

(No Model.)

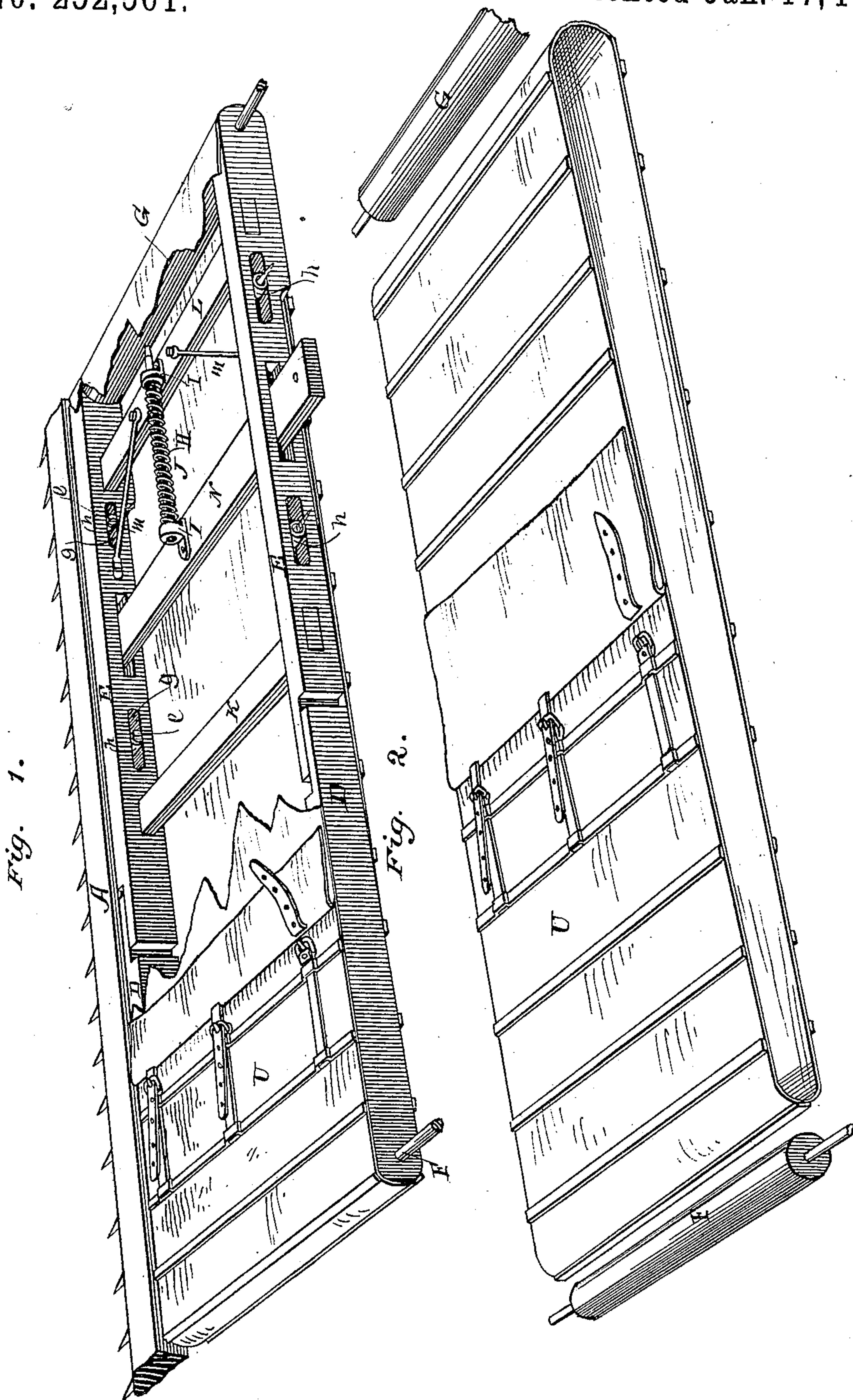
W. N. WHITELEY.

3 Sheets—Sheet 1.

HARVESTER.

No. 252,561.

Patented Jan. 17, 1882.



Attest:

*Aug. L. Jordan*  
*H. P. Low*

Inventor:

*William N. Whiteley*  
*By his atty R. W. Smith*

(No Model.)

