

(No Model.)

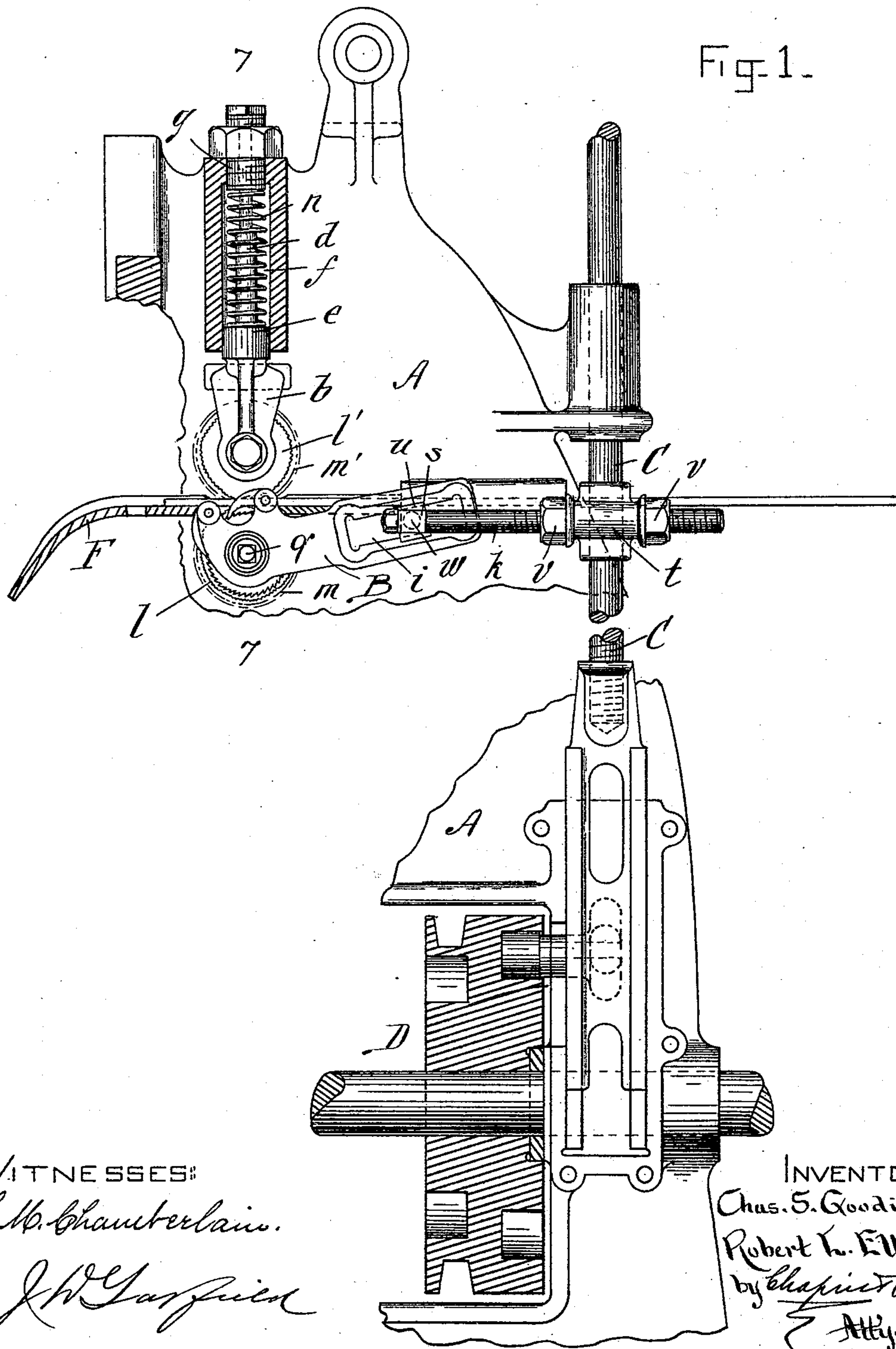
3 Sheets—Sheet 1.

