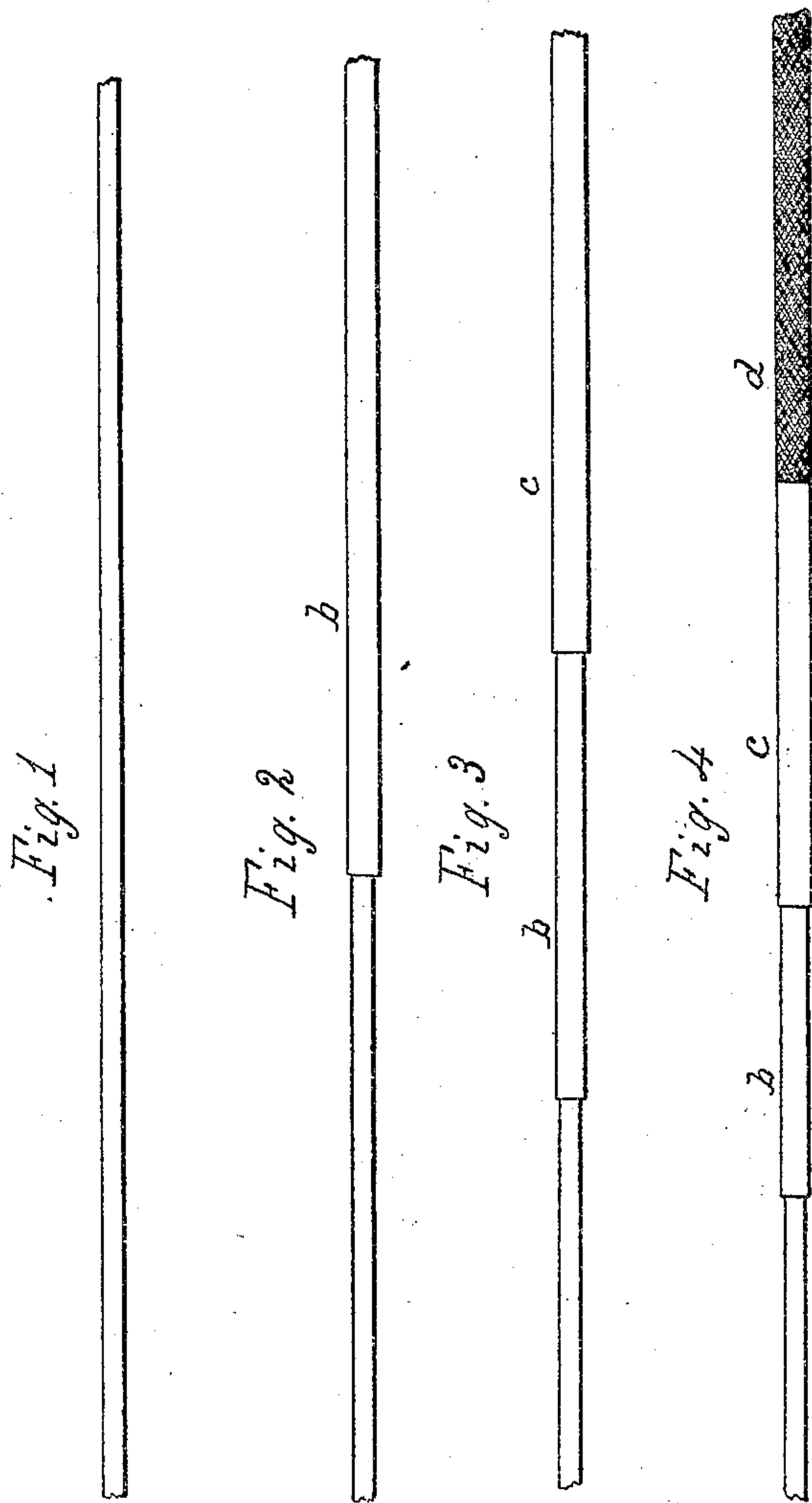


T. B. De Forest.

Hoop Skirt Wire.

N^o 59711

Patented Nov. 13, 1866



Witnesses

S. M. Chesney
Charles Speer

Inventor

T. B. De Forest
By atty
J. N. Mc Intire

UNITED STATES PATENT OFFICE.

T. B. DE FOREST, OF DERBY, CONNECTICUT, ASSIGNOR TO J. N. McINTIRE,
OF BROOKLYN, NEW YORK.

IMPROVEMENT IN HOOP-SKIRT WIRE.

Specification forming part of Letters Patent No. 59,711, dated November 13, 1866.

To all whom it may concern:

Be it known that I, T. B. DE FOREST, of Derby, of New Haven county, in the State of Connecticut, have invented a new kind of Covered Wire for Manufacture of Hoop-Skirts, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a novel method of covering wire or other strips of metal, particularly wire which is used in the manufacture of ladies' hoop-skirts.

