

(No Model.)

2 Sheets—Sheet 1.

S. A. HENKEL, Sr.  
FENCE MAKING MACHINE.

No. 438,727.

Patented Oct. 21, 1890.

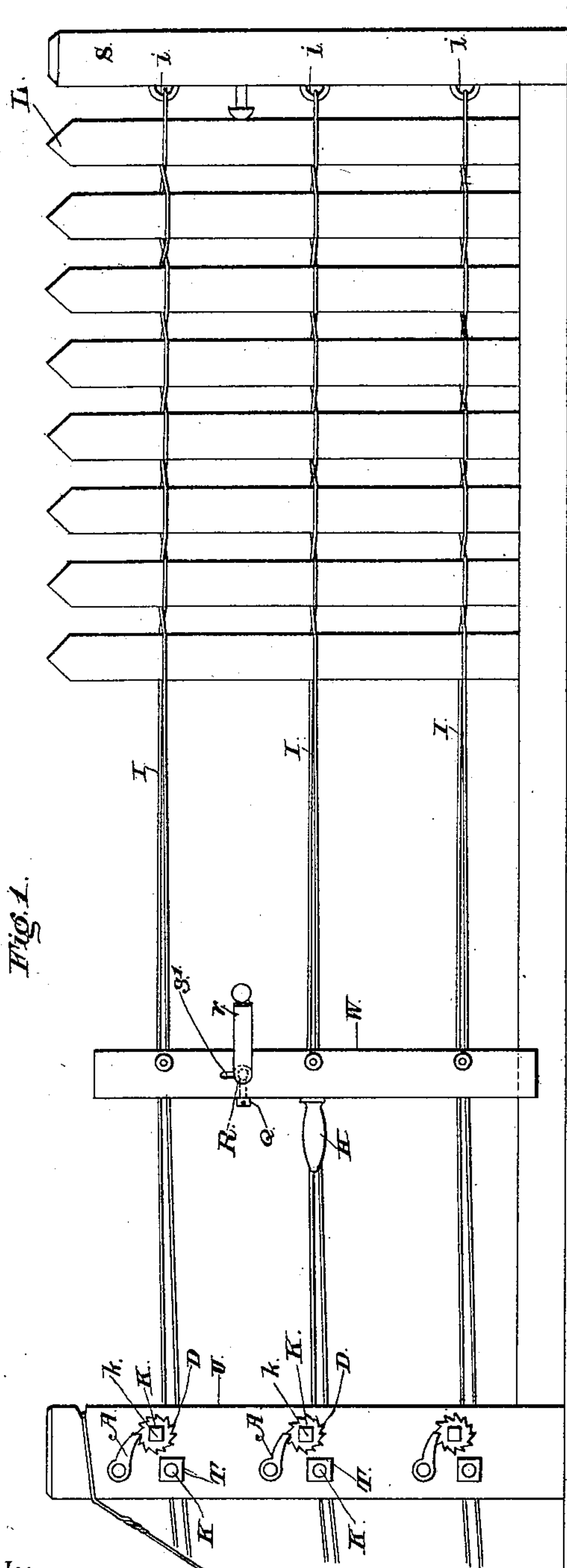


Fig. 1.