C. S. GOODING & R. L. ELLERY.

MECHANISM FOR FEEDING STRIPS OF STOCK MATERIAL.

No. 459,374.

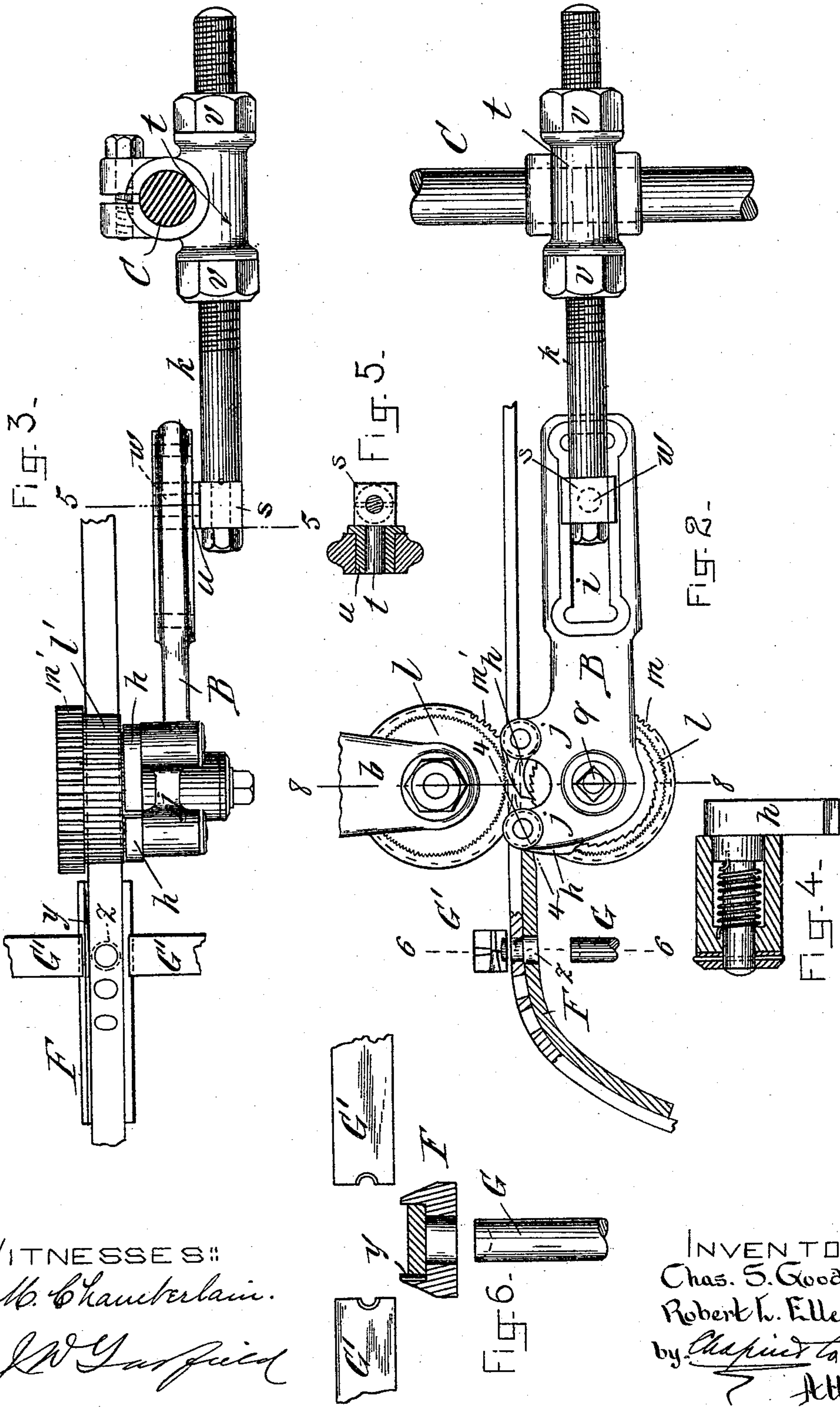
Patented Sept. 8, 1891.