Previous to my invention, wire or strips of metal have been covered in a variety of ways and with various materials, to be used in the manufacture of hoop-skirts; for instance, the wire has been wrapped with fine silvered wire, and it has been suggested to coat wire with india-rubber, and the wire has been braided or covered with cotton, the last-named kind of covering being the most (and almost universally) used for the purpose of manufacturing hoop-skirts.

As I have remarked, the wire braided or covered with cotton yarn is now, and has for some years been, most extensively employed in the manufacture of skirts; and for some time it has been, and is now, almost universally customary to braid or cover the wire with the cotton yarn rather openly—that is, not entirely cover the wire—and then subject the wire so covered to a glazing process, by which it is coated over with a sort of starch or size, whereby the openings between the thread are filled in or coated with the starch, as well as the threads, and a white, glossy, and desirable appearance given to the covered wire, without the use of so much cotton as would be necessary to entirely cover the wire and, without the use of glazing, give this white and desirable surface or exterior; and patents have been granted, I believe, covering this method of glazing such covered wire.

Although by this last-named method a desirable article is produced at a much less cost than that of wire fully or entirely covered with the cotton yarn, there are some objections to it in use, the main one being the liability and tendency of the size or starch to leave the wire

between the threads of cotton and leave the metal exposed, thus destroying the desired appearance when used in a skirt, and the necessity, on account of this difficulty, of using a large quantity of cotton, so that the open spaces between the threads will not be so large as to allow the flaking off of the starch to a damaging extent.

My invention has for its main objects to overcome these difficulties, and to afford with the use of less cotton yarn (and consequently at a much less cost) covered wire for the manufacture of skirts, and for other purposes, which shall be quite as desirable in appearance and more durable than the best braided and glazed covered wire heretofore made; and to these ends my invention consists in providing the wire, previous to its being braided with cotton yarn, with a coating or covering of cotton flocks, which is made to adhere with sufficient tenacity to the wire to remain there until braided over, whereby it is securely retained, and the whole surface of the wire provided with a durable surface or covering. The wire thus covered may be glazed or sized and finished in the same manner as now practiced with the wire which is simply braided without any previous coating or preparation of its surface.

To enable those skilled to make and use my invention, I will more fully describe it, referring by letters to the accompanying drawings, which illustrate my said invention.

I take the wire—such, for instance, as is now used in manufacture of skirts, as seen at Figure 1—and pass it through a bath or vat of dissolved rubber, or any other suitable material, and coat it over, as seen at *b*, Fig. 2. I then pass the wire so coated through a vat or reservoir of cotton flocks, covering the wire and rubber over with the flock, as seen at *c*, Fig. 3. I then pass the wire so prepared through the ordinary braiding-machine, and braid it over with cotton yarn, as seen at *d*, Fig. 4.

After thus preparing the wire, it may be glazed or not, as deemed expedient, though I propose to size and finish it, and judge that it will be more desirable for the manufacturer of hoop-skirts when thus glazed, or sized and finished.

It will be understood that by giving the

wire a covering or coating of flocks before braiding it, I can braid it very openly—that is, only very partially cover the surface with the cotton yarn, thus effecting an immense saving of cotton yarn and consequent reduction in the cost of manufacture—and still leave the entire surface presented of a cotton-like appearance, and of about the same character, or nearly so, as if the wire only were entirely braided over with the cotton yarn; and it will be seen that if wire prepared as described be glazed, the glazing or size will adhere much more tenaciously than it possibly can to the partially braided or covered metal surface.

Of course, in carrying out my invention, it is immaterial whether rubber be used for the first coating or any other substance which answers the purpose of sticking or holding on the flocks through which the wire is afterward passed, the gist of my invention resting in the idea of giving the wire the coating of flocks previous to its being braided, so that after braided the entire surface will be of cotton, though a very small quantity of yarn be used, and the solution of rubber being only one of various substances which may be used to effect the adherence of the flock to the wire.

It will be understood that only enough cotton yarn is necessary—that is, the number of threads need only be sufficient to hold the flock on, and the length of fiber of the flocks may be as long as deemed expedient.

The practice of my invention will enable any one skilled to determine the best length of fiber of the flocks, how little cotton yarn may be used with good effect, &c.

I do not desire to be understood as wishing to limit myself at all in the practice of my invention to any peculiarity of the flocks, or to the quantity of material to be used, or to the substance mentioned for coating the wire to receive the flocks; but,

Having explained my invention, what I claim as new, and desire to secure by Letters Patent, is—

Wire coated with flocks, and then braided with yarn, either with or without being afterward glazed, or sized and finished.

In testimony whereof I have hereunto set my hand and seal this 20th day of July, 1866.

THOS. B. DE FOREST. [L. S.]

In presence of—

WILLIAM PESINGER,
JOHN S. PIPENGE.