

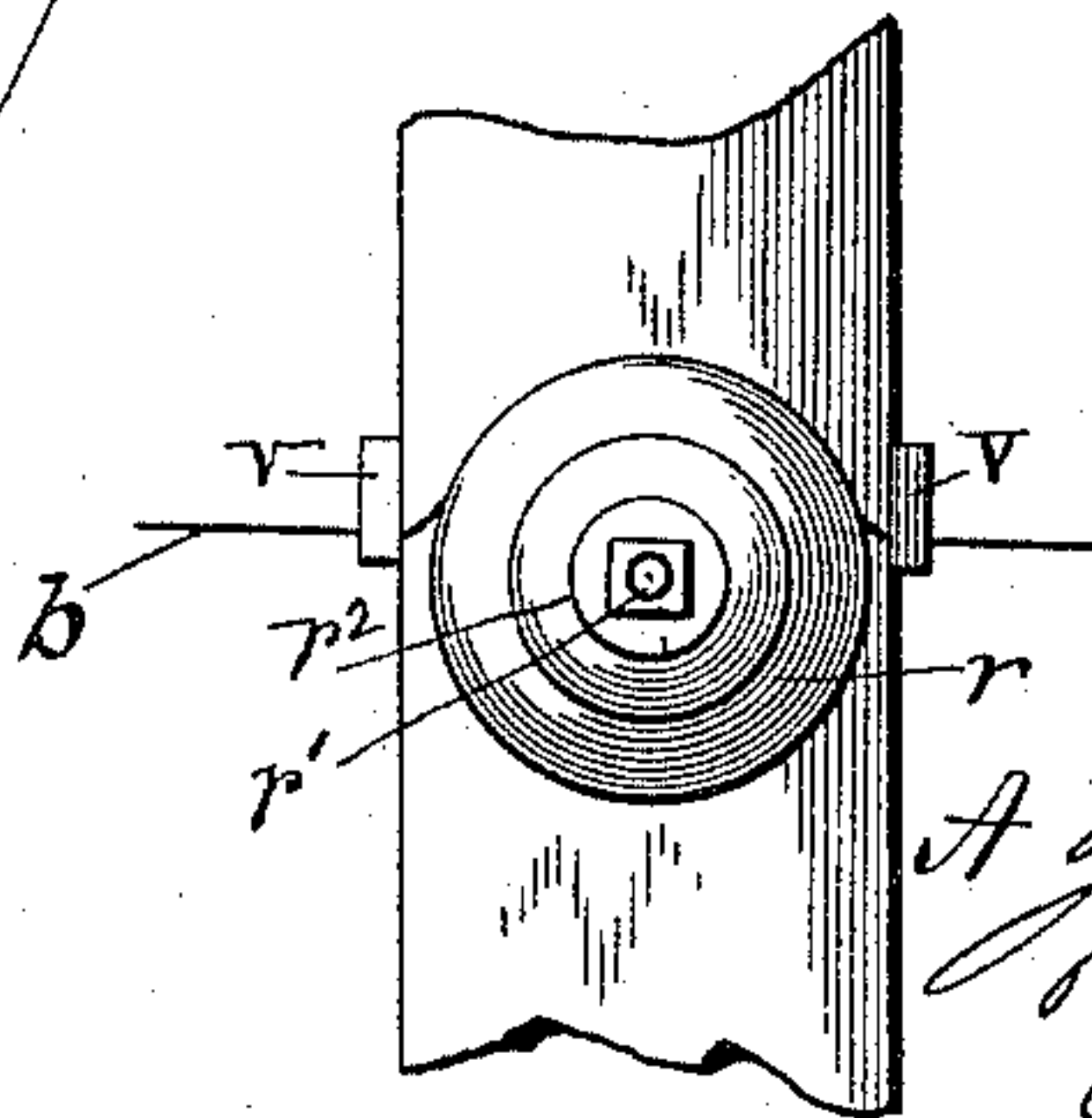
