

(No Model.)

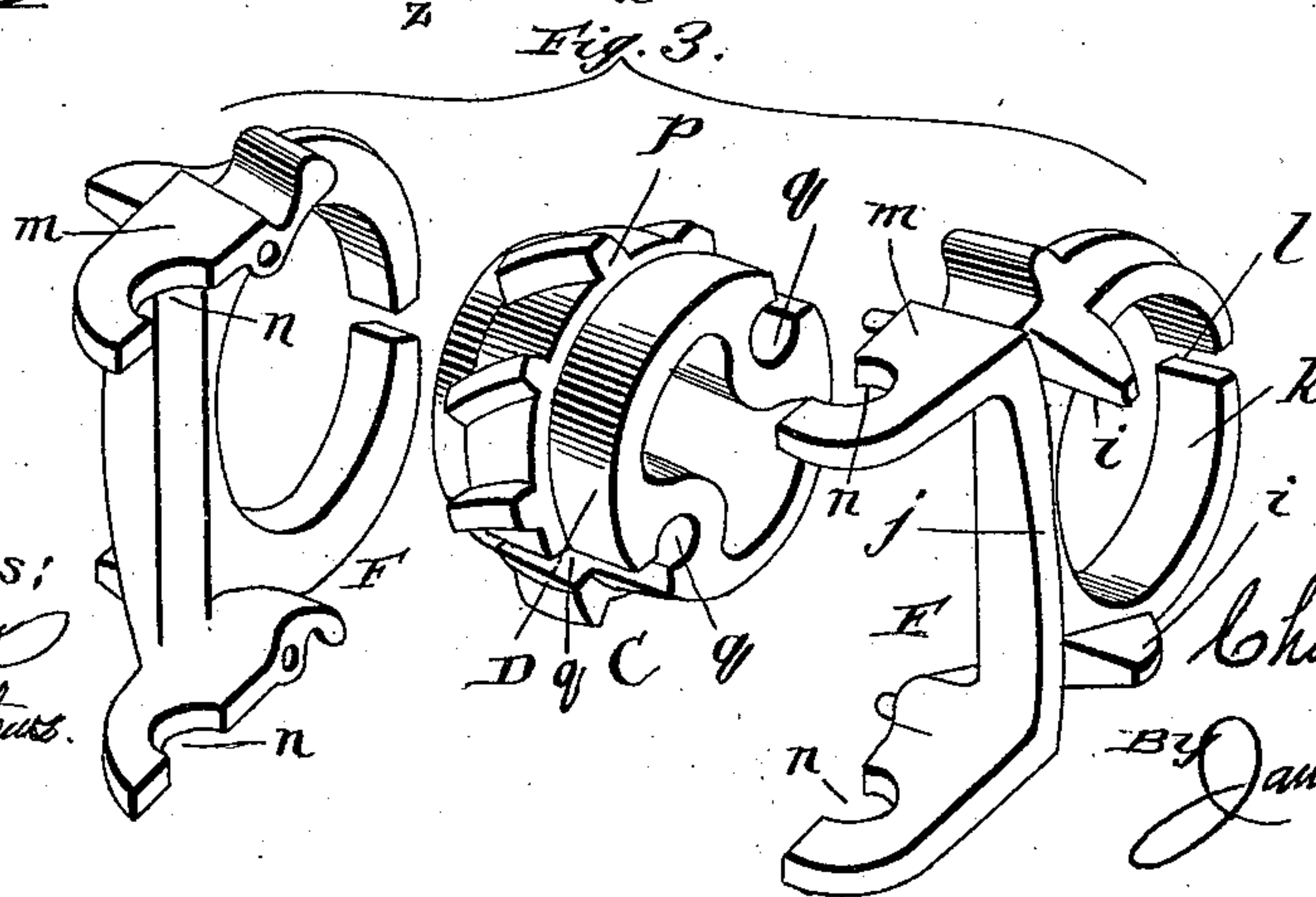
