

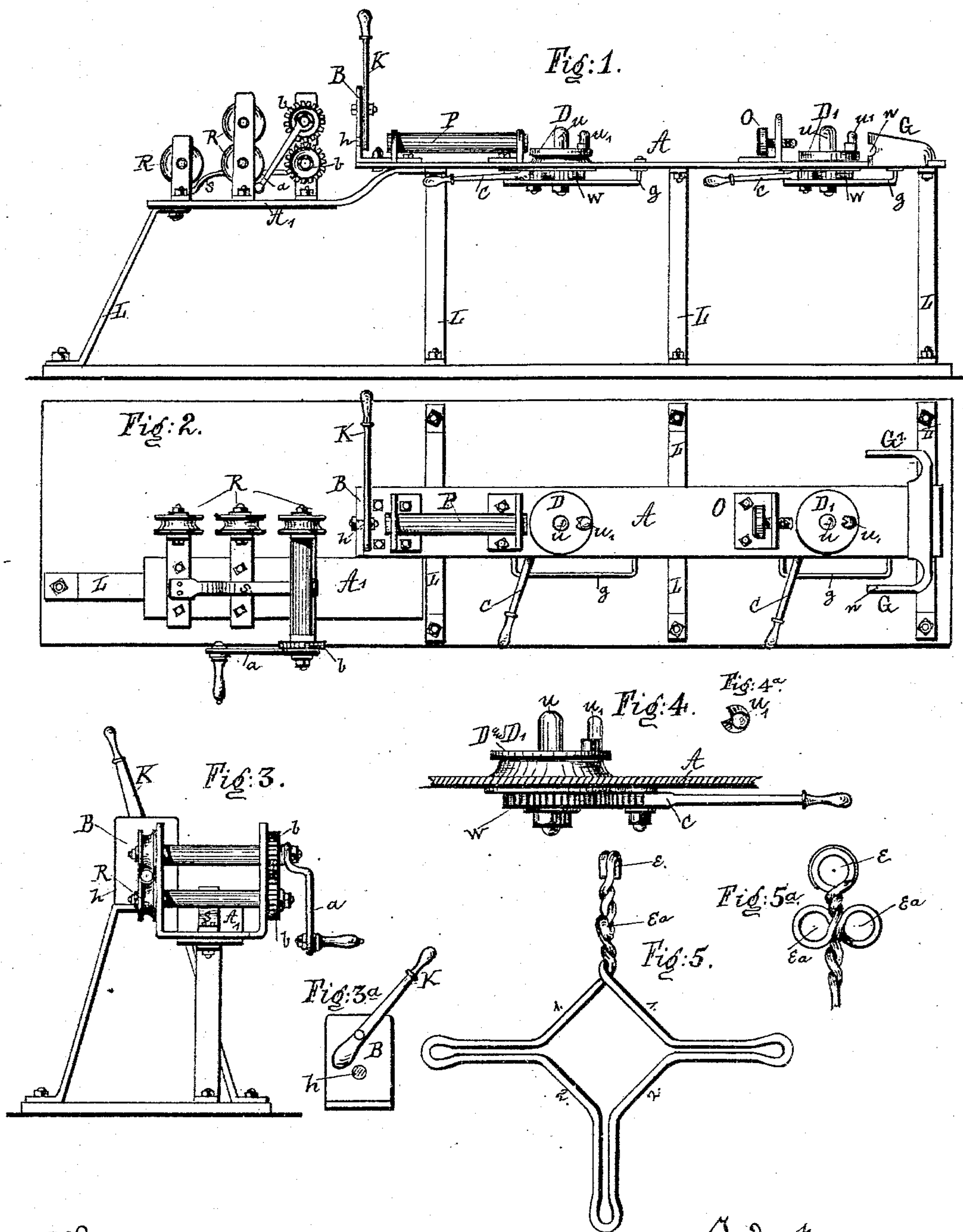
(No Model.)

2 Sheets—Sheet 1.

P. J. SCHARBACH.
MACHINE FOR MAKING CLOTHES PINS.

No. 548,662.

Patented Oct. 29, 1895.



Witnesses:
A. H. Hoff.
Chas. Baumgarten

Inventor:
Peter J. Scharbach.

