

(No Model.)

J. B. GEMMILL.

HARVESTER.

No. 377,067.

Patented Jan. 31, 1888.

Fig. 1.

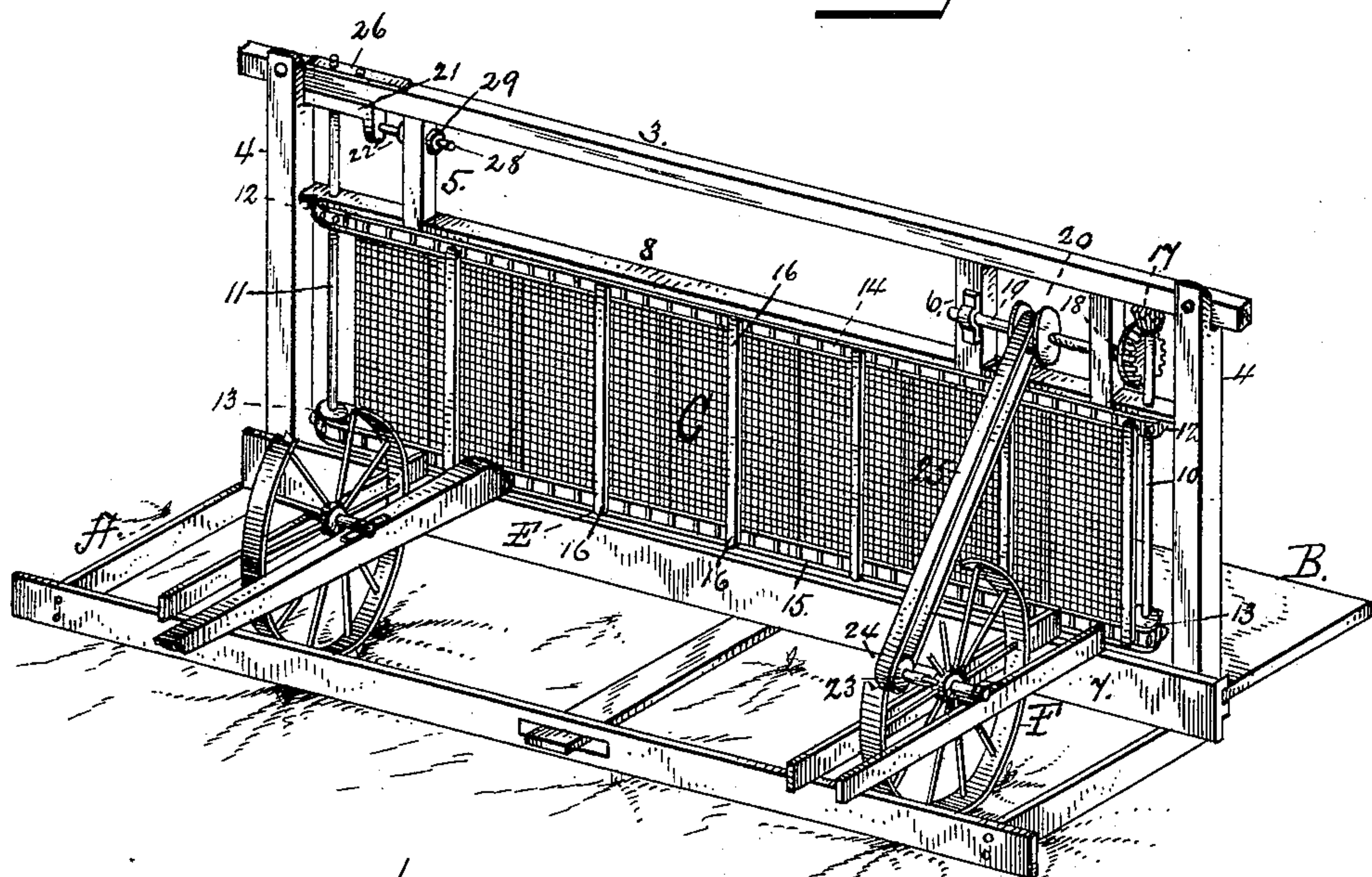


Fig. 2.