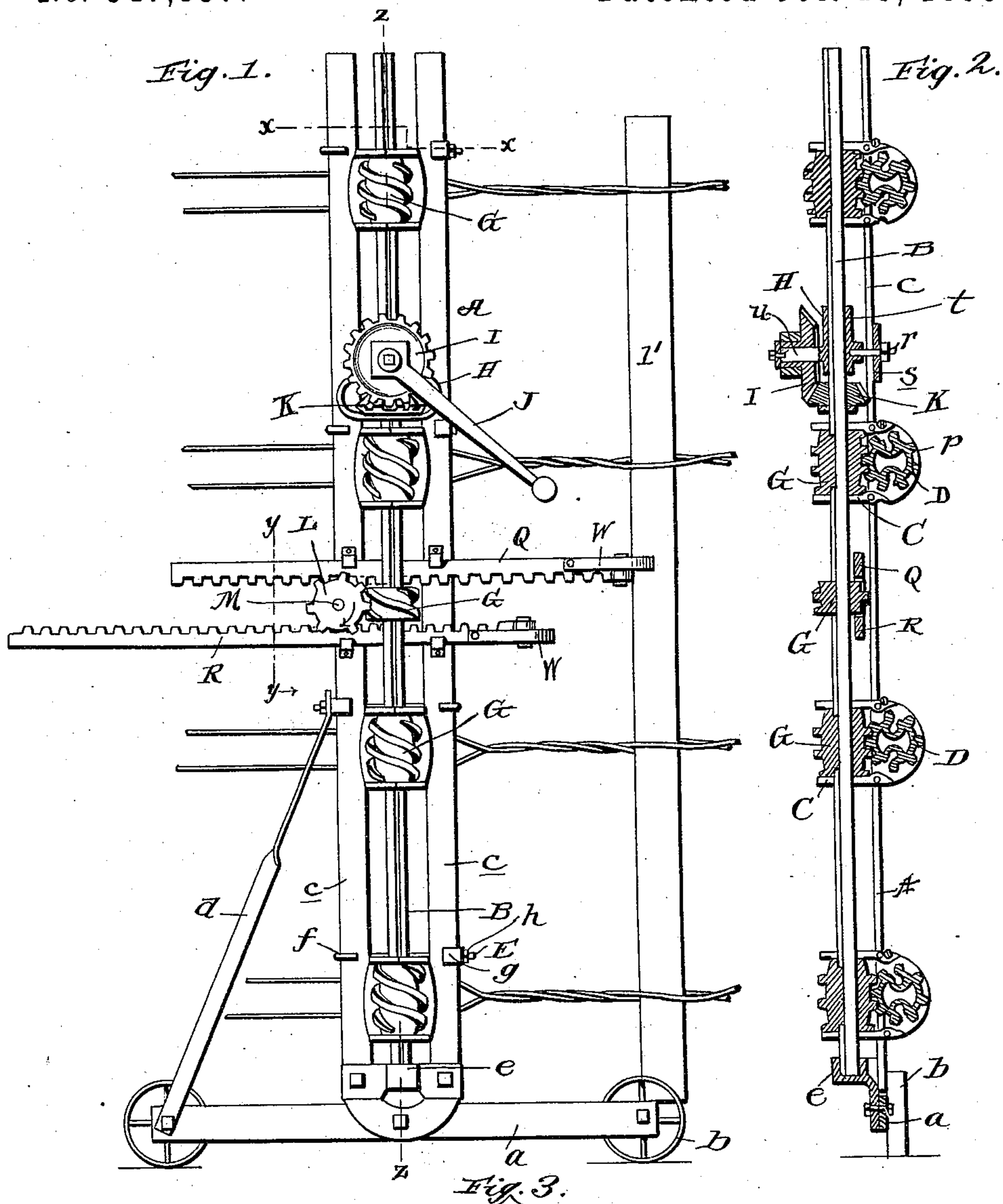
2 Sheets—Sheet 1.

