(No Model.) 2 Sheets—Sheet 1.

W. N. WHITELEY.

HARVESTER.

No. 250,611. Patented Dec. 6, 1881.

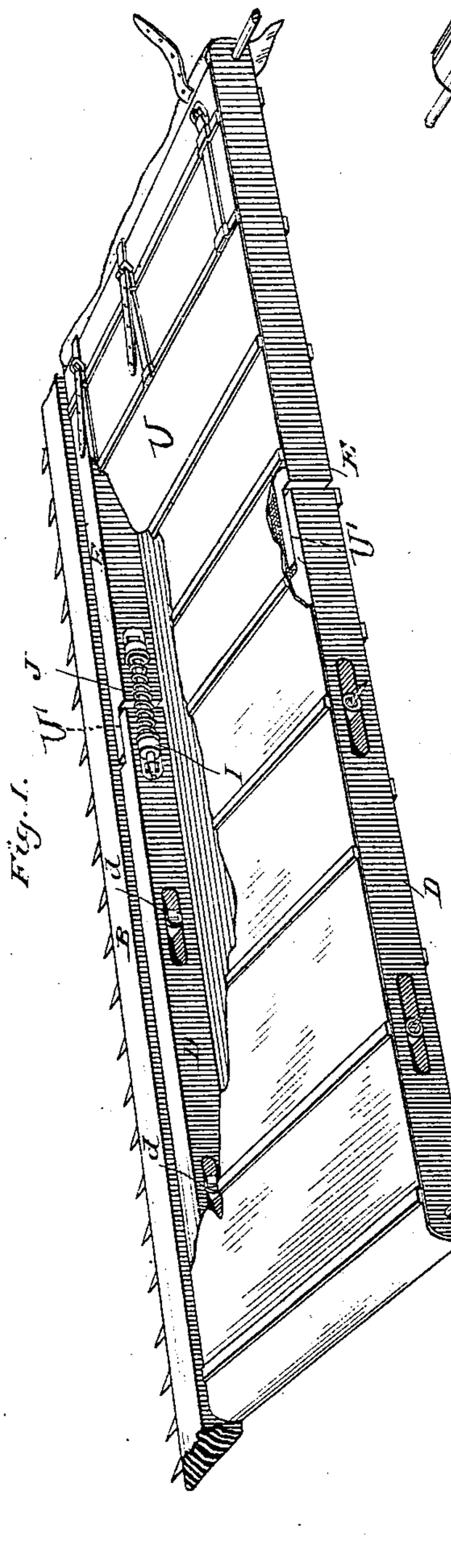

Fig. 1.

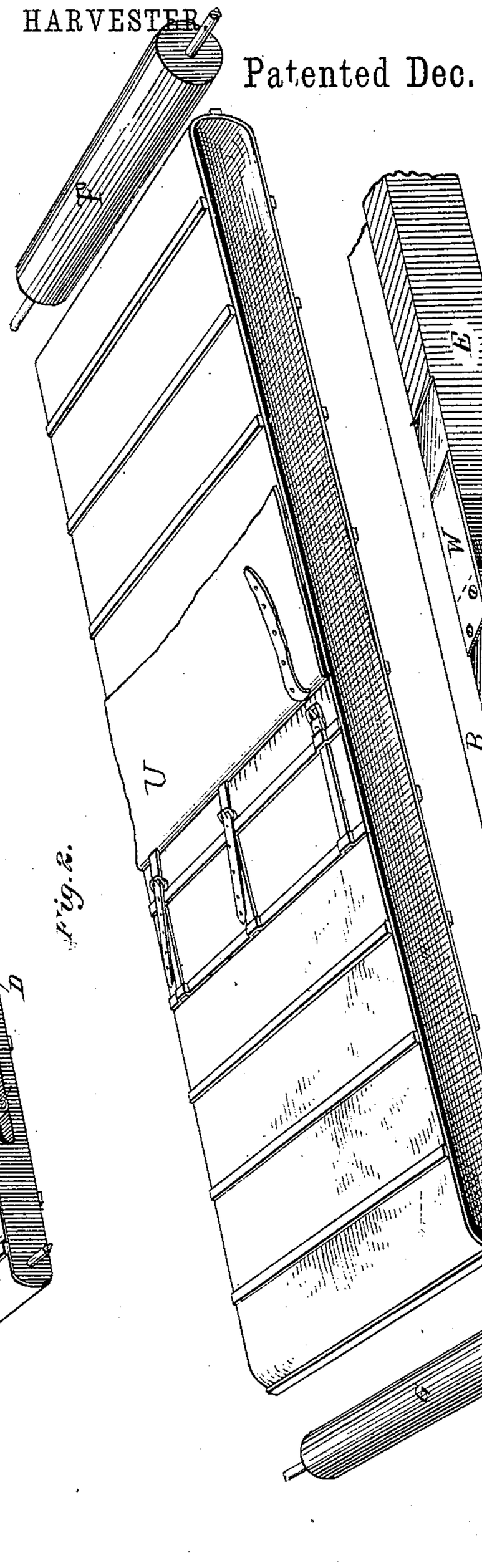

Fig. 2.