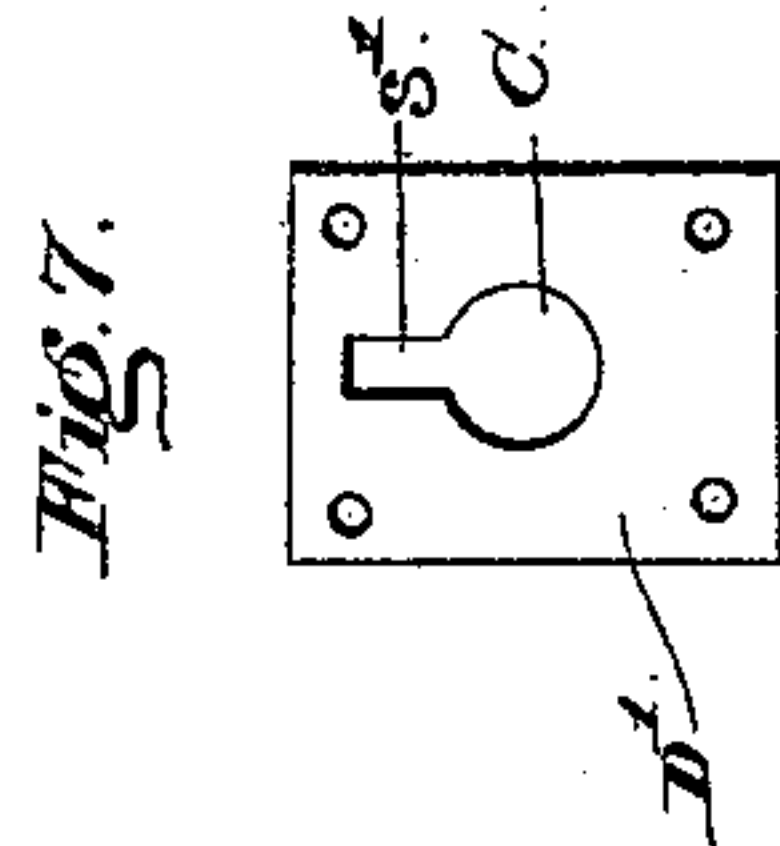


Fig. 7.

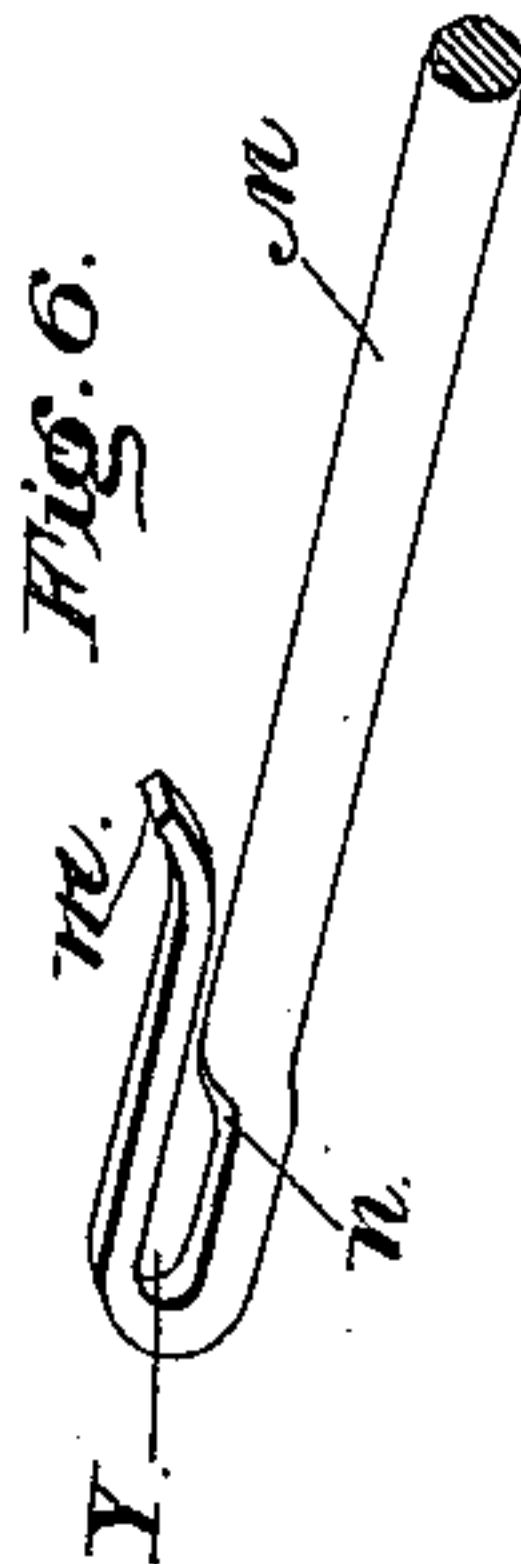


Fig. 6.