C. NEATE.

SLAT AND WIRE FENCE MAKING MACHINE.

No. 547,857.

Patented Oct. 15, 1895.



witnesses;
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Inventor
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Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

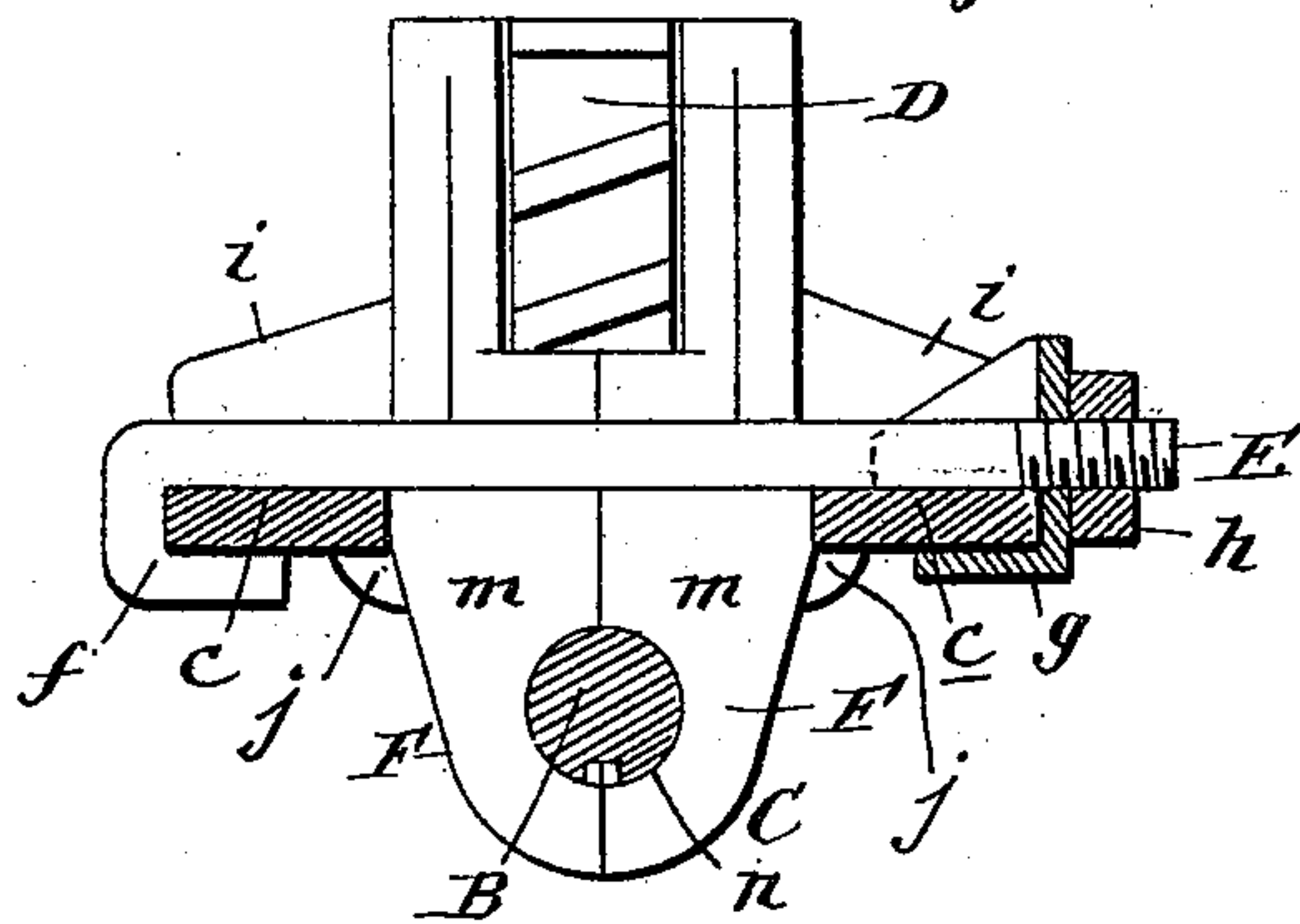


Fig. 5.

