(No Model.)

2 Sheets—Sheet 1.

W. N. WHITELEY & W. BAYLEY.

SELF BINDER.

No. 266,937. Patented Oct. 31, 1882.

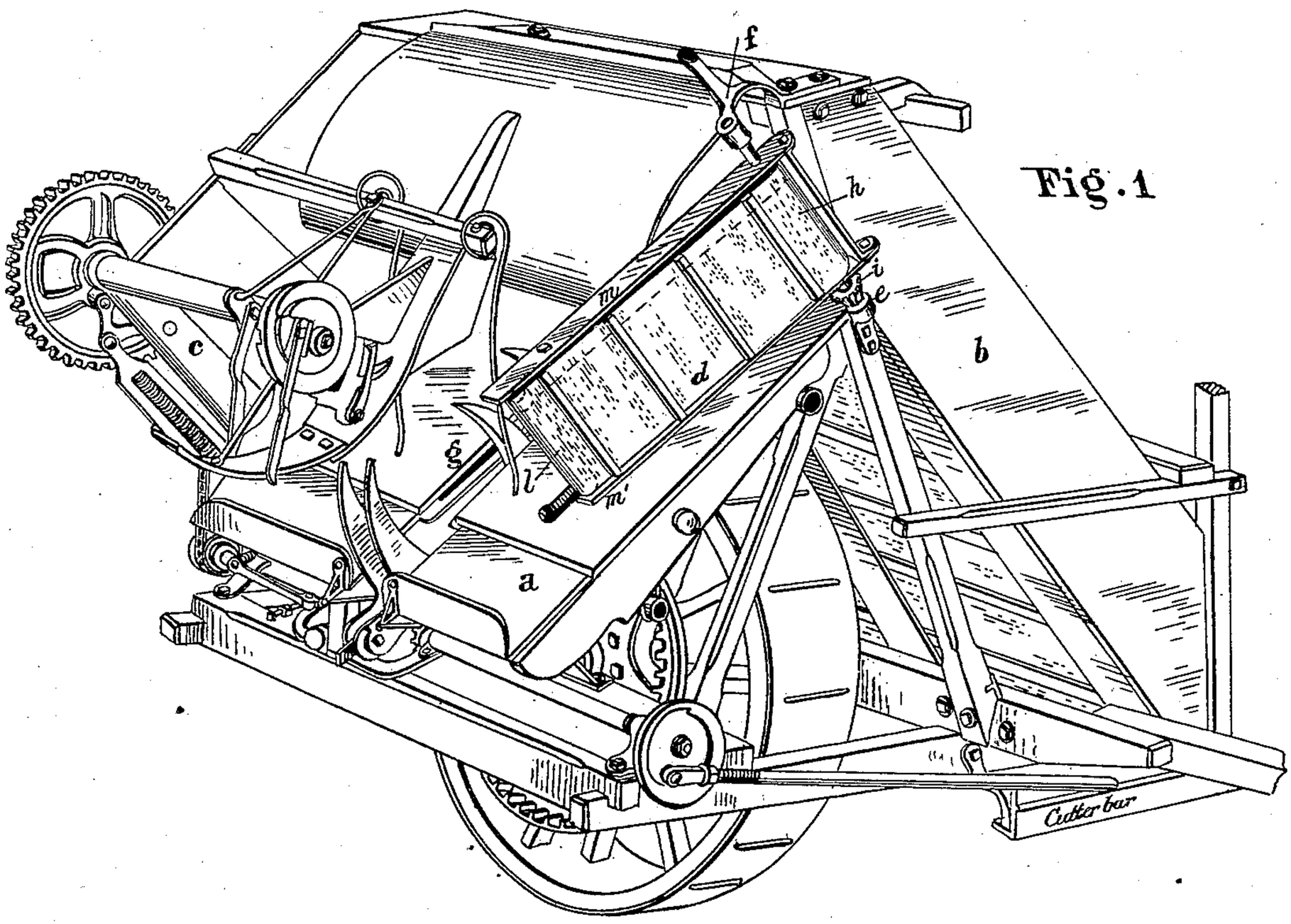
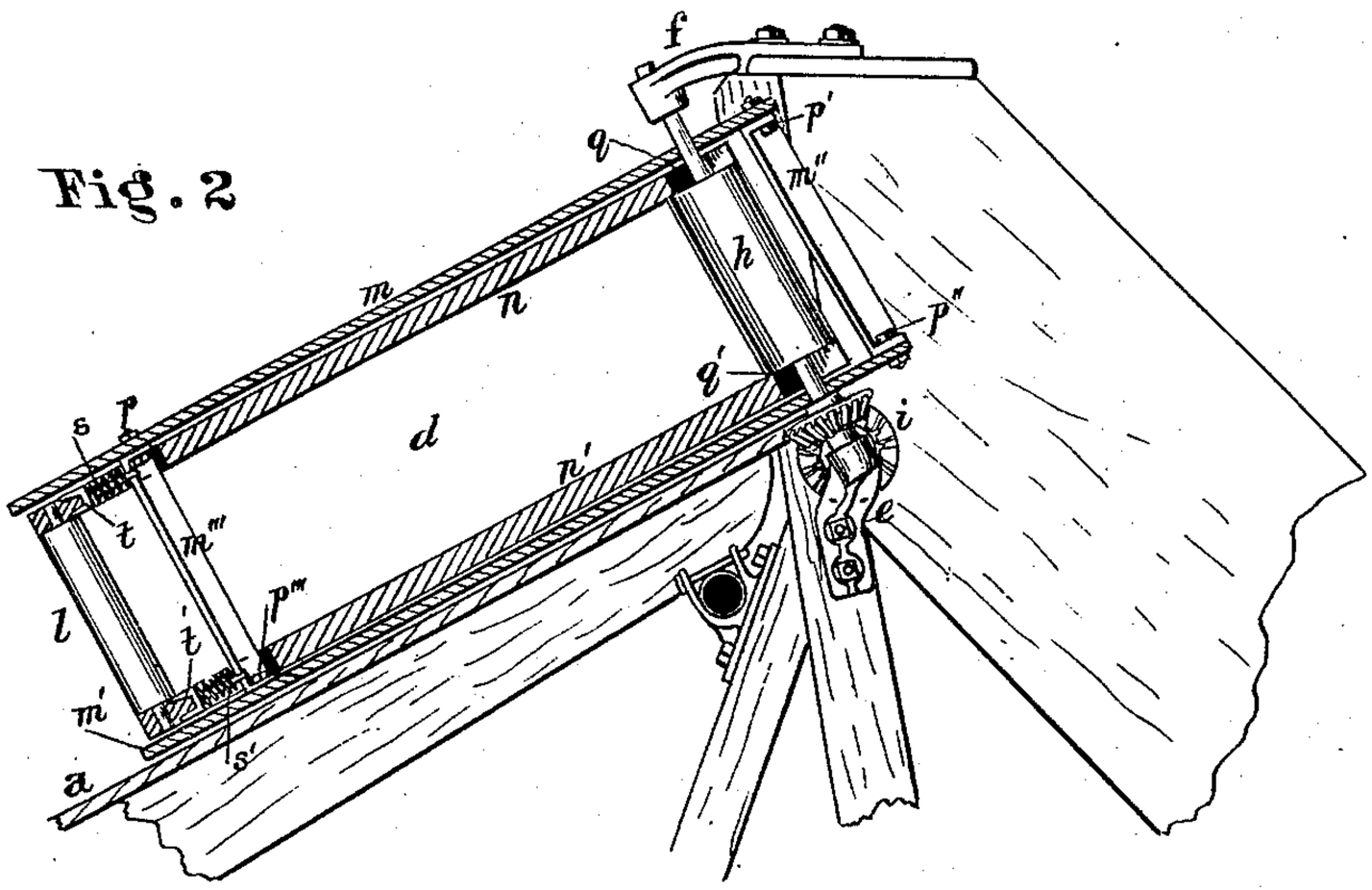