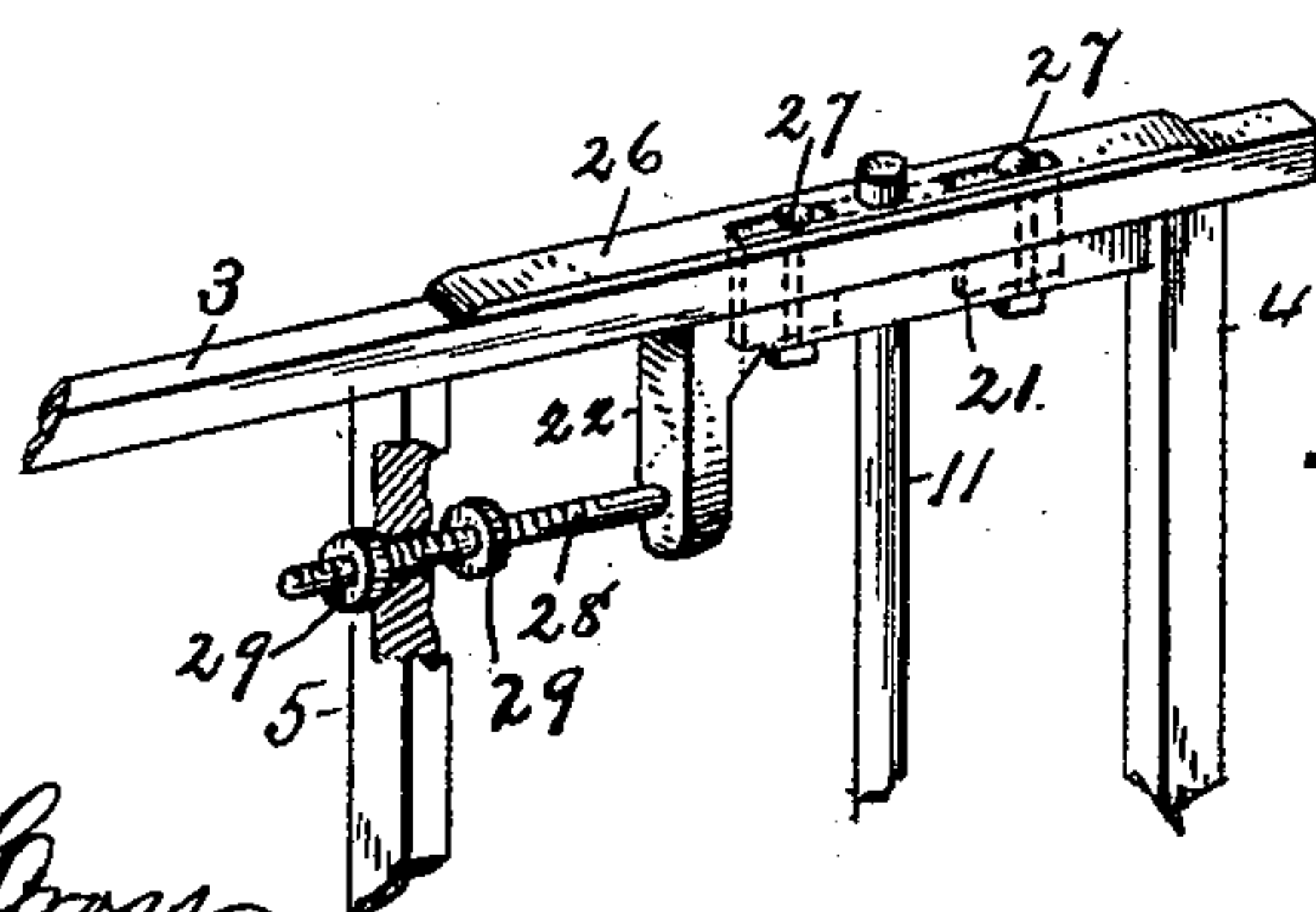
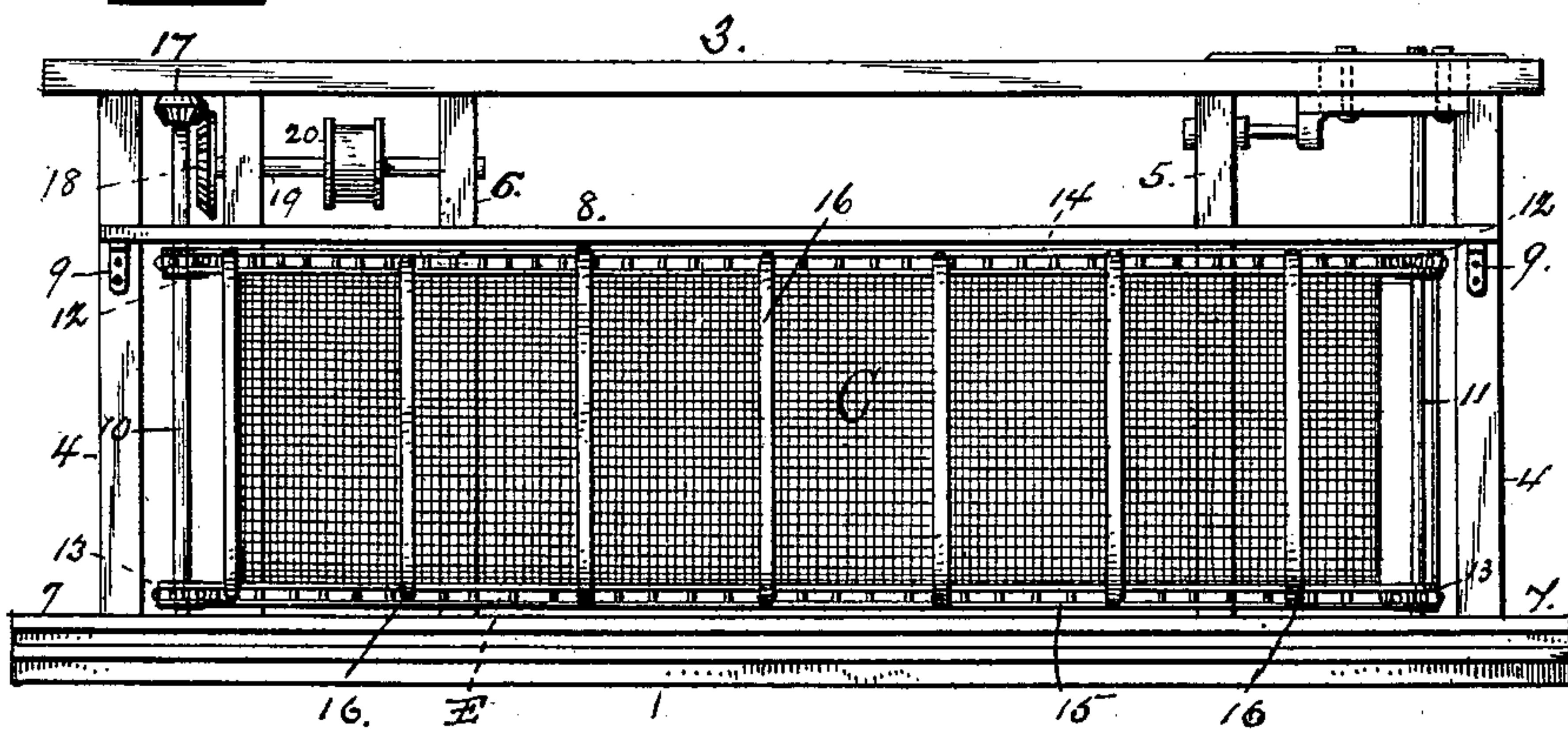