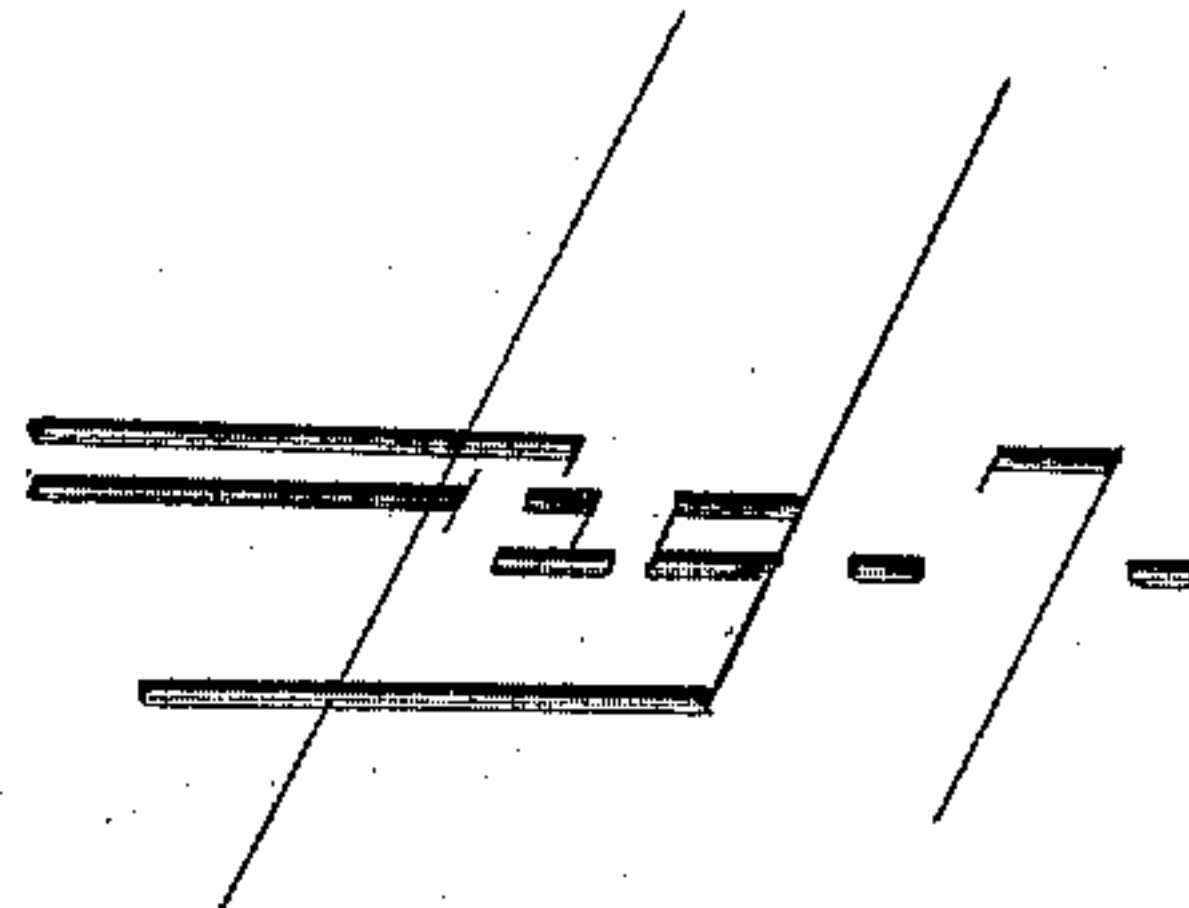