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WITNESSES:
G. M. Chamberlain.
J. W. Garfield

INVENTORS:
Chas. S. Gooding.
Robert L. Ellery.
by *Chapman & Co.*
Attys.

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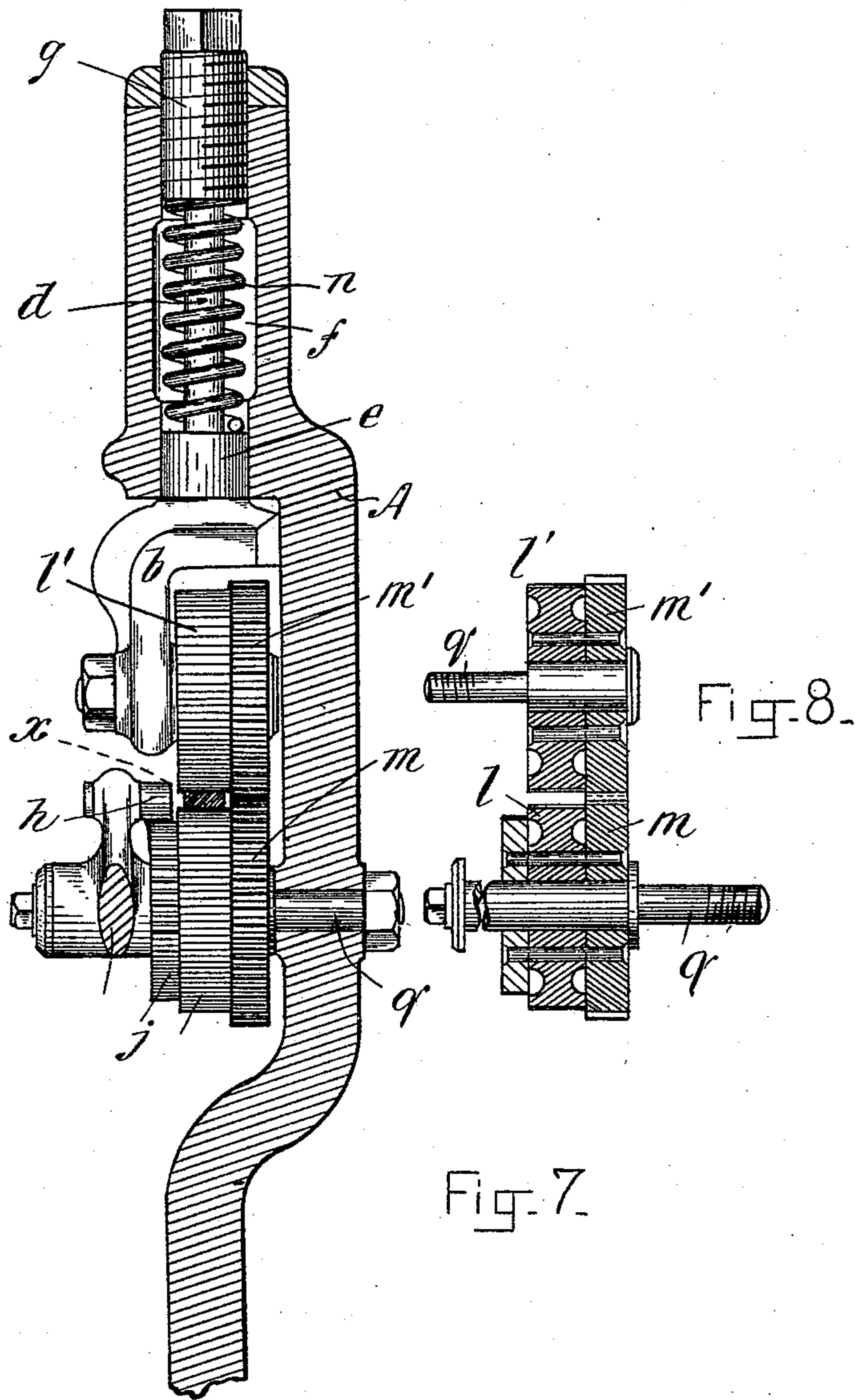
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UNITED STATES PATENT OFFICE.