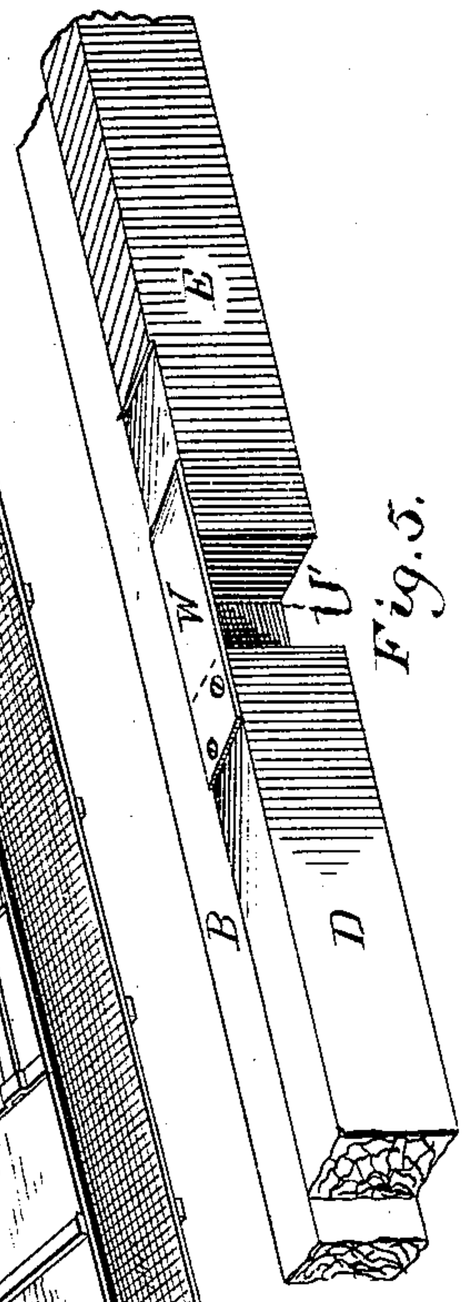

Fig. 3.

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Aug. L. Jordan
A. P. Coombs

Inventor:
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By his atty
R. D. O'Smith

(No Model.) 2 Sheets—Sheet 2.