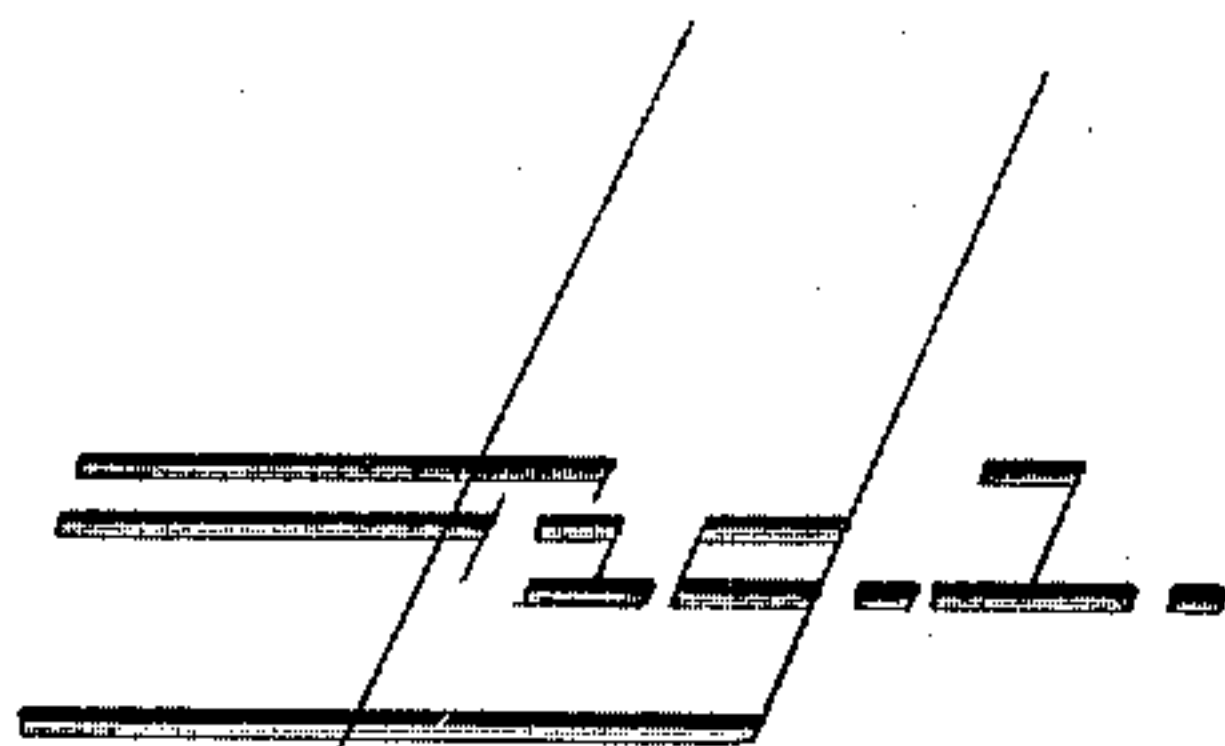
