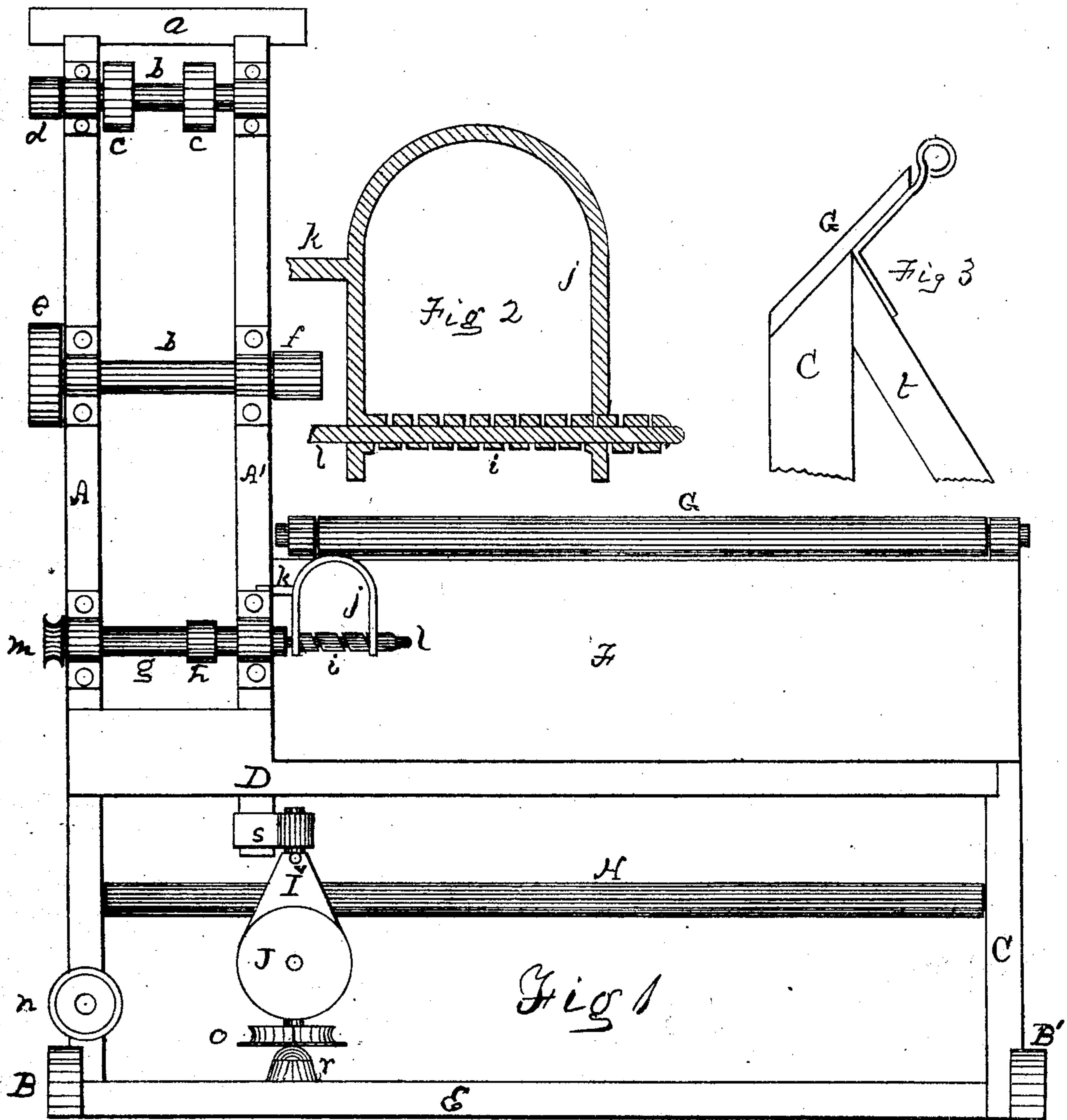


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Machines for Weaving Wire Fabrics.

No. 133,951.

Patented Dec. 17, 1872.



Witnesses.
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DAVID J. POWERS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MACHINES FOR WEAVING WIRE FABRIC.

Specification forming part of Letters Patent No. 133,951, dated December 17, 1872.

To all whom it may concern:

Be it known that I, DAVID J. POWERS, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Machine for Weaving Wire Fabric, of which the following is a full description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a front elevation; Fig. 2, an enlarged detail; and Fig. 3, a detail showing a portion of one end.

The object of my invention is to construct a machine by the use of which two or more wires can be twisted together, then coiled and fed into a web or fabric.

In the drawing, A A' represent two upright standards, connected at the top by the cross-bar *a*, upon which standards the shafts of the driving-pulleys are supported. C is a short standard, which is connected with a foot-piece, B', and is supported by the brace *t*. D is a cross-bar connecting A and C, and E is a bottom bar. A extends down and is secured to the foot-piece B, while the standard A' is secured to the cross-bar D, and does not extend down to the bed. F is an inclined table upon which the fabric lies, passing over the roller G, and it may pass down back of the machine and around upon the roller H. *b b* are shafts running in bearings on A A' upon which shafts are driving-pulleys. *g* is another shaft to which is secured the spindle *l*. Upon this shaft are driving-pulleys. *i* is a stationary hollow cylinder having a spiral groove cut through the body thereof, and it is permanently fastened to the yoke *j*, to which is connected a pin, *k*, which engages with the standard A', and prevents the cylinder *i* from turning. Within this hollow grooved cylinder *i* is the spindle *l*. The under side of this hollow cylinder *i* is cut away, leaving it quite thin, so that the wire, as it is coiled around the spindle *l*, will project beyond the lower side of the screw-cylinder *i*. In Fig. 2 these parts are half size. I is a revolving head, on each side of which is a spool, J, to receive a quantity of wire. These spools revolve upon an axis, passing through the head I. *o* is a pulley secured to the head I, by means of

which it is rotated. *r s* are bearings in which the head I revolves. The wire from each spool passes through a small hole, *v*, up through the shaft of the head I, thence up through the frame near the end of the stationary screw-cylinder *i*, and then is wound around the spindle *l*, following the groove in *i*. The spindle *l* is driven by a band passing over the pulley *c* and *h*. A band also passes over the pulley *d* and *e*; another band passes over the pulley *f*, and around the hollow cylinder *i*.

I think it is advisable to so arrange the pulleys that this belt around the hollow screw-cylinder *i* should move a little faster than the spindle *l*. This belt should be quite tight, so as to press the wire, as it is coiled, against the spindle *l*.

The block I with its spools J can be revolved with a belt or cord, passing over the pulley *n n o*, and a fourth pulley back of *n*, not shown. But I do not limit myself to this specific mode of driving the head-piece I. The speed with which I is to revolve depends upon the twist which the wires are to have and the speed of the spindle *l*.

In use the wires on the spools J are twisted, and then coiled around the spindle *l*, following the groove in the hollow cylinder *i*, and the coiled wire is forced along by the rotation of the spindle and the action of the belt, and fed or screwed from the outer end of the spindle *l* into the last coil of the fabric which lies upon the table F. The coil is then cut next to the spindle *l*, the fabric moved forward the required distance, and the operation is repeated.

The width of the fabric depends upon the purpose for which it is to be used.

What I claim as new is as follows:

1. The hollow stationary screw-grooved cylinder *i*, in combination with the spindle *l*, substantially as and for the purpose set forth.
2. In combination with the above, the revolving head I and spools J, substantially as described.

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