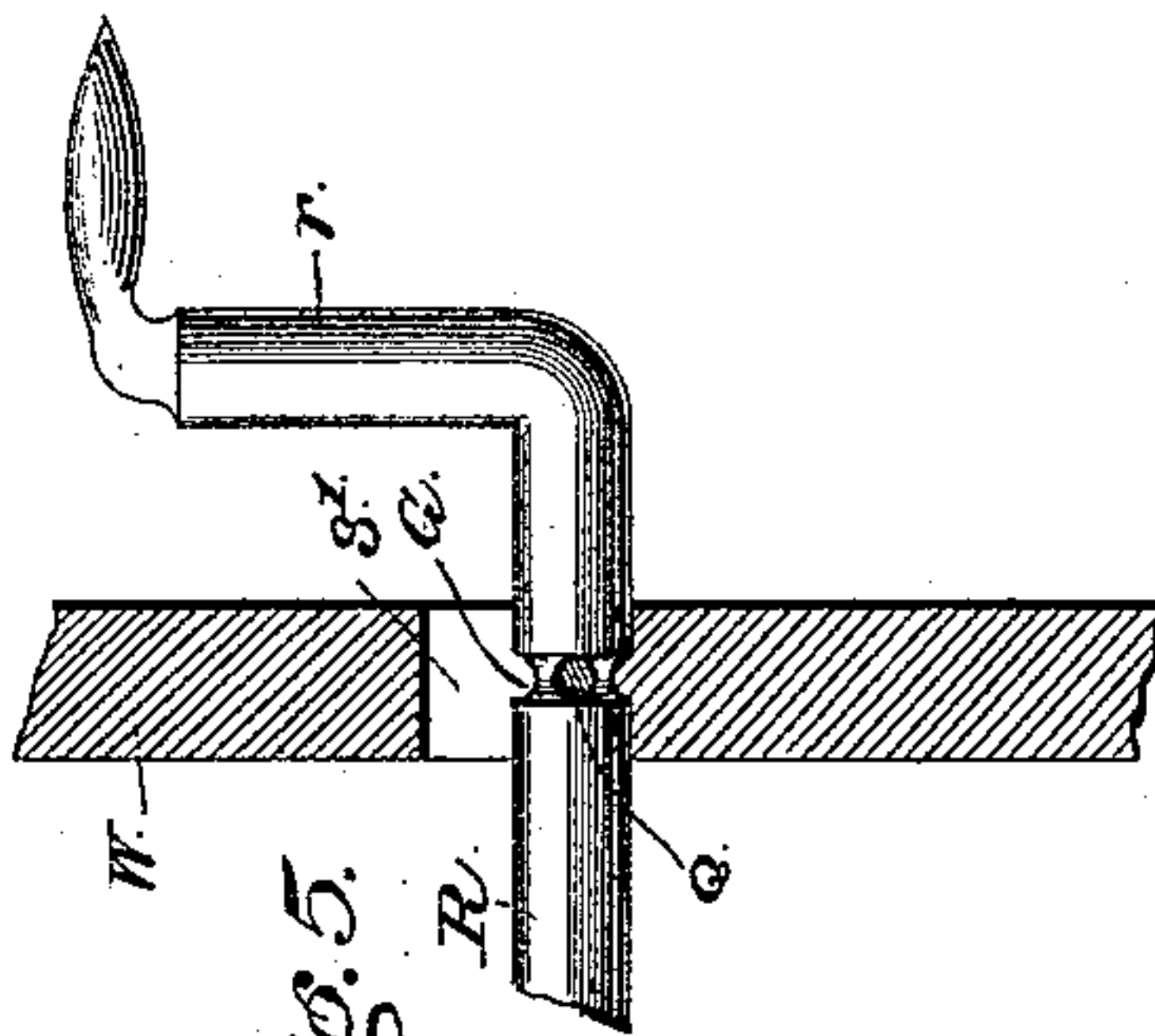


Fig. 5.