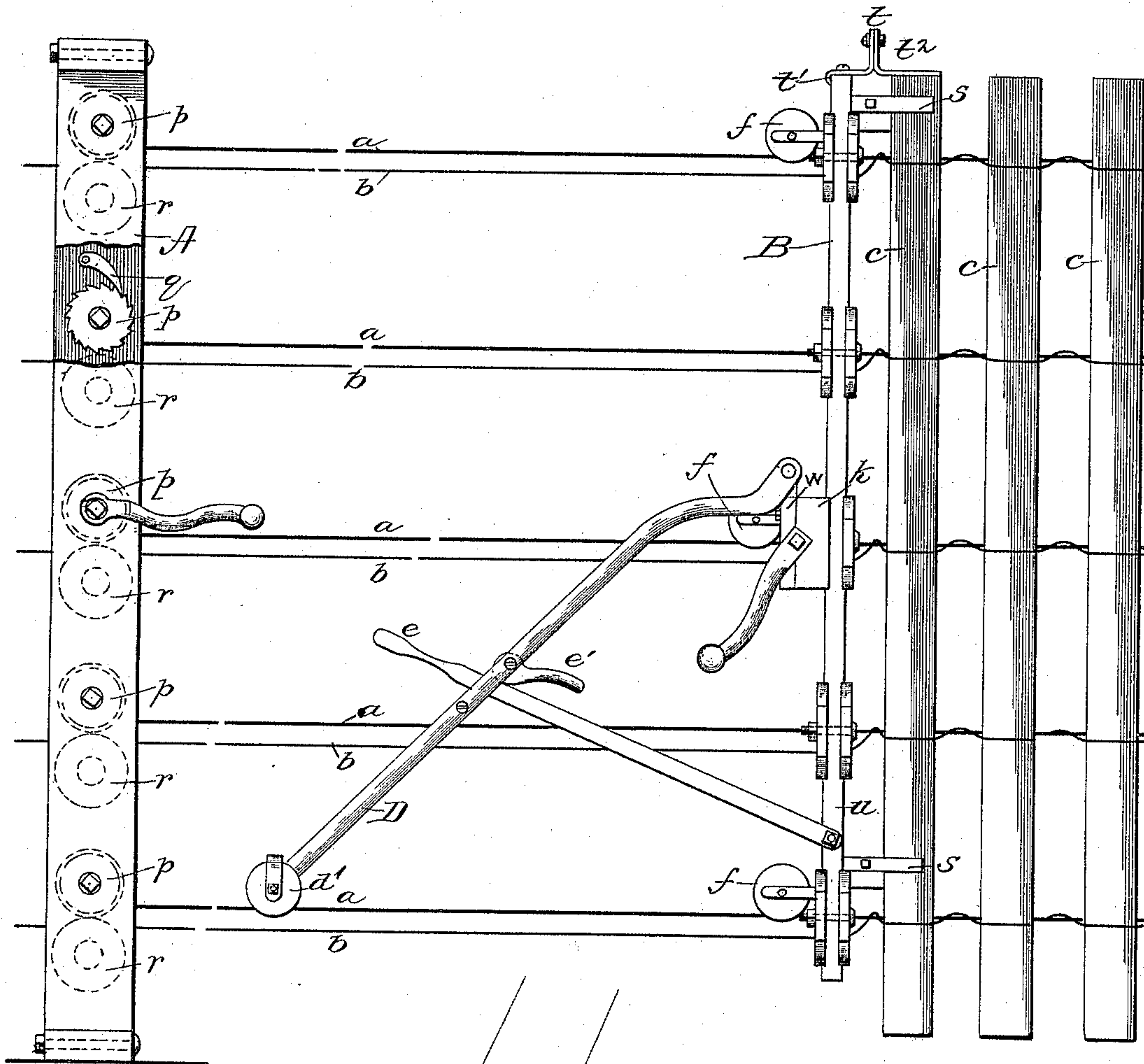
(No Model.)

