAIN BINDER.

No. 351,353.

Patented Oct. 26, 1886.



Witnesses

Wm. A. Shunk
Geo. W. Young.

Inventor

William R. Baker,
Henry E. Pridmore,

By their Attorneys

Parkinson & Parkinson

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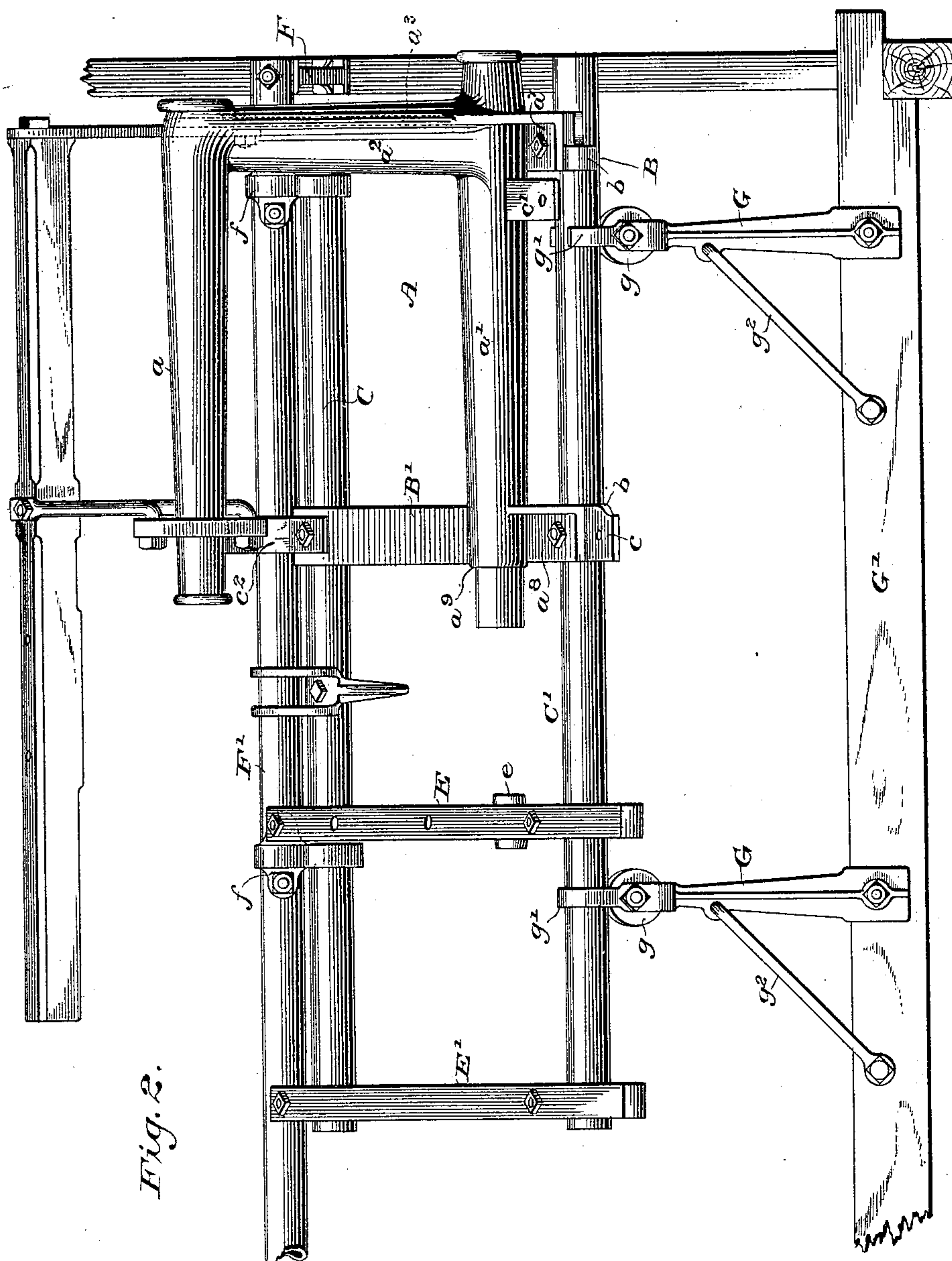
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Emmerson & Parker,

UNITED STATES PATENT OFFICE.

WILLIAM R. BAKER AND HENRY E. PRIDMORE, OF CHICAGO, ILLINOIS.

GRAIN-BINDER.

SPECIFICATION forming part of Letters Patent No. 351,353, dated October 26, 1886.

Original application filed September 29, 1884, Serial No. 144,247. Divided and this application filed August 12, 1885. Serial No. 174,209. (No model.) Patented in England July 19, 1884, No. 10,330; in Victoria October 2, 1884, No. 3,854; in New Zealand November 20, 1884, No. 1,390, and in New South Wales February 3, 1885, No. 1,003.

To all whom it may concern:

Be it known that we, WILLIAM R. BAKER and HENRY E. PRIDMORE, both of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grain-Binders, of which the following is a specification.