Witnesses

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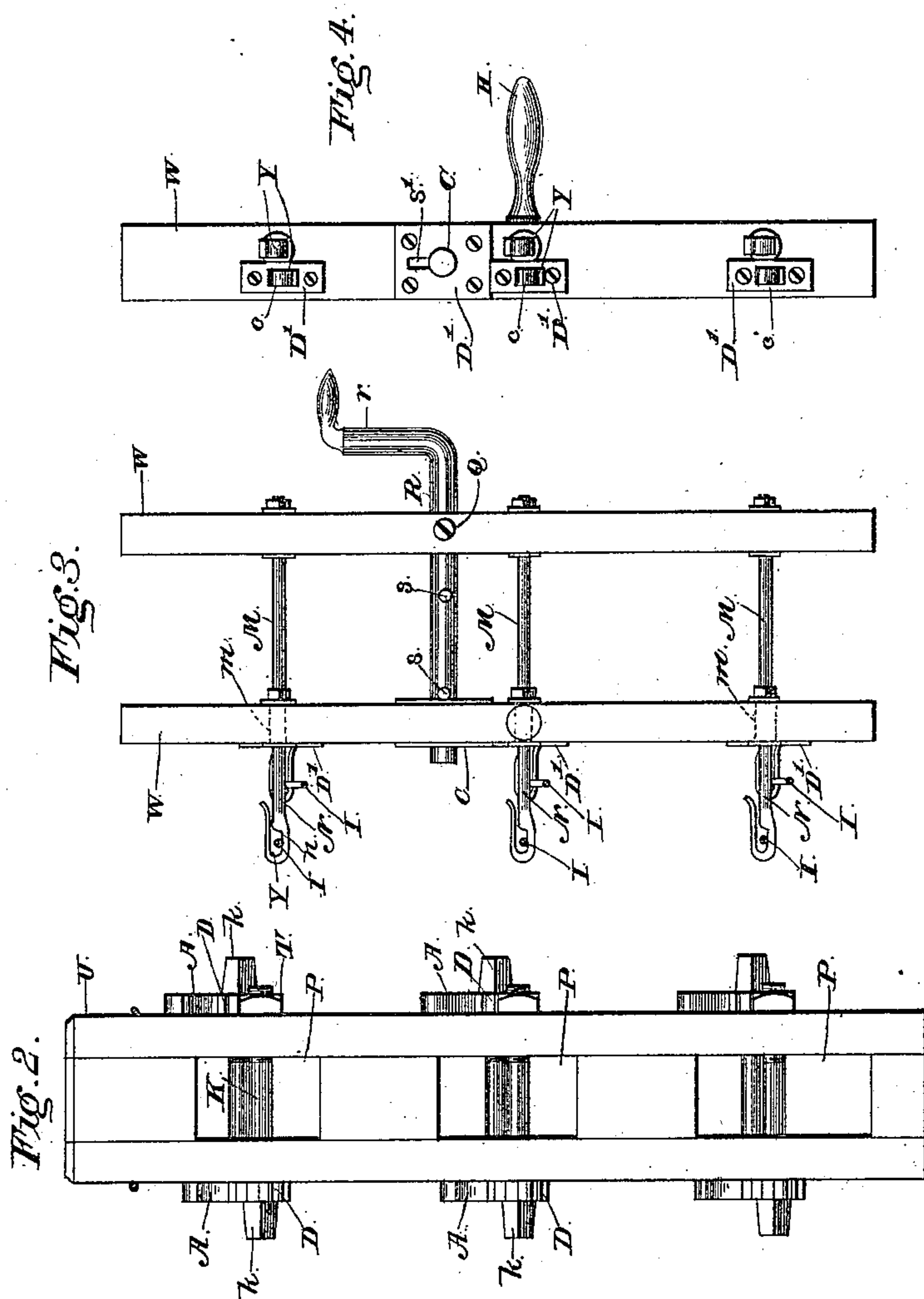
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# UNITED STATES PATENT OFFICE.