2 Sheets—Sheet 1.

J. H. FRANK.
PICKET WIRING FENCE MACHINE.

No. 488,310.

Patented Dec. 20, 1892.



WITNESSES
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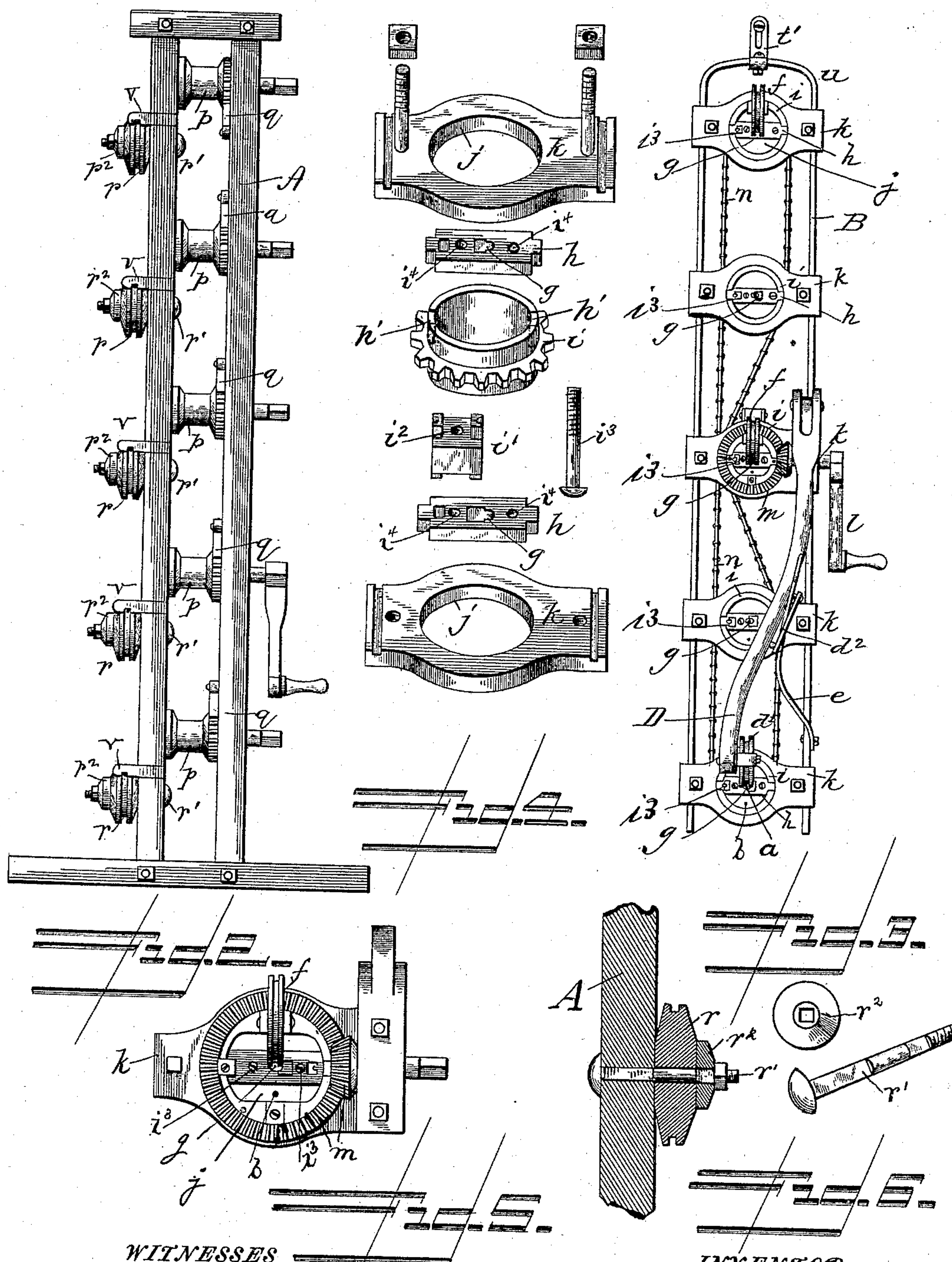
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WITNESSES

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UNITED STATES PATENT OFFICE.

JOHNSTON H. FRANK, OF EDEN, INDIANA.

PICKET-WIRING FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 488,310, dated December 20, 1892.

Application filed April 7, 1892. Serial No. 428,228. (No model.)

To all whom it may concern:

Be it known that I, JOHNSTON H. FRANK, a citizen of the United States, residing at Eden, in the county of Hancock and State of Indiana, 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention is a new and useful device for making wire and picket fences, and consists in the novel construction, arrangement and combination of parts more fully hereinafter described in this specification and set out in the claims hereto attached.

The object of my invention is to provide a new device with which a wire and picket fence may be easily constructed and the device readily operated by one workman.

In the accompanying drawings: Figure 1 is a view of my invention in operative position, showing part of a panel of fence built. Fig. 2 is a front view of the stretcher and tension rack. Fig. 3 is a front view of the weaver. Fig. 4 is a detail view of the bearings *k*, cross pieces *h*, sprocket wheels *i*, and supports, *i'*. Fig. 5 is a detail view of the gearing, *m*, which operates the center sprocket wheel and incidentally shows the wheel, *f*. Fig. 6 is a detail sectional view of part of frame, *A*, spool *r*, bolt *r'*, and washer *r''*. Fig. 7 is a detail view showing how the wire *b*, passes between the wire guards *v* and over the spools *r*.