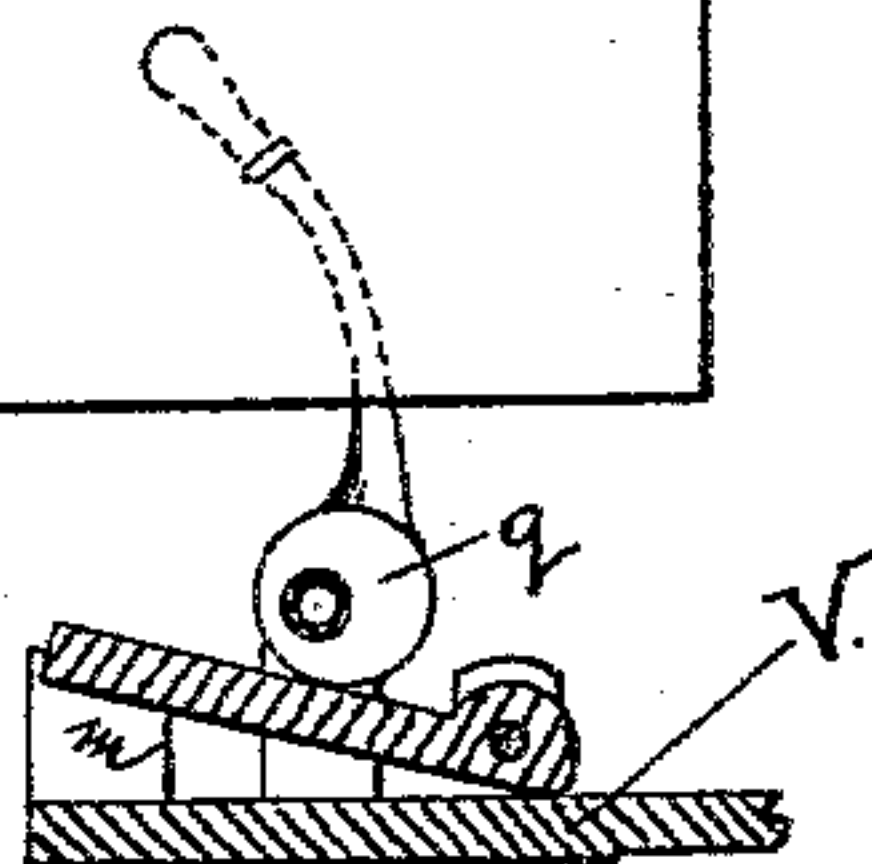
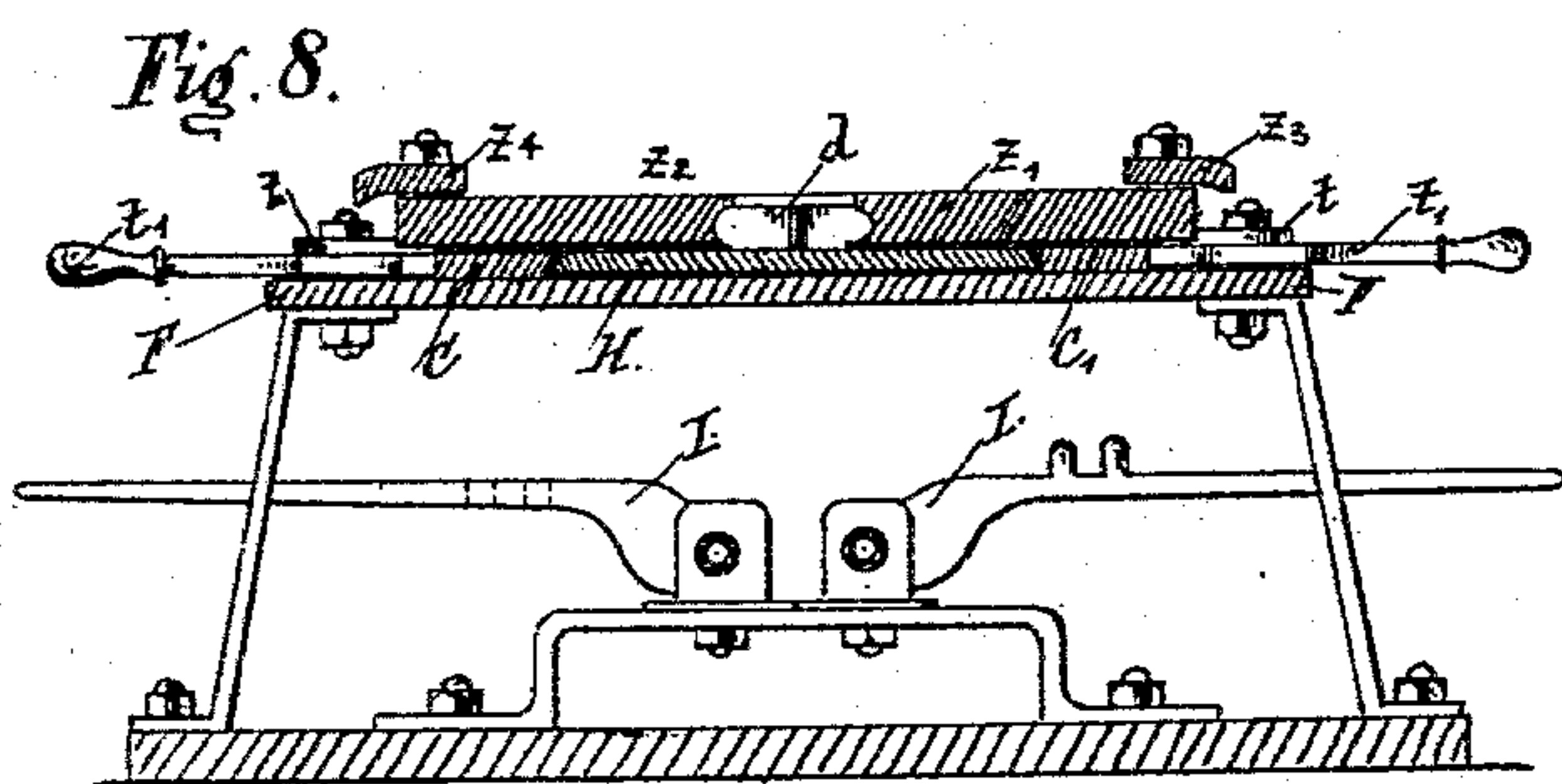