CHARLES S. GOODING, OF BOSTON, AND ROBERT L. ELLERY, OF TAUNTON,
ASSIGNORS TO THE MORLEY BUTTON MANUFACTURING COMPANY, OF
BOSTON, MASSACHUSETTS.

MECHANISM FOR FEEDING STRIPS OF STOCK MATERIAL.

SPECIFICATION forming part of Letters Patent No. 459,374, dated September 8, 1891.

Application filed December 6, 1890. Serial No. 373,833. (No model.)

To all whom it may concern:

Be it known that we, CHARLES S. GOODING, of Boston, in the county of Suffolk, and ROBERT L. ELLERY, of Taunton, in the county of Bristol, State of Massachusetts, citizens of the United States, have invented new and useful Improvements in Mechanism for Feeding Strips of Stock Material, of which the following is a specification.

10 This invention relates to improved mechanism for feeding strips of papier-maché or other stock material, by different portions thereof, successively to the action of other devices or mechanism for working thereon—such, for instance, as dies which are capable of severing
15 suitable portions of the material from the strip and forming and compressing same into button-heads or bodies for other purposes.

The invention embraces a pair of rolls disposed edge toward edge and geared together, one roll being movable and spring-pressed toward and adapted to yield from the other, and mechanism for securing a periodical partial rotation of one of said rolls. There are also
25 provisions for regulating the spring-pressure of the movable roll and also for regulating or adjusting the extent of the intermittent partial-rotational movements of the rolls, and all substantially as will hereinafter more fully appear, and be set forth in the claims.

In the accompanying drawings, Figure 1 is a side elevation, with some parts in section, of the paper-feeding mechanism. Fig. 2 is a side elevation of certain of the parts shown in Fig. 1, but on a larger scale. Fig. 3 is a plan view
35 of the parts shown in Fig. 2, the bracket-bearing for the upper rolls, however, not being shown. Figs. 4, 5, and 6 are cross-sections taken, respectively, on the lines 4 4, 5 5, and 6 6. Fig. 7 is a sectional elevation as seen about at the transverse plane indicated by line 7 7, Fig. 1. Fig. 8 is a vertical section on line 7 7, Fig. 1.

In the drawings *l* and *l'* represent the feed-rolls, having serrated edges for the paper-strip *x*, (seen in edge and plan views in Figs. 2 and 3 and cross-section in Fig. 7,) the lower one of which rolls is mounted on a stud *q*, fixed on the machine-frame A, while the other roll

is mounted on a stud *q'* of a movable bracket 50 *b*, which is downwardly spring-pressed. Said bracket is formed on the lower end of a spindle *d*, which has a shoulder *e* at or above its junction with said bracket and plays upwardly through a cylindrical chamber *f* 55 formed in the machine-frame. A spiral spring is located in the said chamber *f*, encircling the spindle by its lower end, bearing on the shoulder *e*, and said spring is by its upper end borne upon by a screw-plug *g*, which has a thread engagement with the upper portion of the walls of said chamber *f*, whereby on the turning of said plug the compression of the spring may be regulated. The said rolls *l l'* are geared together by the spur- 65 wheels *m m'*. On one side of the roll *m* is a ratchet-wheel *j*, with which engages a spring-actuated pallet. In fact, for the purposes of most efficient operation of the parts, there are two spring-pallets. Said pallet or 70 pallets *h h* are mounted on arms *j j* of a lever B, which is hung upon the supporting-stud *q* for the roll *l*, the other and long arm of which lever is longitudinally slotted, as at *i*, and with which arm is connected a rod *k*, rigidly 75 supported on and extended from a vertically-guided thrust-rod or plunger C, which receives its rectilinear reciprocatory motion from the cam D. The pallets are adjusted to rest by their points on different parts of the backs of 80 the ratchet-teeth.