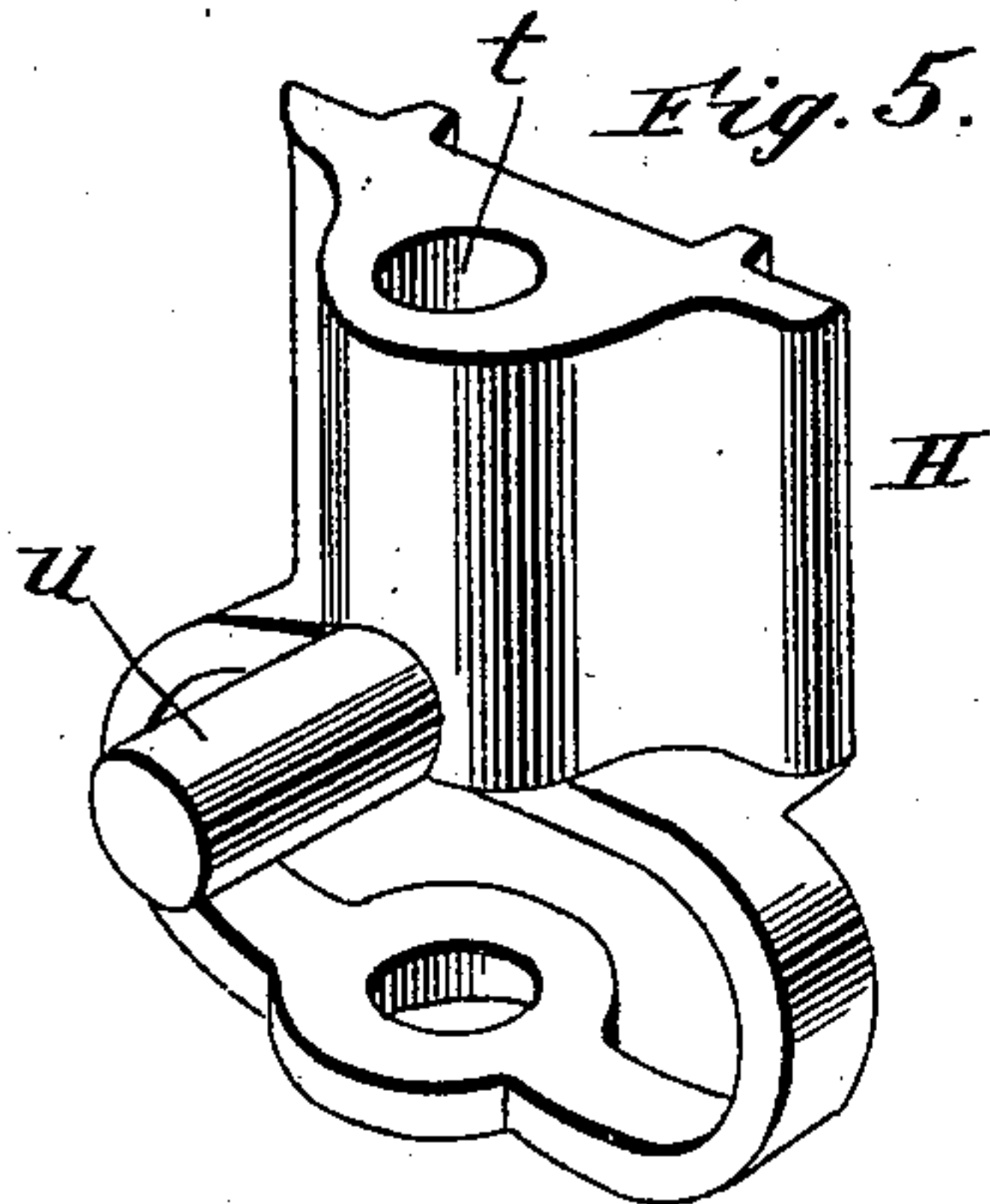


Fig. 6.