SILON AMOS HENKEL, SR., OF NEW MARKET, VIRGINIA.

## FENCE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 438,727, dated October 21, 1890.

Application filed May 31, 1890. Serial No. 353,827. (No model.)

*To all whom it may concern:*

Be it known that I, SILON AMOS HENKEL, Sr., a citizen of the United States, residing at New Market, in the county of Shenandoah and State of Virginia, have invented a new and useful Fence-Making Machine, of which the following is a specification.

This invention relates to fence-making machines, and more particularly to that class thereof which is designed for making fences having vertical pales or pickets and occasional posts and longitudinal wires at top and bottom thereof and sometimes at intermediate points; and the invention consists in certain details of construction effecting improvements upon devices of this same general character heretofore made, all as hereinafter more fully described, and illustrated in the drawings, in which—

Figure 1 is a side elevation of this machine complete. Fig. 2 is an end view of one of the posts. Fig. 3 is an enlarged side elevation of my improved weaver. Fig. 4 is a rear elevation of the same. Fig. 5 is a section through the front bar of the weaver, showing the manner of swiveling the holding-rod within the front bar of the weaver. Fig. 6 is an enlarged perspective view showing my preferred form of eye at the rear end of each weaver-wire. Fig. 7 is an elevation of the bearing-plates for the holding-rod.

Referring to the said drawings, the letter S designates a stationary upright, to which the several longitudinal wires I are attached, as at *i*, in any preferred manner, and U is a second upright set in the ground, as is the first, and located at the distance from the latter it is desired the length of the fence-sections shall be. These sections can be made longer or shorter by moving the upright U farther from or nearer to the stationary upright S, as will be clearly understood; or these uprights may be the posts of a fence, which latter is to be built between them.

The upright U has a number of transverse perforations P, and laterally through each of these perforations extend two keys K, each having one end squared, as at *k*, whereby it may be turned by a wrench or other suitable instrument. Beneath said squared end *k* each key has an integral ratchet-wheel D, or a ratchet-wheel keyed thereto, which wheel

is adapted to lie upon and turn against the flat edge of the upright, as seen in Fig. 1. Near each wheel the pawl A is attached to the upright U and engages the teeth on the ratchet-wheel to prevent the backward rotation of the wheel. The opposite end of each key K where it protrudes from the upright is threaded, as shown, and a nut T is screwed thereon.

W W are two parallel vertical bars constituting the body of a weaver and connected by one or more holding-rods R, journaled therein and extending therethrough, as shown. Each rod is provided with two studs *s* of a size adapted to pass through a slot *s'*, formed radially in the edge of the bearing in the bar W. The front of said bars carries a number of long heavy wires M, extending loosely through holes *m* in the rear bar, and the said rear bar has a similar number of short heavy wires N projecting rearwardly therefrom. There are as many pairs of these wires M N as there are pairs of fence-wires I in the fence, as will be understood, all such features of the weaver being well known in this art. I have found, however, that when the weaver-bars W are of wood and the holding-rods R are of iron the former will swell in damp weather and will pinch upon the holding-rods as well as upon the wires M, thereby causing the parts to bind and interfere with the successful working of the machine. In order to overcome this difficulty I provide plates of metal D', secured to one or both faces of each of the weaver-bars W and having holes *c*, through which the wires M move freely, or having similar but larger holes C, having notches *s'* registering with the radial slot in the edge of the bearing in each bar W. Through the holes in these plates the holding-rods R and the weaving-wires M project, and it will be obvious that the holes in the weaving-bars may be made sufficiently large to avoid the possibility of any binding in damp weather.

Instead of having the front stud *s* strike against the inner face of the forward weaver-bar W, as heretofore, which construction produced considerable friction and prevented an easy turning of the rod R at all times, I provide said rod with an annular groove G at a point where it passes through the front weaver-bar, and in the latter I seat a pointed screw



Q, whose tip engages said groove, thereby permitting the rotation, but preventing a longitudinal movement of the rod R, all as best seen in Fig. 5. I preferably also provide the front end of the rod R with an integral cranked handle *r*, as shown. The rear end of each weaver-wire is cut away for about half of its size, as shown at *n* in Fig. 6, and the long hook which remains is bent nearly upon itself to form an eye Y, the end of the hook being bent against the body of the wire and then slightly outwardly, as shown at *m*. This construction of eye I find preferable to those heretofore employed in this connection.