With this machine I use two sizes of wire for ordinary fencing, but can use smaller or larger wires if desired. I stretch the large wires, *a*, tight the entire distance required. The small wires, *b*, have a tension and do all the wrapping.

With this machine I may use from three to five sets of strands of wire, and with it I build any height of fence to five feet, and weave over hilly ground and make the pickets, *c*, stand perpendicular as on level ground by means of the adjustable plumbing device, *D*, which is very easily and quickly adjusted

and held in place by means of the stay-brace, *e*, and cam, *e'*.

In working my machine it is not necessary that a track be laid as is required by some other machines.

This machine is very durable and easily handled because the weaver, *B*, is carried upon the large wires, *a*, by the wheels, *f*, borne in extensions extending from the flanges of the sprocket wheels, *i*, in front of the weaver which prevents wearing of the holes, *g*, in the cross pieces, *h*, in the sprocket wheels, *i*, which are rotated in the openings, *j*, in the bearings, *k*, by means of the crank handle, *l*, gearing, *m*, and sprocket chain, *n*. Said cross pieces, *h*, have a support, *i'*, between them which, with bolts, *i''*, holds them in place firmly in the recesses *h'* of the flanges of the sprocket wheel *i*. The sprocket wheel *i* has two recesses *h'* in each of its flanges, and in these flanges fit the lugs of the cross pieces *h*. Said cross pieces are each provided with a center perforation *g*, and side perforations *i''*. Between these cross pieces and at each end and in the opening of the sprocket wheel are supports *i'*, having tenons fitting into mortises in said cross pieces, and bolts, *i''*, pass through said cross pieces and perforation *i''*, in said supports. The sprocket wheels *i* revolve in the openings *j* of the bearings *k*. These bearings *k*, have grooves at each end which fit on the bow *u*, and said bearings are secured to said bow by bolts and nuts.

This machine has but one small wire to twist, therefore it is not as hard on the machine as if it had two wires to twist.

In operating this machine I set the stretcher and tension rack, *A*, at the point desired and secure it in position and then put the weaving loom, *B*, on the wires with the large wires *a* under the wheels *f*, and through the center perforations, *g*, of the cross pieces, *h*, and the small wires *b* through the opening *j*, of the bearings *k*. The wires are then secured to the starting post and the loose ends of the large wires are wound around the stretching spools, *p*, of the stretcher and tension rack, *A*, and said spools are turned until said wires are tight. Said spools are provided with ratchet teeth and dogs, *q*, to hold them. I then wrap the small wire around the tension

spools, *r*, and under the wire guards bringing them through the notches in the wire guards, *v*. Having the proper tension on the wires I now turn the weaving loom wheels, *i*, until the small wires, *b*, are to the right on a horizontal line with the large wires, *a*. I then slip a picket, *c*, down between the wires putting it in the picket holders, *s*. These picket holders are secured to the rear face of the weaving loom. The top of the picket is put up against the leveling guard, *t*. Said leveling guard is made in two pieces; one piece, *t'*, has its lower end looped and bolted around the bow, *u*, of the weaving loom with its upper end slotted; and the other piece *t''*, is an elbow having a similar slot; and the two pieces are connected by a bolt passing through their slots. The piece, *t''*, may be moved up and down in the position seen in the drawings, or it may be turned up and then moved up and down. Thus, the upper ends of the slats may be made to extend not farther up than the upper picket holder, *s*, or they may extend a considerable distance above. The picket being in place I now turn the handle of the weaver and twist the little wire as often as desired; then I push the weaver forward about eighteen inches and put in another picket same as before and twist the small wires in the opposite direction, and so on until the panel is completed. By this method of building the fence there is no give in the large wires, so if the pickets shrink or are broken, the fence will not sag as it would were both wires twisted.

The tension spools, *r*, turn on bolts, *r'*, and are tightened by means of nuts on the outer ends of said bolts and beyond the washers *r''*. Said washers have through them square perforations which fit on the square of said bolts and thus said washers are prevented from turning, and may be tightened against said spools by the nuts, and thus the tension on the small wires may be changed.

v, are the wire guards which have in the lower edge of each a small notch immediately in the line of the groove of the tension spools. There are two such wire guards over each of said spools securely bolted one to the front and the other to the rear side of the stretcher and tension rack.