Fig. 3.

Witnesses  
*J. Thomson Cross,*  
*S. F. Marshall*

Inventor  
*John B. Gemmill*  
By his Attorney  
*A. G. Heyburn.*



# UNITED STATES PATENT OFFICE

JOHN B. GEMMILL, OF RED BLUFF, CALIFORNIA.

## HARVESTER.

SPECIFICATION forming part of Letters Patent No. 377,067, dated January 31, 1888.

Application filed August 24, 1886. Serial No. 211,736. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN B. GEMMILL, a citizen of the United States of America, residing at Red Bluff, in the county of Tehama and State of California, have invented a new and useful Improvement in Harvesters, of which the following is a specification.

My invention has relation to improvements in harvesters of that class in which the cut grain is received on a traveling floor or table and carried forward to the carrier leading to the thrasher or wagon. In machines of this construction, so far as I have information, the reel is liable to cast the grain against the face of the stationary screen arranged vertically at the side of the traveling floor, where it clogs and requires a hand to push it forward in the direction of the delivery end of the floor to the spout or elevator; and the object is to overcome this difficulty by providing improved means for carrying the grain evenly along on the floor of the carrier on the way to the delivery end of the floor, or to the spout of the machine, and this I accomplish by arranging about the vertical screen of the harvester endless belts carrying vertically-arranged slats moved in the direction of the delivery end of the table or floor by the mechanism connected to the wheel-axle of the machine; and my invention therefore consists in the novel construction of parts and their combination, as will be hereinafter fully described, and especially as will be pointed out in the claim made hereto.

I have fully illustrated my improvements in the accompanying drawings, to be taken as a part of this specification, wherein—

Figure 1 is a perspective view of my improved "evener," taken from the rear of the machine. Fig. 2 is a front view in elevation of the evener; and Fig. 3 is a view of the adjusting device, showing it in enlarged scale, with part of adjoining frame and mechanism broken off.

It is not deemed requisite to show further or other parts of the harvester than are necessary to fully and clearly show my improvements in operative connection therewith.

Reference being had to the drawings, the letter A designates the carriage of a harvester divested of certain well-known parts. This frame may be of any of the well-known and ap-

proved constructions adapted to hold the floor-frame, and receive a traveling floor on the table.

The letter B designates the grain floor or table of the machine, on which is arranged the traveling floor, which carries the cut grain toward the delivery end of the machine and delivers it to the spout or incline carrier thereof.