The operation is as follows: The fence-wires I are led from their coils or reels, passed through the perforations P in the upright U, given several turns or twists around the keys K within said perforations, and carried onward to the stationary uprights S, where their ends are secured at *i* thereto in any desired manner. It will be understood that the fence-wires I are arranged, as above, in pairs at the upper and lower ends of the uprights and also at their centers, or at intermediate points between said upper and lower positions, if desired, all as shown in Fig. 1 of the drawings. The weaver is then brought into place and the pairs of fence-wires engaged with the eyes Y in the free ends of the wires M and N therein, respectively, as will be clearly understood. The rear of the bars W is then brought into contact with the front one by the operator, who grasps the body of the bars or handles H thereon, and this action spreads or separates the fence-wires I laterally at that point, wherefrom they taper toward the post S. A picket L is then inserted between the wires and pressed to the right close against the post S. The bars W are then separated to their greatest capacity, whereby the wires I I will be crossed in front of the picket L, already in place, and will diverge from the point of crossing to the eyes Y. A second picket is then inserted between the wires I I and pressed to the right close up against the first, and the operation is repeated until the fence-section is made. The pawls A are then lifted, whereby the keys K will be permitted to rotate, and the whole fence as far as constructed is drawn to the right, the several wires I being again secured at *i* to the post S, after which the operation may be continued indefinitely; or, if it be desired to build a fence in separate sections, after the first section is made the wires I are cut at or near the inner face of the upright U and the operation repeated from that point. The use of the keys will be clearly understood by all experienced fence-builders, as they are simply provided to tighten the wires I before the operation of constructing a section is begun. By using the ratchet-wheels D and pawls A the relaxation of the tension of the wires I is prevented, and by using the nuts T upon the

opposite ends of the keys the sides of the upright U may be drawn together when they have shrunk or become worn, or the keys may be caused to bind with considerable friction in the upright.

In the same manner as in machines of this character heretofore constructed the weaver can be slid longitudinally upon the fence-wires, and in operative position is designed to stand comparatively close to the picket last applied, in order that the spreading of the wires I may be as great as possible to facilitate the insertion of the next picket. The fence-wires of course stretch slightly at the insertion of each picket, and if they at any time become too loose they may be tightened by giving the keys a partial or entire rotation in the proper direction. The function of the rod R is to hold the bars W in either distended or closed position in case the operator should be called away or should desire to cease operations temporarily for any cause. To bring this rod into play, the bars W are placed in either extreme position and the said rod given a partial rotation, whereby the studs *s* thereon are turned out of alignment with the slot *s'*, above mentioned. The front bar is held against longitudinal movement upon the rod by the engagement of the pointed screw Q with the groove G in the rod, and the rear bar is held, if the bars are closed, in front of the front stud *s*, or, if the bars are open, in rear of the rear stud *s*, all as will be clearly understood from the above specification and the drawings.

What I claim is—

1. In a fence-weaver, the combination, with the weaver-wires and the holding-rod, the latter being provided with studs, of the weaver-bars through which said wires and rod extend and metal plates secured to the faces of said bars and provided with holes in which said wires are journaled, the holes surrounding the rod having radial notches for the passage of said studs, substantially as described.

2. In a fence-weaver, the combination, with the weaver-bars and the weaver-wires carried thereby, of the holding-rod extending through and journaled in said bars and provided with a surrounding groove, a pointed screw seated in the front weaver-bar and engaging said groove, studs on the rod engaging the rear weaver-bar, and a cranked handle at the front end of the rod, all substantially as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

SILON AMOS HENKEL, SR.

Witnesses:

C. H. HEINRICH,

GEO. W. ROSENBERGER.