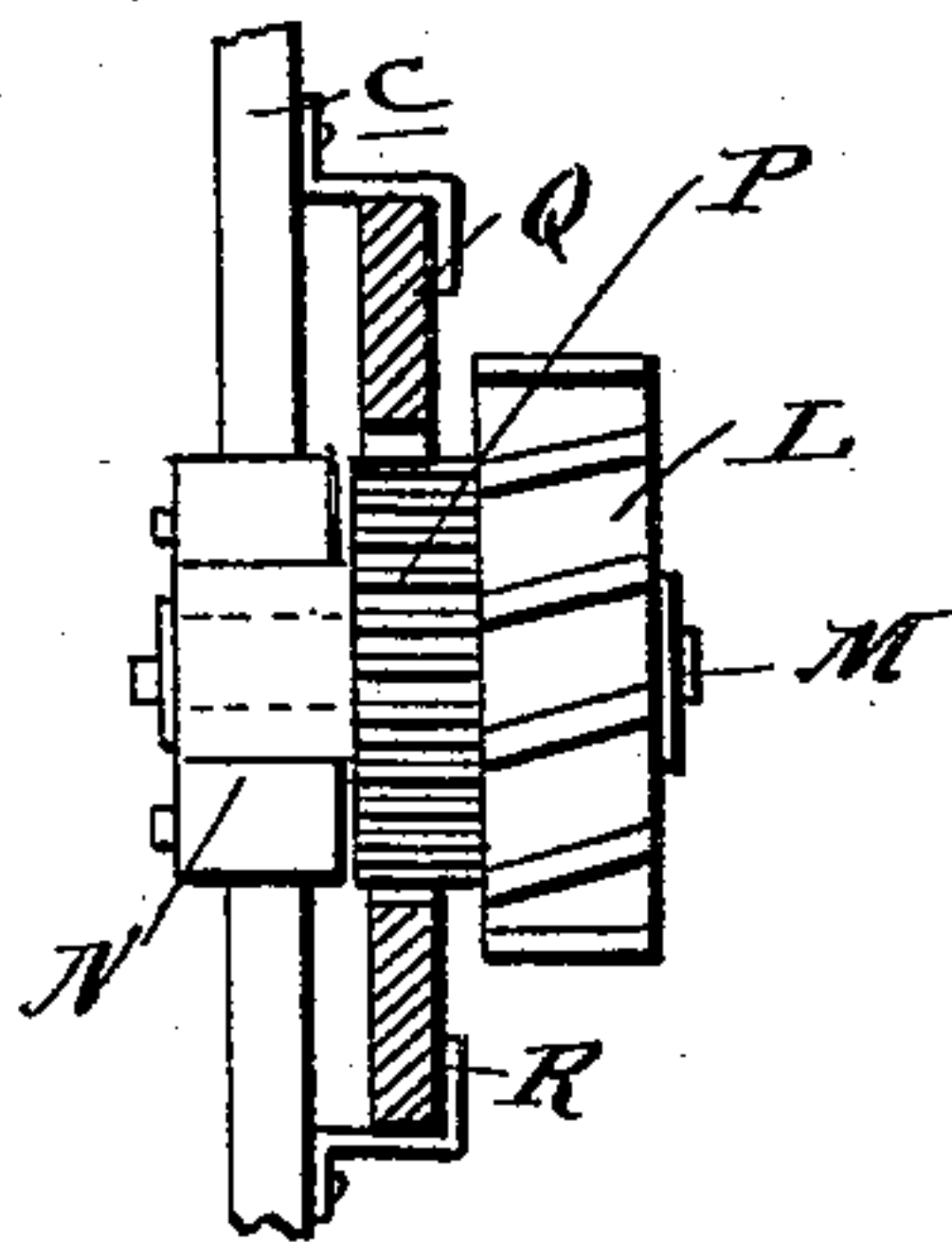
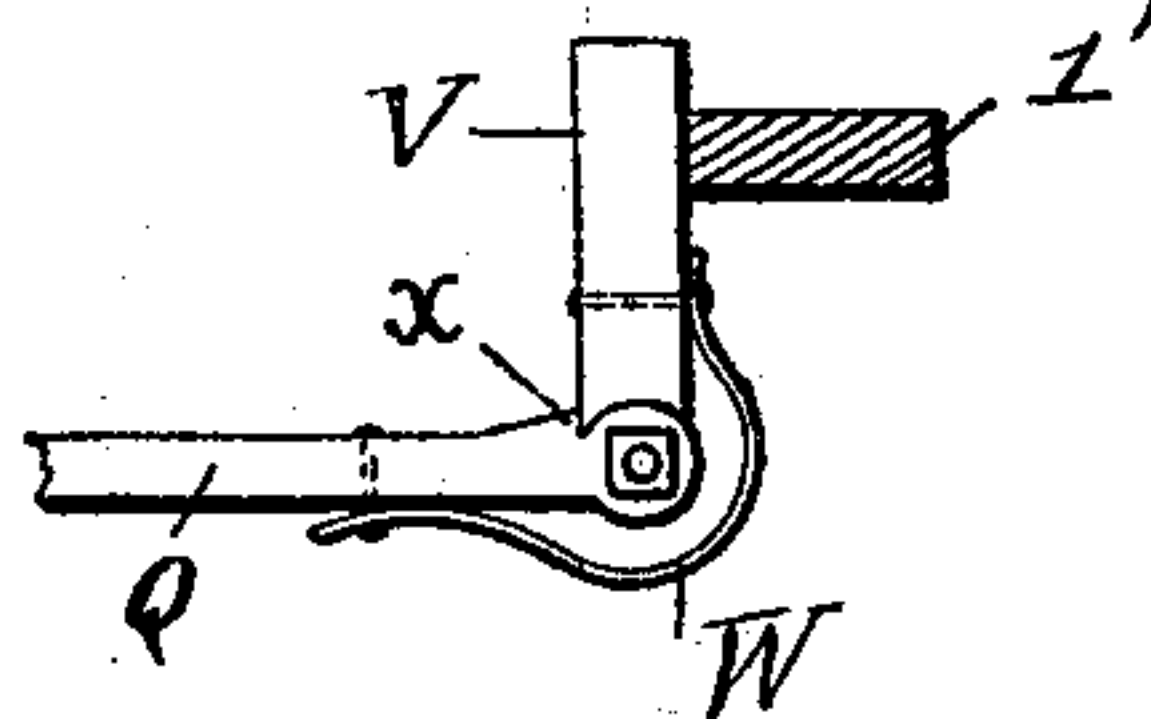