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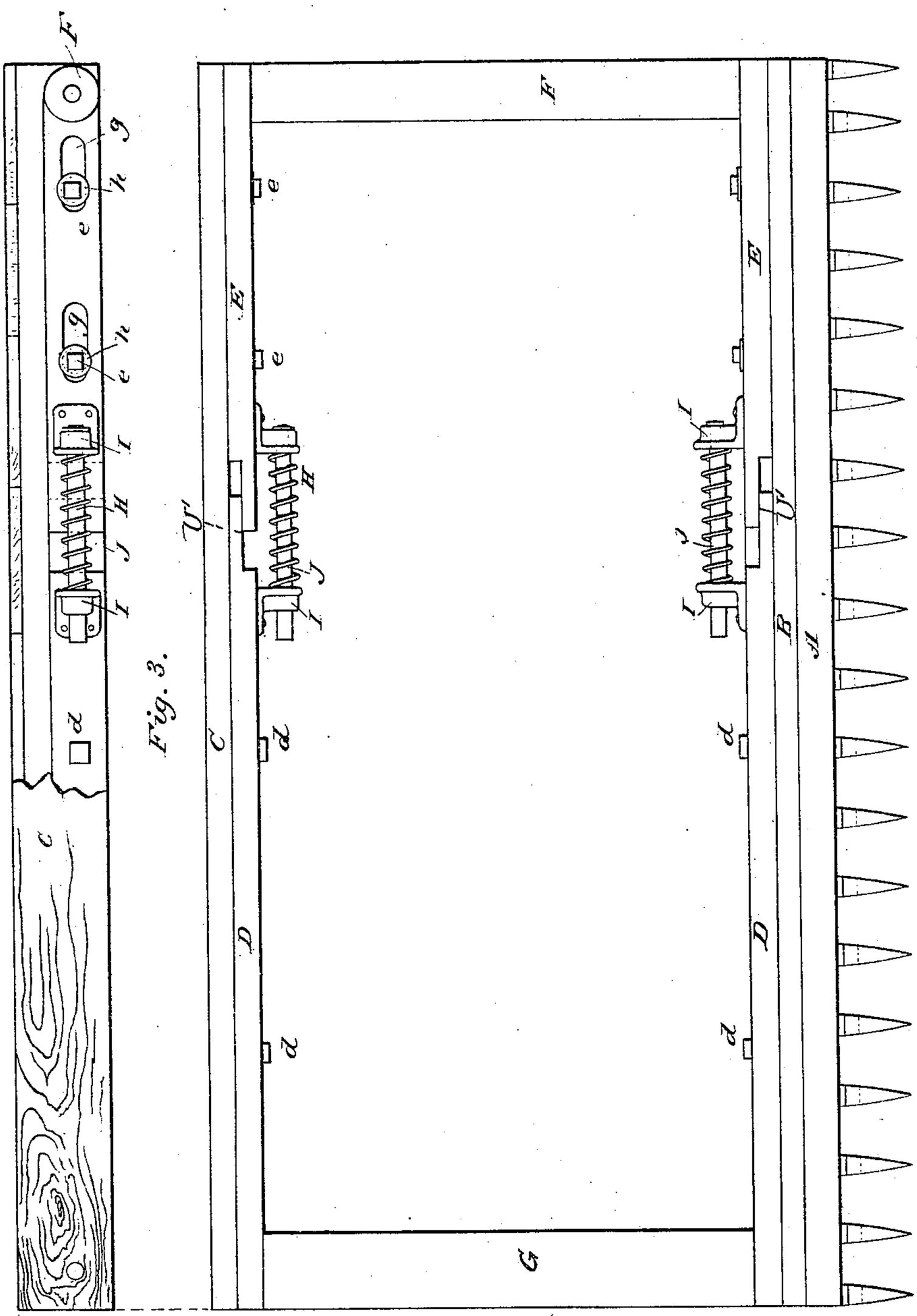

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM N. WHITELEY, OF SPRINGFIELD, OHIO.

HARVESTER.

SPECIFICATION forming part of Letters Patent No. 250,611, dated December 6, 1881.

Application filed September 10, 1881. (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 reaping-machines or 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 or fastened with straps or otherwise secured so that the belts may be loosened or tightened. These belts pass over rollers at each end of the harvester and elevator frames. 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, &c.; 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 positions, 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. Fig. 5 represents the bridge-piece over the joint in the apron-frame.

A is a cutter-bar, and B C are front and rear girts of the harvester-frame. These are formed 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 mounted thereon. The parts D E are secured within the frame B C, with a lapping or split joint, U′, the part D being rigidly secured by the bolt *d*, and the part E is attached by screws *e*, which pass through slots *g*, so as to be movable longitudinally, and between said parts the springs H H are placed between the metallic angle-irons I I, and are supported laterally by the bolts J, which pass 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* by the screws *e*, which pass through them, I place upon said screws thimbles *h*, which serve as friction-rollers within the slots.

In Fig. 5 a bridge-piece, W, is shown fastened at one end to the part D and extending over the joint U′ and the part E a distance sufficient to insure the constant bridging of the open part of said joint under all movements of said part E.

Those parts of the invention described in the original specification out of which this specification has been carved which refer to the employment of a single spring to produce an automatic tension between the frames D E, and the tension of the elevator-belts, are not included herein, but form the subjects-matter of other divisions of said original specification.

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

1. An endless belt or apron provided with supporting-rollers, with the driving-roller journaled in the rigid part D, and the driven roller

in the movable part E, the edges of the frame D E forming a continuous surface for the apron, to keep it in the desired course and prevent it from sagging.

2. The frame composed of the parts D E, the former rigidly and the latter movably attached to the harvester-frame B C, in combination with the side springs, H H, and rollers F and G, as and for the purpose specified.

3. The frame composed of the rigidly and movably attached parts D E, provided with a split joint, U′, constructed to prevent the apron from interfering with or getting between the ends of the rigid and movable parts D E, combined with the harvester-frame B C and the interposed spring, substantially as set forth.

4. An endless apron or belt for harvesters, and supporting-rollers for the same at the ends of said apron-frame, combined with an automatic yielding mechanism and a bridging device, W, for the support and protection of the endless belt or apron, as set forth.

WILLIAM N. WHITELEY.

Witnesses:

A. N. SUMMERS,

A. B. GILMORE.