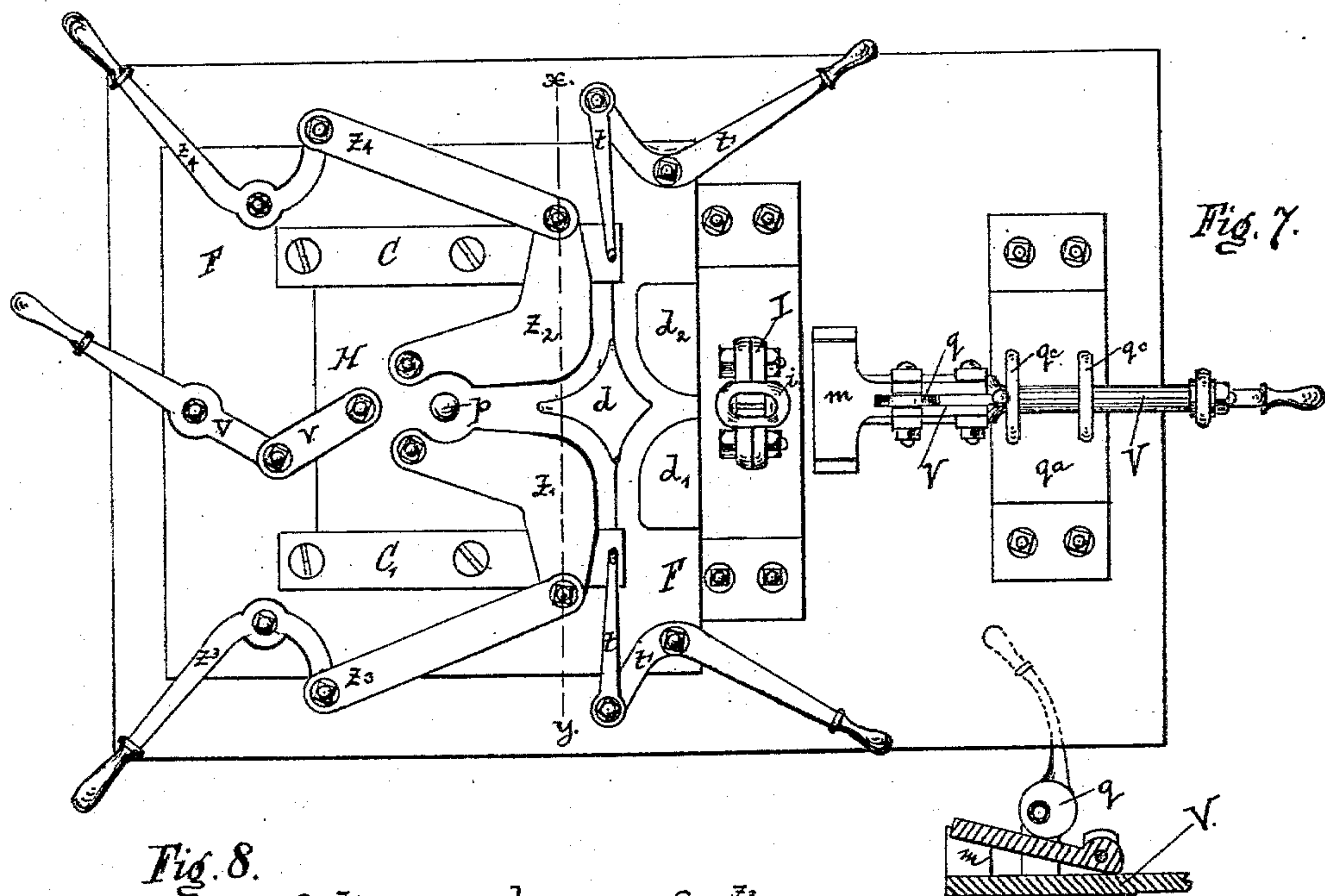
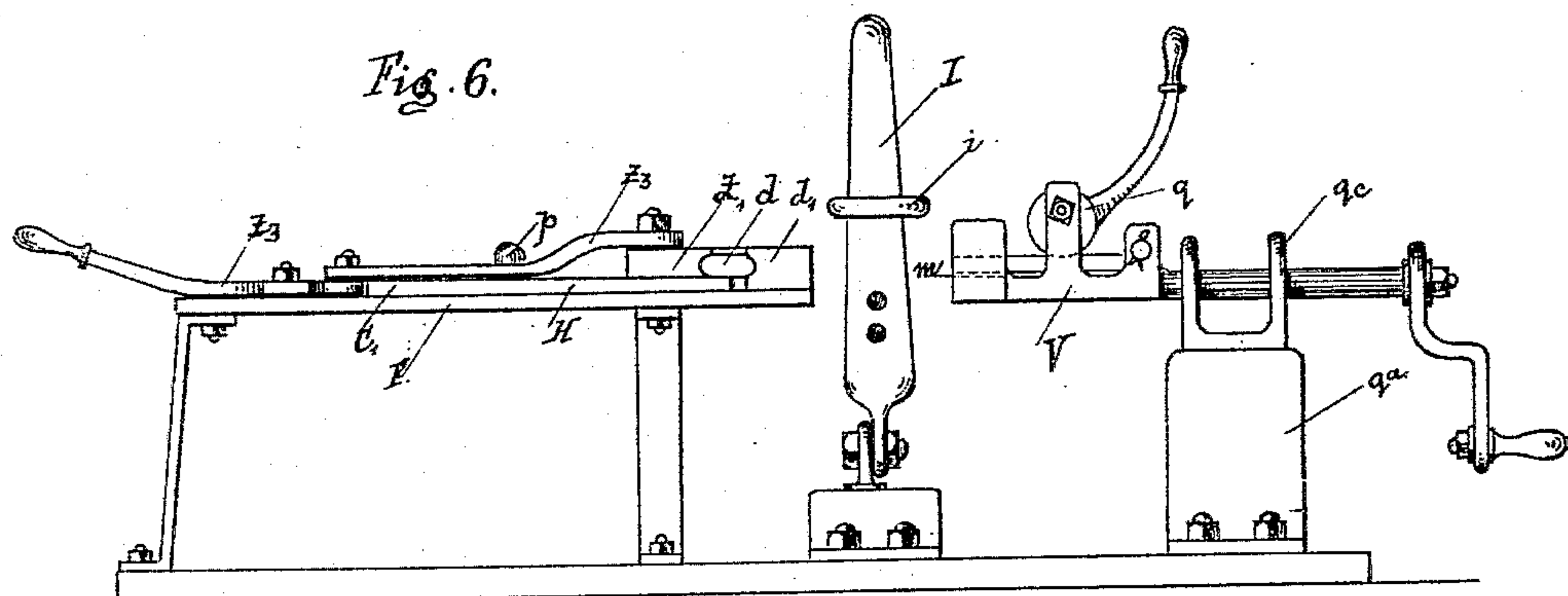
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2 Sheets—Sheet 2.