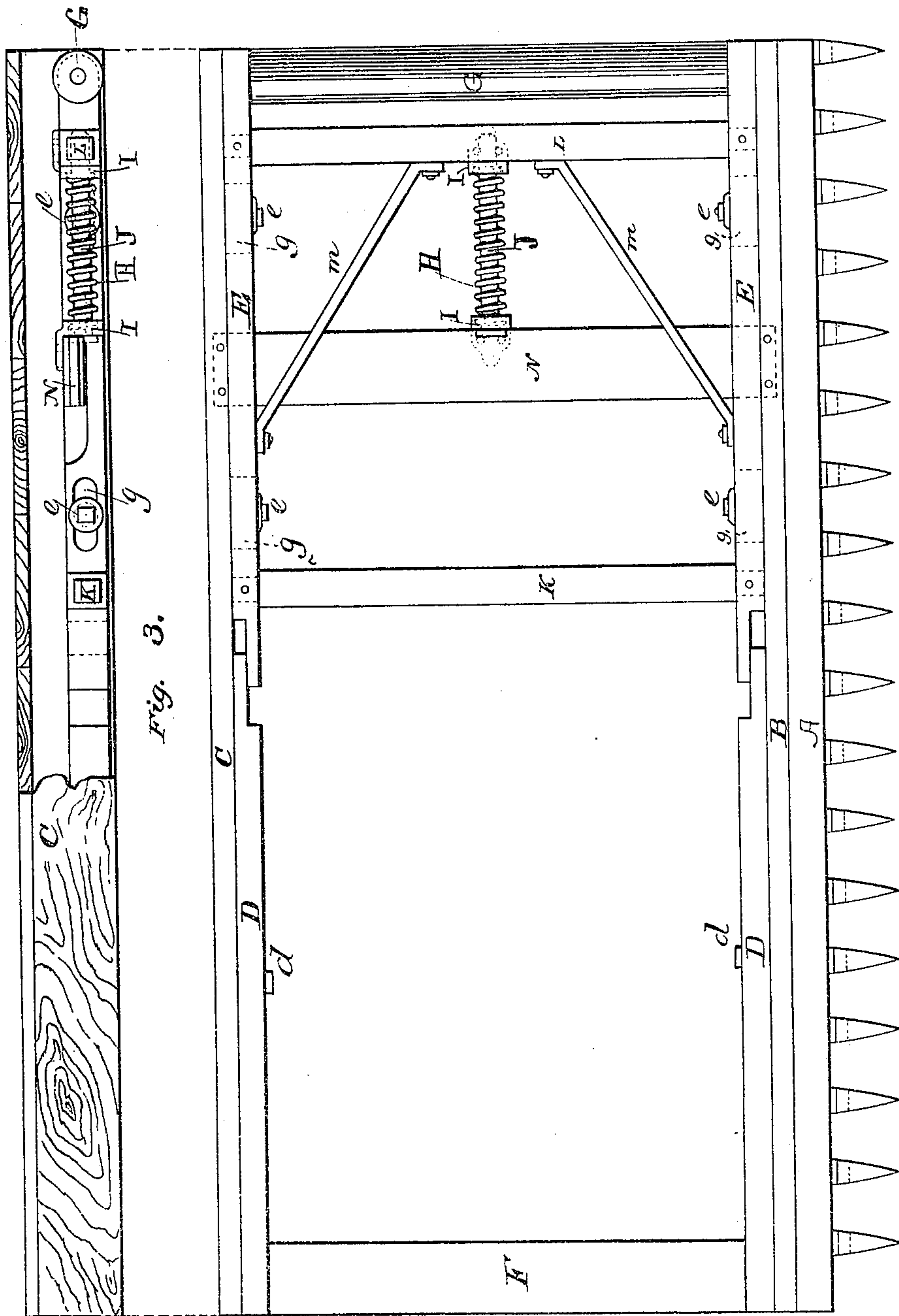
3 Sheets—Sheet 2.

W. N. WHITELEY.

HARVESTER.

No. 252,561.

Patented Jan. 17, 1882.



Attest:  
*Aug. L. Jordan*  
*L. P. Cowley*

Inventor:  
*William N. Whiteley*  
*By his atty*  
*Rev. O. Smith*

(No Model.)