The letter C designates the stationary vertical screen arranged along the rear edge of the grain-floor and secured in position as usual, except that it need not be braced at the rear to prevent disturbance or displacement.

The frame which supports the evener and the mechanism which moves it consists of a substantial top piece, 3, which is about the length of the grain-floor of the machine, and end supports, 4, firmly fixed to the top piece and having their lower ends mortised in the side pieces of the grain-floor 7. Vertically arranged and properly secured between the top piece of the frame and the side piece of the grain-floor are uprights 5 and 6, the former of which serves as a support for the adjusting device, hereinafter described, and the latter to carry the shaft of the belt-pulley. On a line with the top edge of the vertical screen is fixed a cross-piece, 8, secured by brackets or angle-irons 9 to the posts of the frame. This cross-piece 8 is wide enough to project over or cover both lines of the endless belt or chain, and lies close to its edges, in order that the gavels may be stopped from lodging in the chains.

The letter E designates the evener, comprised of the following coacting elements, arranged to operate as follows: Disposed at each end of the frame are two vertically-arranged shafts, 10 11, having bearings in the side piece of the grain-floor, the cross-piece 8, and the top piece, 3. Fixed to these vertical shafts, at a proper distance apart to take in the width of the evener, are sprocket-wheels 12 13, about which the endless chains 14 15 are fitted. These chains have fixed to them at regular intervals the upright slats 16, which form the means for pushing the ends of the grain along at the same speed the stems are carried on the grain-table.

On that portion of the shaft 10 extending above the cross-piece 8 is fixed a bevel gear-wheel, 17, which meshes with a counter gear-



wheel, 18, fixed to the horizontal shaft 19, carrying the belt-pulley 20, and supported on bearing on the uprights 6 of the frame. The bearings of the vertical shaft 11 are given a  
 5 limited movement in order that the chains of the evener may be properly and readily set to the sprockets. This adjustment may be accomplished by means of the devices shown in detail in Fig. 3, wherein the shaft 11 is  
 10 shown as mounted in a sliding plate, 21, secured to the under side of bar 3. In order to steady the motion of this plate, and also give the shaft a more rigid upper moving bearing, I extend it through bar 3, which is slotted to  
 15 allow the desired movement thereof, and mount it in a plate, 26, resting upon the upper face of bar 3, to which both it and plate 21 are held by bolts 27 or other suitable means. To permit movement of these plates in which shaft  
 20 11 is mounted, I slot both of them, as best shown in Fig. 3 of the drawings, or they may slide relatively to bolts 27, and yet be held thereby. The lower plate, 21, is provided with a bracket, 22, from which extends an adjust-  
 25 ing-bolt, 28, screw-threaded at one end. The free end of bolt 28 has a bearing in the upright 5, and by means of nuts 29, working on the screw-threaded portion thereof, may be readily adjusted to change the position of  
 30 shaft 11, and thus loosen or tighten belts 14 and 15, as will be readily understood. The frame is generally sustained from the rear by braces let into the beams of the frame and against the uprights. The outer carriage-  
 35 wheel, F, has its axle extending inwardly, as shown at 23, and on the end of this extension is fixed a pulley, 24, about which and on the pulley 20 is arranged the drive-belt 25.

The operation may be stated as follows: As  
 40 the machine progresses motion is communi-

cated to the pulley on the frame by the medium of the driving-belt, and through the gearing to the endless belts with slats. Now, as the grain is cut and deposited on the carrier of the table it is thrown against the screen, 45 and unless assisted in its progression on the table is likely to and does clog and stop. This aid is afforded by the progression of the evener, the slats of which contact with the ends and push them along in the carrier. 50

By arranging the vertical slats connecting the chains at intervals rather far apart I am able to utilize the screen and at the same time accomplish the end of my invention by moving only such grain as may be lodged or tends 55 to lodge.

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

The combination, with the wheel-axle, car 60 rying a driving pulley, the evener-frame having journaled therein a horizontal shaft carrying a pulley connected by a belt to the driving pulley, and a gear-wheel, a vertical shaft, as 10, having a gear to mesh with the gear on 65 the horizontal shaft, and sprocket-wheels, as 12 13, and a vertical shaft, as 11, carrying similar sprocket-wheels, of the evener E, composed of endless chains arranged on said sprocket wheels, and the slats 16, secured to 70 said chains, and the stationary vertical screen C, arranged along the rear edge of the grain-floor and within the evener, substantially as described.

In testimony whereof I have hereunto set my 75 hand in the presence of two attesting witnesses.

JOHN B. GEMMILL.

Attest:

J. M. JOHNSON,  
 JAS. R. TAPSCOTT.