P. J. SCHARBACH.
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Chas Baumgarten.

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Peter J. Scharbach.

UNITED STATES PATENT OFFICE.

PETER J. SCHARBACH, OF WOODBURN, OREGON.

MACHINE FOR MAKING CLOTHES-PINS.

SPECIFICATION forming part of Letters Patent No. 548,662, dated October 29, 1895.

Application filed December 26, 1894. Serial No. 532,996. (No model.)

To all whom it may concern:

Be it known that I, PETER J. SCHARBACH, a citizen of the United States, residing at Woodburn, in the county of Marion and State of Oregon, have invented a new and useful Machine for Manufacturing Wire Clothes-Pins, (patented to J. W. Cook October 17, 1893, No. 506,980,) of which the following is a specification.

My invention relates to improvements in a machine to facilitate the manufacture of the said wire clothes-pins, being pressed together out of galvanized steel wire.

The objects of my improvements are to easily cut the wire to the proper length and thence, after turning the eyes on revolving disks with pins to hold the wire, have the cut and bent wire pressed to shape by a combination of levers without breaking the wire. After this the wire is twisted to the finally-desired form. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

On first sheet Figure 1 is a side view of the machine for straightening and cutting the wire and for making the three eyes of the pin. Fig. 2 is a top view of the machine. Fig. 3 is an end view of the machine. Fig. 3^a shows the knife and back plate of the machine. Fig. 4 is a view showing the revolving disk with its pins and spur-wheel lever. Fig. 4^a is a plan of a pin *u'*. (Shown in elevation in Fig. 4.) Figs. 5 and 5^a show the wire clothes-pin the machine manufactures. On second sheet Fig. 6 is a side view of the bending and twisting machine. Fig. 7 is a top view of the same. Fig. 8 is a cross-section through the dotted line *xy* in Fig. 7. Fig. 9 is a longitudinal section of the revolving and sliding vise-head of the machine.

Similar letters refer to similar parts throughout the several views.

On connected tables A and A', made of steel and elevated sufficiently on legs L, are fastened, as shown, at proper distances the rollers R, the knife K, fastened to back plate B, the guiding-pipe P, the revolving disks D and D', the adjustable measuring-pin O, and the guides G and G' for bending the eyes E^a on the wire. The coil-wire is placed over and between the rollers R, which are revolved by a crank-lever *a* and spur-wheels *b*, where-

by the wire is straightened and forced ahead on and between the rollers R, which are tightened by a spring *s*, and through a small hole *h* in the knife back plate B, Fig. 3^a, and thence through the guiding-pipe P, and between the pins *u* and *u'* on disks D, up to the adjustable measuring-screw O. Then the proper length of the wire is obtained and the wire is doubled or bent back up to the back plate B by means of revolving the disk D, where, after the wire which passed through the hole *h* is cut off by knife K, giving the two shanks of the bent wire equal lengths, as the disk D is located in the center between the adjustable pin O and the back plate B. After removing the wire shank remaining in pipe P from said pipe an eye E is formed, Figs. 5 and 5^a, on both ends of the shanks by means of revolving the disk D and placing the wire ends between the pins *u* and *u'*. Hereafter first one shank of the wire with its eye E on the end is abutted against guide G' and the wire is placed between the pins *u* and *u'* on revolving disk D', at the same time being easily held in proper position by notch *n* in guide G, and when now the disk D' is revolved the eye E^a is formed at the correct distance from eye E on each end of the wire shank, so that now the properly-bent wire has on the end of each wire shank two eyes E and in proper distance from them the two eyes E^a.

The revolving disks D and D' are revolved by means of a spur-wheel W and a spur-wheel lever *c*, fastened to the main pin *u* of both disks D and D' and under the table A. The spur-wheel lever *c* rests on guide-bars *g*, as shown. The smaller pin *u'* is formed as shown in Fig. 4 and top view of Fig. 4^a, having an offset at bottom. In this offset a notch is filed, which holds the end of the wire when the disk is turned.