3 Sheets—Sheet 3.

W. N. WHITELEY.

## HARVESTER.

Patented Jan. 17, 1882.

No. 252,561.

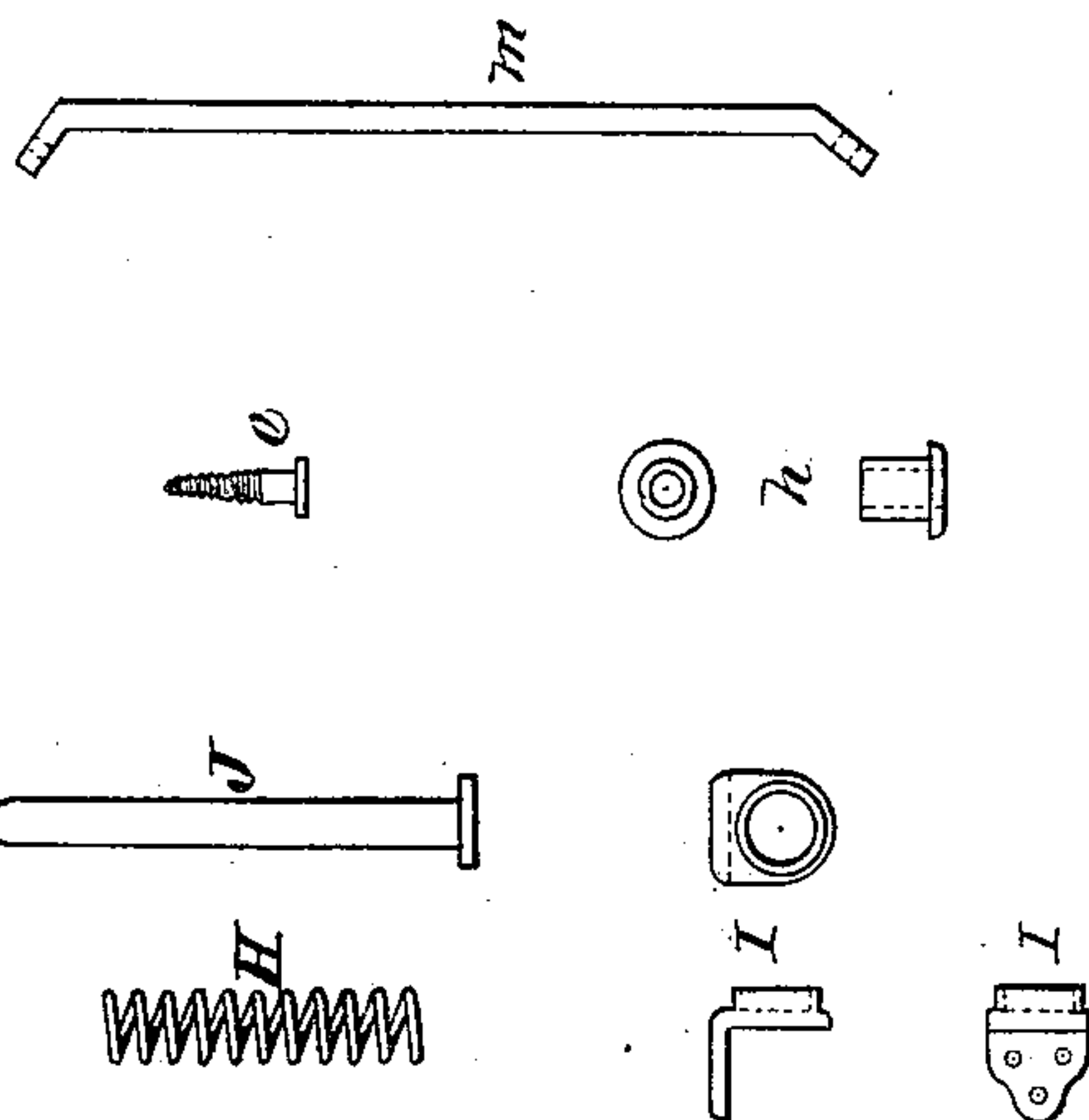
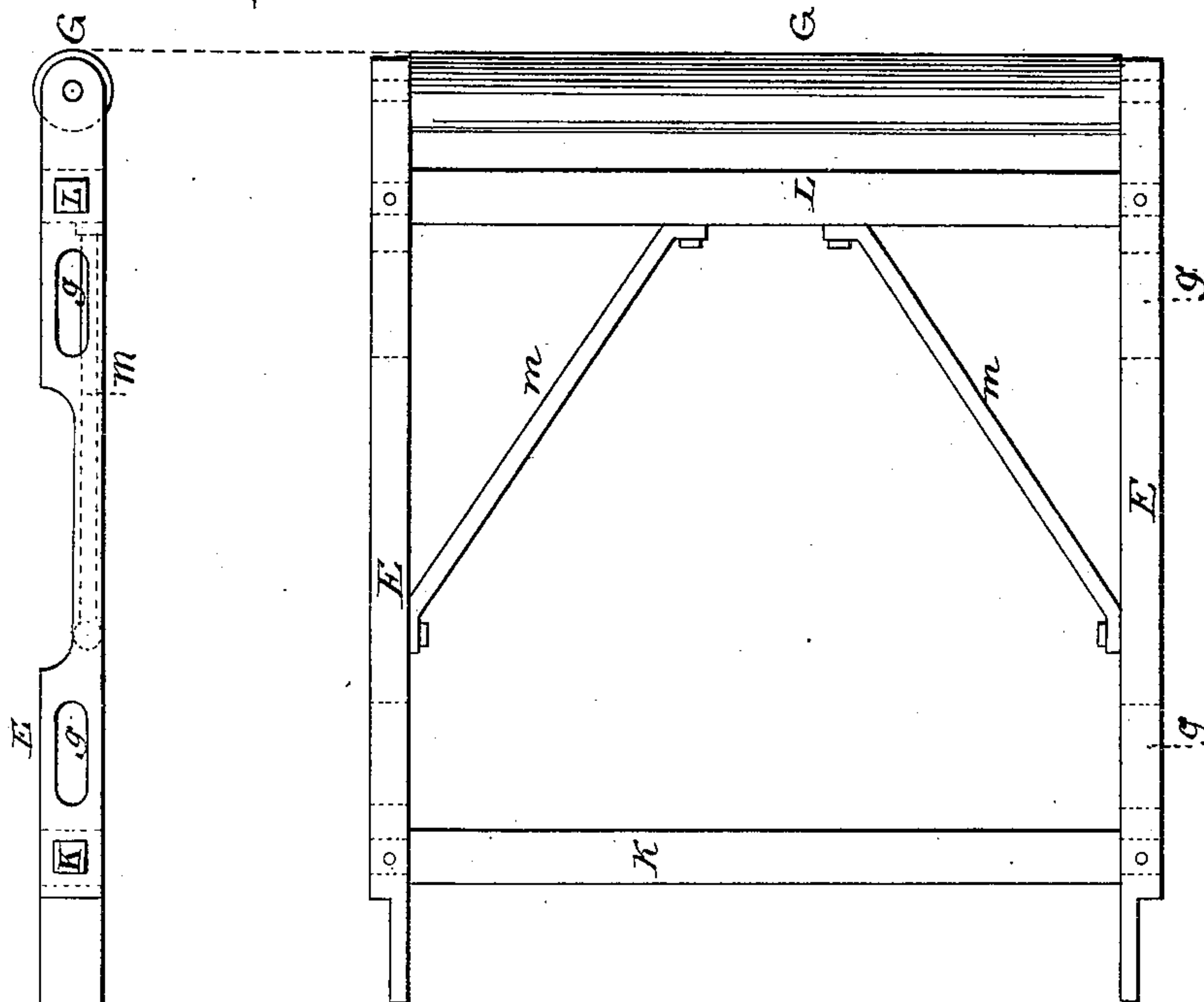


