

S. S. Gray.
Collar.

No. 46,232.

Patented Feb. 7 1865.

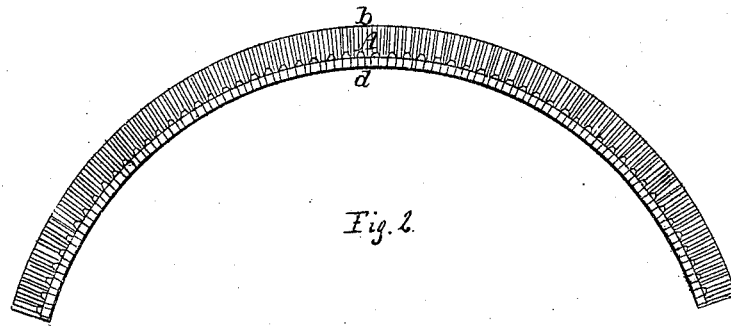


Fig. 2.

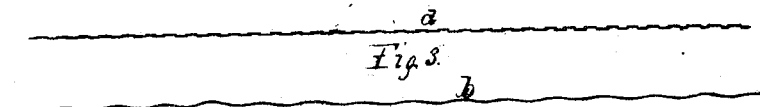


Fig. 3.

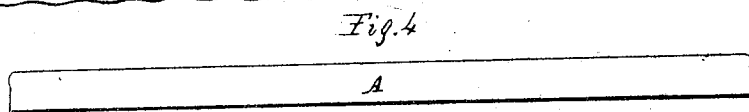


Fig. 4.

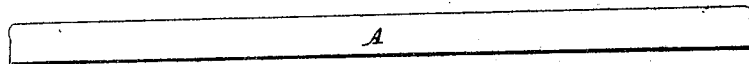


Fig. 1.

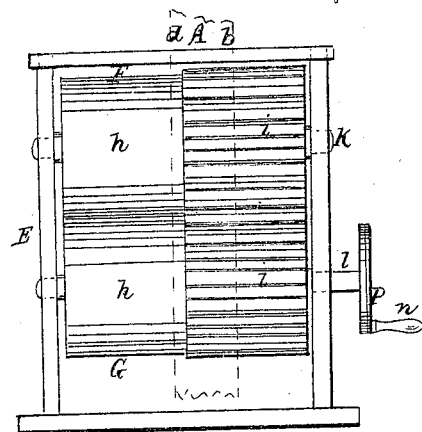


Fig. 5.

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UNITED STATES PATENT OFFICE.

SOLOMON S. GRAY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN LADIES' PAPER COLLARS.

Specification forming part of Letters Patent No. 46,232, dated February 7, 1865.

To all whom it may concern:

Be it known that I, SOLOMON S. GRAY, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Paper and Cloth-and-Paper Collars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan of a lady's collar before it is formed, being a straight strip of paper or cloth and paper. Fig. 2 is a similar view of the same after it is formed or finished. Fig. 3 is a view of the concave edge of a finished collar, and Fig. 4 is a view of the convex edge of the same. Fig. 5 is a front elevation of a machine by means of which the straight strip shown in Fig. 1 is formed into the curved and finished collar shown in Fig. 2.

Like parts are indicated by the same letters in all the drawings.

My improvement is more particularly applicable to what are known as 'ladies' collars,' of paper or cloth and paper, which are now cut out on curved lines or the arcs of circles, so as to give them the requisite shape when on the wearer's neck, the great objection to which method of construction is the necessary waste of material attendant on the cutting out of the curved strips of which the collars are formed.

The nature of my invention, therefore, consists in constructing a collar out of a straight strip of paper or cloth and paper and giving it the requisite curve by contracting one of its edges by plaiting, doubling, or folding down the same, while the opposite edge remains either smooth or slightly corrugated.

To enable others skilled in the art to make and use my invention, I will now describe the construction and operation of the same.

I first cut out the material into straight strips A of the required length and width, as represented in Fig. 1. These strips I run

through a machine represented in Fig. 5, in which E is the frame, and F and G two cylinders of suitable metal, provided with axles *k* and *l*. One part, *h*, of the periphery of these cylinders is smooth, the other part, *i*, being provided with cogs—those of the one cylinder meshing into those of the other like the teeth of two pinion-wheels. These cylinders may be straight or slightly conical. They are pressed together with the requisite force by springs on their axles.

F is a pulley, by which the machine is driven by a belt, or it may be driven by means of the crank *n*.

The collar on being passed between the two cylinders F and G (in the position represented by the dotted lines in Fig. 5) assumes the curved form shown in Fig. 2, the concave edge *d* being plaited and flattened down by the smooth part of the cylinders, and consequently contracted in length, as represented in Fig. 3, while the opposite edge, *b*, is only slightly waved or corrugated, as represented in Fig. 4. The part *b* may, however, be left nearly or entirely smooth, if desirable—as, for instance, on the outer part of a turn-over collar, either for ladies or gentlemen—the contracting of the part *d* giving the collar the requisite flare or space between the outer and inner portions. In this manner properly shaped and highly ornamental collars can be made with great rapidity, cheapness, and economy of stock.

Having thus described the nature of my invention, what I claim as new, and desire to secure by Letters Patent, is, as a new article of manufacture—

A paper or cloth-and-paper collar, to which the requisite curve or shape is given by contracting one of its edges, substantially as described.

SOLOMON S. GRAY.

Witnesses:

N. AMES,
HENRY F. SHAW.