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES NEATE, OF UPPER SANDUSKY, OHIO.

SLAT-AND-WIRE-FENCE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 547,857, dated October 15, 1895.

Application filed February 4, 1895. Serial No. 537,270. (No model.)

To all whom it may concern:

Be it known that I, CHARLES NEATE, a citizen of the United States, residing at Upper Sandusky, in the county of Wyandot and State of Ohio, have invented certain new and useful Improvements in Fence-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in machines for building wire and picket fences, and its novelty will be fully understood from the following description and claims, when taken in connection with the annexed drawings, in which—

Figure 1 is a side elevation of my improved machine in its operative position. Fig. 2 is a vertical section taken in the plane indicated by the line *z z* of Fig. 1. Fig. 3 is a perspective view illustrating one of the twister-spools and the two sections of its boxing removed from the main frame. Fig. 4 is an enlarged transverse section taken in the plane indicated by the line *x x* of Fig. 1, looking downwardly. Fig. 5 is a detail perspective view of the casting upon which the operating-crank and the gear connected thereto are mounted. Fig. 6 is an enlarged detail section taken in the plane indicated by the line *y y* of Fig. 1, and Fig. 7 is a detail view illustrating a portion of one of the pusher-rods in engagement with a picket.

In the said drawings similar letters designate corresponding parts in all of the views.

A indicates the main frame, which is preferably formed of metal, although it may be formed of any other suitable material. This frame A comprises the lower horizontal bar *a*, which has wheels *b* at its ends to permit of its being easily moved, the parallel uprights *c*, which are by preference formed from a single bar of metal, which is bent at its middle and has its bent portion fixedly connected to the bar *a*, and a suitable brace-bar *d*, which is connected to the end of the bar *a* and to one of the uprights *c*, as illustrated. The said frame A is provided adjacent to its lower end with a bearing *e* for the reception of the lower end of the shaft B, and its uprights *c* are held the proper distance apart to hold the

boxings C of the twister-spools D by the four (more or less) bolts E, which have one of their ends bent, as indicated by *f*, to engage one of the uprights, and are provided upon their opposite ends, which are threaded, with angle-plates *g* to engage the other upright and with nuts *h* for securing the plates *g* in position and for tightening the uprights upon the boxings C, as will be presently described.