Fig. 4



*Attest:*

Dearest:  
 Aug<sup>2</sup> Jordan  
 D. P. Cowie

*Inventor:*

William T. Whaley,  
By his atty  
R. D. Osment



# UNITED STATES PATENT OFFICE.

WILLIAM N. WHITELEY, OF SPRINGFIELD, OHIO.

## HARVESTER.

SPECIFICATION forming part of Letters Patent No. 252,561, dated January 17, 1882.

Application filed September 16, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM N. WHITELEY, of Springfield, in the county of Clarke and State of Ohio, have invented a new and useful Improvement in Harvesters; and I do hereby declare that the following is a full and clear description of the same.

My invention relates to that class of reaping-machines known as "harvesters;" and it consists in a novel appliance for maintaining a practically uniform tension on the aprons or belts, whereby the cut grain is carried across the machine and elevated to the binder or delivered to the ground. The endless aprons or conveyers are constructed of stout duck or canvas with the ends laced together fastened with straps or otherwise secured, so that the belts may be loosened or tightened. These belts pass over rollers at the ends of the harvester-frames, and, as is well known, canvas is very sensitive to hygrometric changes in the atmosphere, shrinking up in damp weather and stretching out again in dry weather. These changes will sometimes be so great within the space of a few hours as to make several adjustments of the apron necessary.

I am aware that it is common in machinery where belts are employed to use spring and other automatic tightening devices, sometimes applied to the roller or pulley and sometimes to the belt itself; but so far as I am aware the method of mounting said boxes when applied to harvesters has been too fragile and liable to derangement from exposed position; and the object of my invention is to obviate these practical defects.

My invention consists in an independent roller-frame made in two parts, movable as to each other, which are secured within and to the main frame of the harvester. One of said parts is rigidly secured, and the other is attached so that it may move longitudinally, and said parts have interposed between them suitable springs, so that a proper tension may be maintained on the apron or belt with the operating mechanism located between and covered and protected by said apron or belt.

That others may fully understand my invention I will particularly describe it, having reference to the accompanying drawings, wherein—

Figure 1 is a perspective view of my invention in working position, portions of the apparatus and the surrounding frame being removed for the better exhibition of the invention. Fig. 2 is a perspective of the apron and its rollers detached. Fig. 3 represents the same in plan and edge elevation. Fig. 4 represents the details detached.

A is a finger-bar, and B C are front and rear girts of the harvester-frame. These are framed or secured together in the usual and proper way, with end pieces, &c., to constitute the harvester-frame.

D D and E E are the parts of the apron-frame having the apron-rollers F G. The parts D E are secured within the frame B C, the part D being rigidly secured by the bolts *d d*, and the part E is attached by screws *e e*, which pass through slots *g g*, so as to be movable longitudinally, and between said parts the spring H is placed between the metallic angle-irons I I, and is supported laterally by the bolt J, which passes through one or both of said angle-irons freely.

U is the endless apron stretched over rollers F G.

To prevent the excessive enlargement of the slots *g g* by the screws *e*, which pass through them, I place upon said screws thimbles *h*, which serve as friction-rollers within the slots.

The parts E E are supplied with one or more cross-bars, K L, from bar L. Back braces, *m m*, may extend to the parts E E to strengthen the angles. The harvester-frame B C is also supplied with a cross-bar, N, which is placed in the plane of the bar L by passing through slots or notches in the side pieces, E E, as shown in Figs. 1 and 3. The angle irons or clips I I are placed on the bars L N, respectively, and the bolt J and spring H are interposed.

By this structure the working parts are protected, and there is no waste space within the harvester-frame to provide room for the roller-springs outside of the rollers. The requisite length can also be obtained for slides, &c., without enlarging the exterior dimensions of the harvester-frame or decreasing the area of the apron.

Those parts of this invention as originally described herein which refer to the arrangement of side springs and to idle tighteners

for elevator-belts have been included in other and separate specifications carved out of this one, for which separate applications for Letters Patent have been made, and therefore ; such matters are not included herein.

Having thus described my invention, what I claim as new is—

1. The frame composed of the parts D E, the former rigidly and the latter movably attached to the harvester frame B C, combined with a cross-bar, N, and interposed spring, as set forth and for the purpose specified.

2. An endless apron for a harvester, and supporting-rollers for the same located at the ; ends of the apron-frame, combined with an

automatic yielding mechanism to vary the distance between said rollers, all placed between said rollers and covered and concealed by the said apron, as set forth.

3. The frame composed of parts D and E, 20 the former rigidly and the latter movably fixed in the harvester-frame B C, combined with the cross-bar L on the movable frame, and the rigid cross-bar N, and the interposed spring, substantially as set forth.

WILLIAM N. WHITELEY.

Witnesses:

PERCY NORTON,  
E. H. BARNES.