The provisions for varying the swing of the lever B, whereby the amount of partial rotation of the roll *l* may be varied, will be clearly understood on noting that there is secured on 85 the thrust-rod C a laterally-extended hub *t*, having a passage therethrough at an angle to the axis of said rod. The rod *k* passes through said hub, being extended rearwardly therefrom and also forwardly, where it is provided 90 with a squared block *s*, bored to embrace said rod and keyed thereto and provided with a stud *w*, which enters an opening therefor in a slide-block *u*, which fits for movement in and longitudinally of the slotted arm of the 95 lever B. Lock-nuts *v v* are screw-engaged with the rod C and adapted to be turned up thereon against the ends of the hub, so that

the rod may be adjustably moved for varying the distance between the center of the thrust-rod C and hub *t* and of the stud *w*.

F represents a guide for the strip *x* in advance of the pair of rolls *l l'*, onto which the strip passes after having been carried through the rolls. Said guide is of a trough form, open at its top, the bottom thereof being about in a plane coincident with the top edge of the lower roll *l*, and the distance between the side walls thereof is a little greater than the usual width of the strip. There is a spring *y* lying along one side wall of the said guide for maintaining the strip by its one edge firmly against and along the opposite side wall, and there is an aperture *z* through the bottom of the guide for the passage of the die-punch G, which, working back and forth vertically through said aperture, has an operative action on the stock material, in conjunction with a pair of separable dies, (indicated at G' G'), suitably supported and controlled to present their ends in abutment over the aperture.

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

1. In a mechanism for feeding a strip of stock material, a pair of rolls disposed edge toward edge and geared together, one roll being movably guided and spring-pressed toward the other, and mechanism for securing a partial rotation of one of said rolls, for the purpose set forth.

2. In a mechanism for feeding a strip of stock material, a pair of rolls arranged edge toward edge and geared together, one roll being movably guided and spring-pressed toward the other, a ratchet-wheel connected to one of said rolls, a lever pivotally mounted and carrying a pallet which engages said ratchet, a thrust-rod or plunger and means for imparting thereto its reciprocatory motion, and an arm or rod having a sliding engagement with said lever, adjustably supported on and engaged with and adapted to have a traverse on said plunger, for the purpose set forth.

3. In a mechanism for feeding a strip of stock material, the combination, with the roll *l*, having a ratchet-wheel connected thereto, of a lever pivotally supported and provided

with a pallet engaging said ratchet and having a longitudinal slot or way, a reciprocatory plunger or thrust-rod having an arm or rod *k*, equipped on its end with a stud, and a block movable in said longitudinal way and with which said stud has an engagement, substantially as and for the purpose set forth.

4. In a mechanism for feeding a strip of stock material, the combination, with the roll *l*, having a ratchet-wheel connected thereto, of a lever pivotally mounted, provided with a longitudinal slot or way and carrying a pallet which engages said ratchet, a reciprocatory thrust-rod or plunger provided thereon with a hub *t*, a rod *k*, extended through said hub and screw-threaded at portions thereof adjacent the ends of the hub and provided with lock-nuts, said rod being extended into proximity to said lever, having secured thereon the block *s* with the stud, and the slide-block movable in said lever-slot and with which said stud is connected, substantially as and for the purposes set forth.

5. In a mechanism for feeding and guiding a strip of stock material, the pair of rolls, one *l* having a fixed bearing and the other *l'* spring-pressed toward the former and the ratchet-wheel, a pallet for engaging the ratchet, and a carrier therefor, suitably mounted for an oscillatory movement, and means for imparting such movement, combined with a trough-shaped guide ranged in advance of said rolls and provided with an aperture through its bottom, substantially as and for the purpose set forth.

6. In a mechanism for feeding and guiding a strip of stock material, the combination, with a pair of feed-rolls geared together and one spring-pressed toward the other, and means for imparting an intermittent partial rotary motion to said rolls, of a trough-shaped guide ranged in advance of said rolls and provided with an aperture through its bottom and having a spring, substantially as described.

CHAS. S. GOODING.
ROBT. L. ELLERY.

Witnesses:

WM. S. BELLOWS,
G. M. CHAMBERLAIN.