Our invention relates in part to means for supporting and allowing the adjustment of the frames of automatic binders—such as may be found upon the machines manufactured by the McCormick Harvesting Machine Company at the present day—and in part to the combination of such means with a binder-frame of novel construction; and it consists in combining, with a binder-frame, a supporting-bar carried upon the outside elevator-struts of the harvester, yokes or keepers from said bars embracing the inner longitudinal bar of the frame, and supporting anti-friction rolls and yokes or keepers for the outer bar of the frame, borne by standards from the end sill of the harvester, and in such other combinations as are herein-after set forth and claimed.

In the drawings, Figure 1 is a front end elevation of said frame with the operative mechanism removed; and Fig. 2 a stubble side elevation, also with operative parts removed.

A represents a post-frame or main bracket, having one arm or sleeve, a , overhanging the binding-table or grain-chute and serving as a bearing or support for the binder-shaft, and a second arm or sleeve, a' , subtending said table or chute and receiving the rock-shaft which carries the binder-arm. These tubular arms are united by a post, a^2 , strengthened by a vertical flange or web, a^3 , bored at two points, a^4 and a^5 , to receive stub-axles for the two idle-gears in the train communicating motion to the binder-shaft, and from the lower or subtending arm project ears or lugs a^6 a^7 at an angle to the line of said post determined by circumstances, but here shown as slightly obtuse to the inner side of said line, the lug a^7 being in other respects, however, a substantial extension of the post, and advisably further united therewith by integral connection through the just-mentioned vertical flange, as shown. Op-

posite to these lugs are other lugs, a^8 a^9 , in the same plane therewith, and also integral with the post-frame, and these latter, as well as the lug a^4 , are preferably strengthened by webs from the subtending arm and post, formed in the process of casting. Bolted to each pair of lugs or ears thus provided are transverse bars B B' of cast metal—malleable iron or steel, for instance—which on the outer or stubble side of the arm have each a bearing, b , for the reception of a rock-shaft which carries the tripping-fingers, and on the inner side are provided with other bearings, b' , for the packer-shaft, or the shaft continuously driven from the harvester, then at their upper ends saddle a tubular frame-bar, C , such as heretofore used for like purpose, to which they are secured by throughbolts, as shown. At their lower or outer ends, just inside the shaft for the tripping-fingers, they also saddle and are similarly secured to a second tubular frame-bar, C' , extending parallel with the other from front to rear of the binder-frame, and beyond this last connection and outside of said shaft the bar B' , which is the rearmost and lies alongside the plane of movement of the binder-arm, has a bracket-extension, c , in the same plane with a like offset or bracket, c' , from the subtending arm or sleeve of the post-frame, these two affording seats for the chute-decking or binding-table. Other brackets, c^2 , are bolted to the frame at suitable points for the same purpose. Both transverse bars have also a pendant ear, c^3 , inside of and in close proximity to the post-frame, to receive and support the tripping rock-shaft. A brace-bar, D , of strap-iron or other suitable metal, extends from the junction of the front transverse bar to the upper stub-axle on the post-frame web, thus tying the post-frame firmly.

The tubular frame-bars are further united in rear of the binder-arm by two wooden cross-pieces or timbers, E E' , the inner of which supports a bearing-bracket, e , for the rear end of the packer-shaft, this, in machines of the present type, being the one continuously driven from the harvester, and on which the trip-clutch is mounted.

Brackets F, bolted to the outer elevator-struts near their head, receive in suitable seats a tubular supporting-bar, F', which is firmly secured in place, and guides or keepers f from this bar loosely embrace the upper tubular frame-bar and permit it to slide longitudinally, as demanded by the adjustment of the binder. The lower tubular frame-bar, C', rests upon properly-grooved anti-friction rollers g, borne at the upper end of standards G from the end sill, G', of the harvester-frame. Yokes or keepers g', projecting from these standards above the rollers, confine the bar against lateral displacement, and metal rods g² from the sill, hooked in and clamped to ears from the standards, which are themselves of metal, serve to brace the latter.

So far as concerns the construction of the binder-frame itself, irrespective of its combination with the special provisions for its support and adjustment, this is made the subject of an application filed by us in the Patent Office of the United States on the 29th day of September, 1884, Serial No. 144,247, of which this is a division, and therefore no claim is made to such construction herein; but

What we do claim is—

1. The combination, substantially as hereinbefore set forth, with the binder-frame, of the supporting-bar carried upon the outside elevator-struts and having keepers for the up-

per or inner longitudinal bar of said frame, and the supporting anti-friction rollers and yokes or keepers for the lower or outer bar of the frame borne by standards from the end sill. 35

2. The combination, substantially as hereinbefore set forth, of the metal post-frame, the metal transverse frame-bars bolted thereto, the tubular frame-bars secured near the opposite ends of the transverse bars, the tubular supporting-bar seated in and bolted to brackets upon the outside elevator-struts, and having guides or keepers which embrace the adjacent tubular frame-bar, and the metal standards upon the end sill of the harvester provided with grooved anti-friction rolls to receive the outside tubular frame-bar, and above said rolls with yokes or keepers to prevent lateral displacement of said bar. 40 45

3. The metal standards secured to the end sill and having anti-friction rolls for the support of the outer bar of the binder-frame, and yokes or keepers to prevent lateral displacement of said bar, combined with braces secured to ears integral with said standards and extending therefrom to said end sill. 50 55

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Witnesses:

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