Fig. 1

Fig. 2



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R. D. O. Smith

(No Model.) 2 Sheets—Sheet 2.

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SELF BINDER.

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Fig. 3

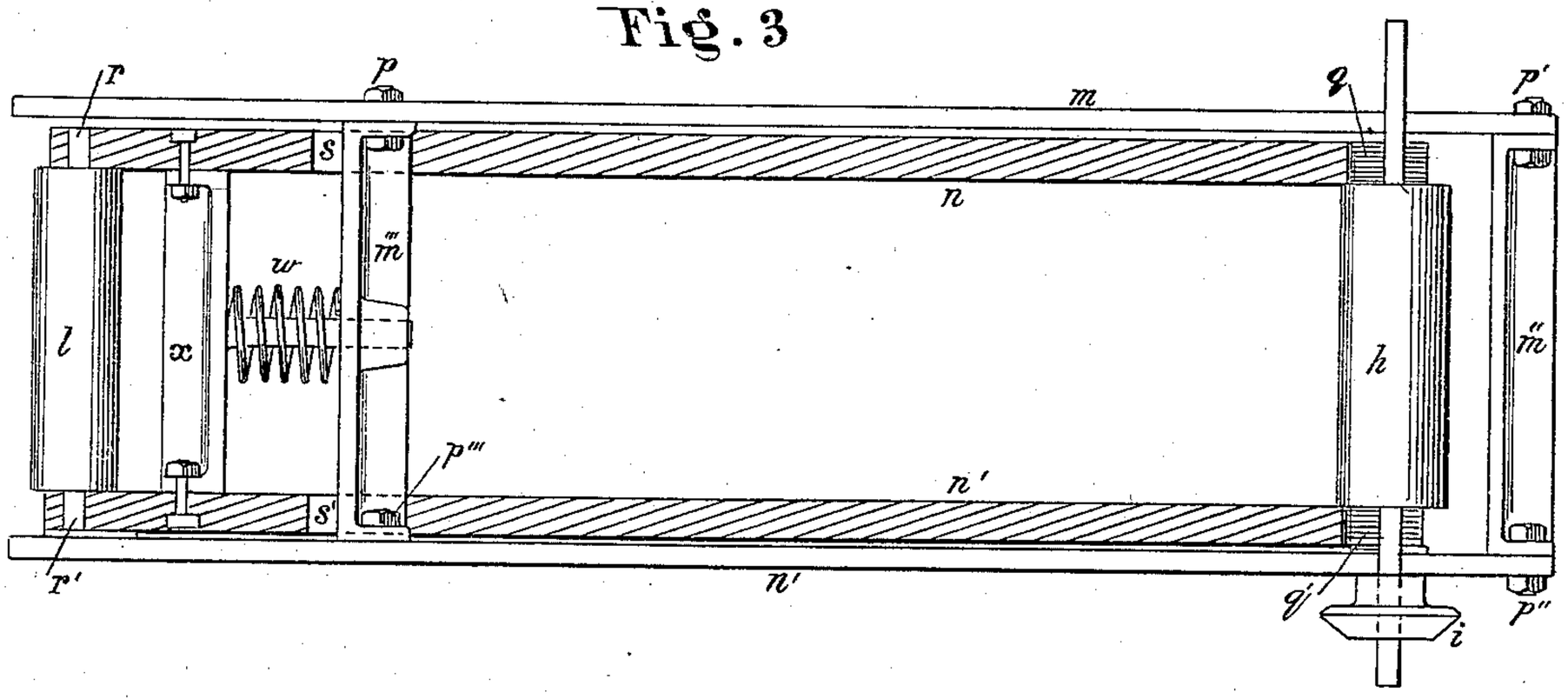


Fig. 4

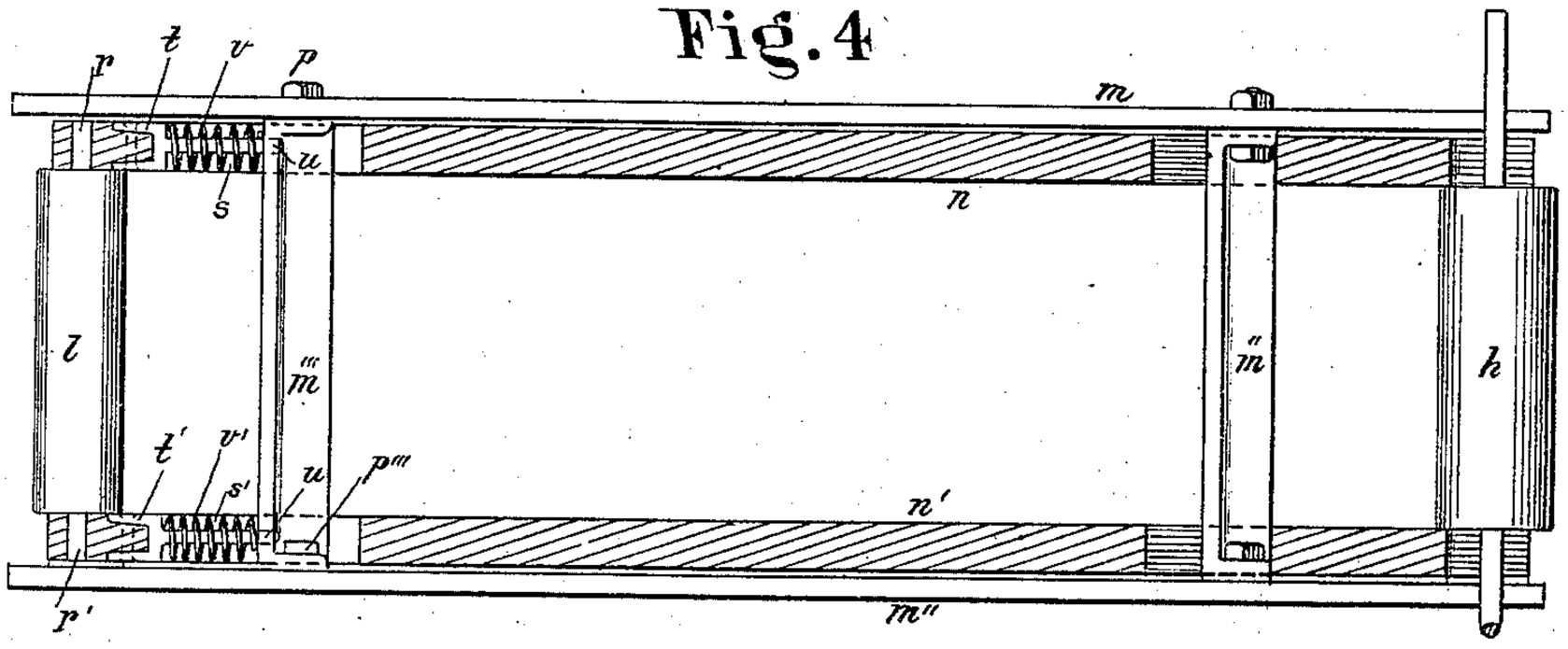
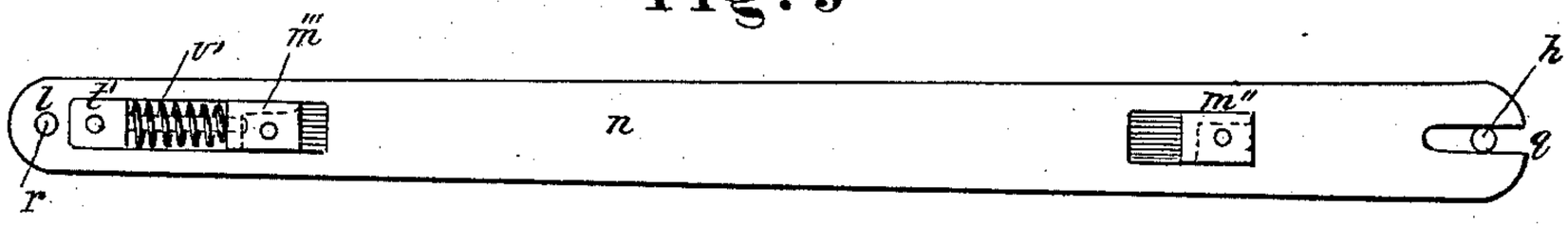


Fig. 5



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UNITED STATES PATENT OFFICE.