The boxings C of the twister-spools D are formed in two sections F, (better illustrated in Fig. 3,) and each section F is provided with lugs *i* to rest on one side of one of the uprights and with a flange *j* to rest on the opposite side of the upright, so as to hold the boxings against horizontal movement on the uprights. Each of the boxing-sections F is also provided at one end with a circular bearing *k* for one end of a twister-spool, with which bearing communicates an opening *l* for a purpose presently described, and at its opposite end each section F is provided with the horizontal arms *m*, which have aligned notches *n* in their inner edges, as illustrated. These notches of the sections F are designed when the said sections are clamped together to register, so as to form circular bearings for the shaft B, as better shown in Fig. 4, and the upper and lower arms *m* of the sections of each boxing C are designed to receive between them the worm-screws G, so as to hold the said screws against vertical movement on the shaft B, on which they are splined, as illustrated.

The twister-spools D of the machine, which are journaled in the bearings *k* of the boxing-sections F, as stated, are provided at their middles with the usual gear-teeth *p*, which mesh with the teeth of the worm-screws G, and are also provided at diametrically-opposite points in their sides with grooves *q*, which extend throughout their length, as illustrated. These grooves *q* of the spools D are designed to receive the wires to be twisted, and it will be readily perceived that, when desired, the wires may be readily removed, and may also be removed from the boxings by drawing them through openings *l* thereof, and that therefore when a day's work has been done with the machine it may be disconnected from the fence and removed to a barn or house. I prefer in practice to employ four,

more or less, twister-spools and boxings therefor in each machine, and by reason of the construction described it will be seen that the distance between the twister-spools may be readily changed when desired, so as to increase or diminish the space between the wires, it being simply necessary when the twister-spools are to be moved to first loosen the nuts *h* on the bolts *E*, then move the boxings to the desired points, and then tighten the nuts on the bolts *E*, so as to securely clamp the uprights *c* against the boxings.

H indicates a casting or journal-box, which is arranged on the front side of the uprights *c*, as shown in Fig. 1. This casting *H* is adjustably secured on the uprights by a bolt *r*, which takes through a plate *s* on the opposite side of the uprights with respect to the casting and into the casting, as shown in Fig. 2, and said casting is provided with a bore *t* to receive the shaft *B*, and is also provided with a lateral stud *u*, upon which the beveled gear *I*, to which the crank *J* is fixed, is mounted. The said gear *I* meshes with the beveled gear *K*, splined on the shaft *B*, and it will therefore be seen that when the gear *I* is rotated the shaft *B* and the several worm-screws *G* mounted thereon will also be rotated to rotate the twister-spools.

L indicates a gear-wheel, which meshes with one of the worm-screws *G*. This gear-wheel *L* is fixed on a shaft *M*, which is journaled in a suitable bearing *N*, connected to one of the uprights *c*, and on the said shaft *M* is also fixed a pinion *P*, as better illustrated in Fig. 6. Arranged in suitable guides on the uprights *c* (see Figs. 1 and 6) and disposed above and below the pinion *P* are rack-bars *Q R*, the teeth of which mesh with the teeth of the said pinion, as shown. These rack-bars *Q R* are designed at one end to bear against the pickets *l'* of the fence that is being built, and as said bars are connected by gearing with the shaft *B* it will be seen that when the said shaft is turned in one direction the pinion *P*, engaging the upper rack-bar *Q*, which bears against the picket, will cause the machine to move forwardly, so as to twist the wire evenly, and at the same time will move the lower rack-bar *R* forwardly ready to engage the next picket that is placed between the wires. When the lower rack-bar *R* is placed in engagement with the picket, the shaft *B* is rotated in a direction opposite to that above mentioned, when the machine will be moved forward, so as to twist the wire evenly, and the upper rack-bar will be moved forwardly with respect to the machine, so as to be in readiness to engage the next picket.