On the second sheet of the drawings is shown the device for finishing the clothes-pin to its desired form. On a steel table F is secured a combination of levers, all made of steel. Between this table or shaper F, with its levers for shaping the wire and the revolving and sliding vise V, is placed the folding-clamp I. On the table F two bevel-edged cleats C and C' are securely fastened, wherein a plate H slides, which is moved back and forward

by an eccentric-lever v . On the end of this plate H the shaping-block d is riveted. By moving the plate H by means of the eccentric-lever v forward this shaping-block d is pressed against the stationary shaping-blocks d' and d^2 . To this sliding plate H the shaping-jaws Z' and Z^2 are pivoted, and which are pressed together and against block d by means of the double-extended eccentric-levers Z^3 and Z^4 . These shaping-jaws Z' and Z^2 , as well as the shaping-blocks d , d' , and d^2 , are grooved on the edges where they come in contact with the wire, so that they may clutch and hold the wire. Now when the eyes E and E^a are made as described before the folding-clamp I is opened and let down, as shown in Fig. 8, thus allowing the revolving and sliding vise V to take hold of the eyes E and E^a on the bent wire by placing these eyes in the mouth m of the revolving vise V, wherein they are then firmly held by the lowering of the eccentric-lever q . The revolving vise V is balanced and slid forward or backward in the uprights q^c of the stand q^a . After the eyes E and E^a are fastened by mouth M the spreaders t are hooked into each one of the wire shanks, respectively, and by moving the lever t' the wire shanks are sufficiently pulled apart, so that the lower part of the wire goes easily between the shaping-jaws Z' and Z^2 and the shaping-block d on sliding plate H, and the upper part of the wire is placed between the shaping-block d and the stationary shaping-blocks d' and d^2 , whereas the outer or bent end of the wire is slipped over pin p . Now to give the clothes-pin its first shape, 1 in Fig. 5, the eccentric-lever v on plate H is moved forward, so as to press the shaping-block d against the wire and the stationary blocks d' and d^2 . After this, by moving the double eccentric-levers Z^3 and Z^4 , the shaping-jaws Z' and Z^2 are closed and pressing now the wire against shaping-blocks d , thus forming shape 2 in Fig. 5. As the revolving vise V still holds the eyes E and E^a firmly in its mouth m , the vise V is turned once one and one-fourth turn, thus making the twist of the wire between the diamond-shaped parts of the clothes-pin at 1, Fig. 5, and the eyes E^a . Now the eccentric-lever q is loosened and the revolving vise V slid back against the uprights q^c on stand q^a , giving sufficient room for the vise V to take hold of the two outer eyes E, which are placed face to face together. Then the eccentric-lever q fastens down again the mouth m , and

the folding-clamps I are raised when the two inner eyes E^a are clamped between the blades of clamp I securely by slipping the ring i over the blades. As now the revolving vise V is turned again one turn, the clothes-pin is formed to its proper shape and ready for use.

I am aware that prior to my invention machines for manufacturing such wire clothes-pin have been in use. I therefore do not claim such a combination, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination in a machine, of a set of rollers "R" with crank-lever "a" and spur-wheel "b," a knife "K" on back-plate "B," a guiding-pipe "P," the revolving-disks "D" and "D'" a measuring-screw "O," and the guides "G" and "G'," all combined on and connected by tables "A" and "A'," as shown and for the purpose specified.

2. In a wire clothes-pin machine, the combination of a revoluble disk D, pins u and u' attached thereto, said pin u' having a V-shaped notch to receive the end of the wire being acted on, and means for revolving said disk, substantially as described.

3. In a clothes-pin machine, the combination of a revoluble disk, pins u and u' attached thereto, the pin u' having a V-shaped notch to receive the end of the wire being acted on, a spur-wheel connected to the disk, and a spur-lever for operating the wheel, substantially as described.

4. In a machine, the combination of a table "F" with its shaping-jaws "Z'" and "Z²," a shaping-block "d" "d'" and "d²," a clamp "I," and a revolving and sliding-vise "V," all substantially as set forth.

5. In a wire clothes-pin machine, the combination of a sliding-plate "H" with shaping-block "d" and shaping-jaws "Z'" and "Z²" thereon, and sliding in cleats "c" and "c'," and moved by the eccentric-lever "v," (whereas the shaping-jaws "Z'" and "Z²" are moved separately by the double-eccentric-extended-levers "Z³" and "Z⁴"), the stationary shaping-blocks "d'" and "d²," the spreaders "t" with their levers "t'," and all fastened to a table "F," for the purpose specified and set forth.

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

PETER J. SCHARBACH.

Witnesses:

A. OHLHOFF,

CHAS. BAUMGARTEN.