WILLIAM N. WHITELEY AND WILLIAM BAYLEY, OF SPRINGFIELD, OHIO, ASSIGNORS TO WHITELEY, FASSLER & KELLY, OF SAME PLACE.

SELF-BINDER.

SPECIFICATION forming part of Letters Patent No. 266,937, dated October 31, 1882.

Application filed June 27, 1882. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM N. WHITELEY and WILLIAM BAYLEY, of Springfield, in the county of Clarke, State of Ohio, have invented a new and useful Improvement in Self-Binders, of which the following is a full, clear, and exact description.

Figure 1 is a perspective view of a self-binder with our improved butt-evener and adjuster attached thereto. Fig. 2 is a sectional elevation of the same. Figs. 3 and 4 are views of modifications in construction, and Fig. 5 is a plan view of a detached belt-guide.

This invention relates to canvas endless aprons used for the purpose of straightening up the butts of straw and delivering the grain nearly central to the binding mechanism, whether the grain be long or short; and it consists in an endless canvas belt running upon rollers that are provided with journals that are both yielding and resisting, in order that they may compensate for the expansion or contraction of the material from which the belt is constructed, said belt being pivoted upon its driving-roller, so as to permit of an adjustment at its free end to or from the binding-arm to suit long or short straw.

To enable others skilled in the art to which our invention belongs to make and use our improvements, we will proceed to describe their construction and operation.

a is the binding-table, and *b* the elevator-frame, which may be of any suitable construction, as may also the binding machinery *c*.

d is the butt-evener and grain-adjuster, journaled to the elevator-framing by a foot-journal, *e*, and an overhanging journal, *f*, by which construction and arrangement it will be free to oscillate, so that its free end may be moved nearer to or farther from the position *g*, where the binding-cord encircles the sheaves.

The driving-roller *h* is actuated by bevel-gear *i*, that receives its motion from the upper roller of the lower elevator-belt. The driving and driven rollers *h l*, respectively, are supported by a rectangular frame, *m m′ m″ m‴*, and side guides, *n n′*, upon the latter of which the edges of the slatted canvas travel and receive their side support. The rectangular frame *m m′ m″ m‴* is bolted together by screw-bolts *p p′ p″ p‴*, and are thus made for convenience when placing the rollers *h l* into their working positions. The guides *n n′* are provided with elongated apertures *q q′*, through which the journals of the driving-roller *h* work, and cylindrical perforations *r r*, through which the journals of the driven rollers *l* work. These guides *n n′* are also provided with apertures *s s′*, through which the uprights *m‴* freely pass, in order that said guides may have an unobstructed motion in the direction of their length. The apertures *s s′* are fitted with metallic pieces *t t′*, that are fastened at one end to the guides *n n′* near the roller *l*, and then work freely through perforations *u*, made in the uprights *m‴* at the other end. Surrounding the stems of the metallic pieces *t t′* are coil-springs *v v′*, that force said metallic pieces away from the upright *m‴*, and, keeping the canvas taut, enable it to force back heavy and tangled grain.

Fig. 3 is a modification illustrative of a change of construction, whereby one spring, *w*, takes the place of the two springs *v v′* and a T-shaped metallic piece, *x*, takes the place of the metallic pieces *t t′*. Fig. 4 is a modification wherein both bars *m″ m‴* are placed between the end rollers.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A continuous and revolving butt evener and grain-adjuster swinging upon the journals of its driving-roller through the agency of a rectangular frame, *m m′ m″ m‴*, so as to admit of an adjustment of its free end to suit the varying lengths of straw and bring the grain centrally on the table for binding, provided with guides *n n′*, having perforations *q q′*, apertures *s s′*, and springs *v v′* for forcing the roller *l* away from the upright *m‴*, for the purpose specified.

2. A continuous and revolving butt-evener and grain-adjuster, *d*, swinging upon the journals of its driving-roller through the agency of a frame, substantially such as hereinbefore specified, provided with guides *n n′*, having perforations *q q′*, apertures *s s′*, metallic pieces *t t′*, and springs *v v′*, for the purposes specified.

WILLIAM N. WHITELEY.
WILLIAM BAYLEY.

Witnesses:
HENRY MILLWARD,
E. O. BOWMAN.