The rack-bars *Q R* are provided at their rear ends with pivoted arms *V*, designed and adapted to engage the pickets *l'*. These arms *V* are normally held in the position shown in Fig. 7 by the springs *W*, which press them against shoulders or abutments *x* on the bars, as shown. By reason of such con-

struction it will be seen that when either of the bars *Q R* is moved forward with respect to the machine the arm *V* will swing backward, so as to pass the picket and will automatically assume the position shown in Fig. 7, so as to engage and bear against the next picket.

It will be seen from the foregoing that my improved machine is very simple, inexpensive, and easily operated, and it will also be seen that when worn or broken or otherwise impaired any of the parts may be removed from the main frame and new parts may be placed in position without the employment of skilled labor and without damaging any of the other parts, which is a desideratum.

I have in some respects specifically described the construction and relative arrangement of the parts of my improved machine in order to impart a full, clear, and exact understanding of the same; but I do not desire to be understood as confining myself to such construction and arrangement, as such changes or modifications may be made in practice as fairly fall within the scope of the invention.

Having described my invention, what I claim is—

1. In a fence building machine, the combination of a movable main frame, twister spools journaled in said frame, a shaft *B* journaled in bearings in said frame and connected by gearing with the twister spools, bars carried by the frame and adapted to engage pickets, and mechanism intermediate of the shaft *B* and said bars for moving the latter, substantially as and for the purpose set forth.

2. In a fence building machine, the combination of the uprights, boxings carrying twister spools and arranged between the uprights, and the connecting bolts having one of their ends bent to engage one of the uprights and having their opposite ends provided with a plate to engage the other upright and with an adjusting nut, substantially as and for the purpose set forth.

3. In a fence building machine, the combination of the uprights, the twister spools having peripheral teeth and also having grooves in their opposite sides, the boxings arranged between the uprights and respectively comprising the two sections having bearings for the ends of a twister spool and openings communicating with the bearings, and also having the arms provided with notches adapted to register and form bearing apertures, the shaft *B* extending through the said bearing apertures of the boxings, the worm screws splined on the shaft *B* between the upper and lower arms of the boxings and meshing with the twister spools, means for pressing the uprights against the boxes so as to adjustably secure the same in position, and means for rotating the shaft *B*, substantially as and for the purpose set forth.

4. In a fence building machine, the combi-

nation of a main frame mounted on a wheel, a shaft B journaled in bearings in said frame and carrying a gear, a gear fixed on a shaft M and engaging the gear on the shaft B, a pinion also fixed on the shaft M, the rack bars arranged in guides above and below the pinion and adapted to engage a picket, and means for rotating the shaft B, substantially as and for the purpose set forth.

5. A fence machine comprising the bar a having wheels at its ends, the uprights rising from the bar a , the twister spools having peripheral teeth and also having grooves in their opposite sides, the boxings arranged between the uprights and respectively comprising the two sections having bearings for the ends of the twister spool and openings l communicating with the bearings and also having the arms provided with notches adapted to register and form bearing apertures, the casting H arranged on one side of the uprights and having the bore t and the lateral stud u , a bolt taking through a plate on the opposite side of the uprights with respect to the casting H and into said casting, the shaft B extending through the bearing apertures of the boxings and through the bore t of the casting H, the worm screws splined on the shaft B, between the upper and lower arms of the boxings and meshing with the twister spools, the beveled gear fixed on the shaft B,

the beveled gear mounted on the stud u of the casting H and having a crank connected thereto, and means for pressing the uprights against the boxings, all substantially as and for the purpose set forth.

6. In a fence building machine, the combination of a main frame, bars carried by the frame and having the shoulders or abutments x , the arms pivotally connected to the bars and backed by springs and adapted to engage pickets, and means for moving the said bars, substantially as specified.

7. In a fence building machine, the combination of a movable main frame, a shaft B journaled in bearings in said frame and carrying a gear, a gear fixed on a shaft M and engaging the gear on the shaft B, a pinion also fixed on the shaft M, the rack bars arranged in guides above and below the pinion and having shoulders or abutments adjacent to one end, and the spring-backed arms pivotally connected to the bars and backed by springs so as to enable them to pass and engage pickets, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES NEATE.

Witnesses:

R. C. McNELLY,
H. S. MOFFETT.