The plumbing device D has its upper end pivoted to an extension, *w*, attached to the bearing, *k*, secured to the bow *u*. Its lower end is provided with a wheel, *d'*, which runs on the lower large wire. The lower end of the brace-rod, *e*, is bolted to the bow, *u*, of the weaver and passes between a loop, *d''*, (Fig. 3) secured to said plumbing device and the beam of the same, and is locked in the desired position by the cam, *e'*. Said plumbing device has its lower end bent inwardly so that when its wheel is running on the wire the weaving device may still be in a vertical position.

Having described my invention what I

claim as new and desire to secure by Letters Patent, is:—

1. The combination of the framework of the stretcher and tension rack or frame A, the spools *p* journaled in said frame having ratchet teeth; dogs *q*, adapted to catch in said teeth; bolts *r'* passing through one beam of said frame; grooved tension spools *r* turning on said bolts; washers *r''* having square perforations fitting on the square parts of said bolts, and nuts adapted to bind said washers against said tension spools, substantially as shown and described and for the purposes set forth.

2. In a weaving machine, substantially as shown and described, the twisting device, consisting of the bearings *k* having openings *j* to receive the flanges of the sprocket wheels *i*; sprocket wheels *i* having the upper and lower flanges; cross pieces *h* secured one in one flange and the other in the other flange of said sprocket wheel having between them the support *i'*, said cross pieces having the center perforations *g* and side perforations *i''*, said bearings grooved to fit on to the bow *u* and secured on said bow by proper bolts and nuts, substantially as shown and described and for the purposes set forth.

3. In a weaving machine the combination with said machine, of the extension *w* attached to the bearing *k*; plumbing device D having attached to its lower end a wheel *d'* and its upper end pivoted to the extension *w*; loop *d''* bolted to the arm of said plumbing device; stay-rod *e*, one end pivoted to the bow *u* and the other passing under said loop; and cam *e'* pivoted to said arm and adapted to hold said stay-rod in place, substantially as shown and described and for the purposes set forth.

4. In a weaving machine, as described, the leveling device *t* having the lower end of part *t'* secured to the upper part of bow *u*, with its upper end slotted, the elbow part *t''* having a similar slot and being secured to the other part by a bolt and nut, substantially as shown and described and for the purposes set forth.

5. The weaving device B, consisting of bow *u*, the leveling device *t* secured to its upper part; picket holders *s* secured to the rear face of said weaver; twisting devices consisting of the bearings *k* secured to bow *u*, sprocket wheels *i* working in said bearings, cross pieces *h* fitting in the recesses *h'* of the flanges of said sprocket wheels, supports *i'* situated between said cross pieces and supporting the same, and wheels *f* borne on extensions extending from the flanges of said sprocket wheels; crank *l* and gearing *m* adapted to turn one of said sprocket wheels, and sprocket chain *n* drawn by said wheel and adapted to turn the other sprocket wheels, substantially as shown and described and for the purposes set forth.

6. The weaving device B, consisting of bow *u*, the leveling device *t* secured to its upper

part; picket holders *s* secured to the rear
face of said weaver; twisting devices consist-
ing of the bearings *k*, sprocket wheels *i*, sup-
ports *i'*, cross pieces *h*, and wheels *f* borne in
5 extensions extending from the flanges of said
sprocket wheels; crank *l* and gearing *m*
adapted to turn one of said sprocket wheels,
and sprocket chain *n* drawn by said wheel
and adapted to turn the other sprocket
10 wheels; plumbing device *D* pivoted to exten-
sion *w*, secured to bow *u*; stay-rod *e* pivoted

to the bow *u*, and cam *e'* adapted to hold said
plumbing device in place, substantially as
shown and described and for the purposes
set forth.

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

JOHNSTON H. FRANK.

Witnesses:

SAMUEL E. D. CAMP,
WILLIAM H. WARRUM.