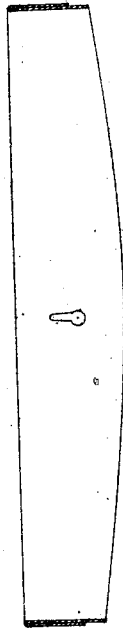


J. H. Hoffman,
Collar.

No. 45998.

Patented Jan. 24. 1863.



Witnesses.
W. & C. Smith
E. W. W. Griffiths

Inventor.
J. H. Hoffman
by his attorney,
Thomas D. Nelson

UNITED STATES PATENT OFFICE.

JAMES H. HOFFMAN, OF NEW YORK, N. Y.

IMPROVEMENT IN TURN-DOWN ENAMELED PAPER COLLARS.

Specification forming part of Letters Patent No. **45,998**, dated January 24, 1865.

To all whom it may concern:

Be it known that I, JAMES H. HOFFMAN, of the city, county, and State of New York, have invented a new and useful Manufacture of Folded Paper Collars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification and giving a view of a folded paper collar with the ends in section.

It has been frequently attempted to manufacture merchantable folded glazed paper collars from ordinary materials, but hitherto without success, for when common paper is used with an enameled surface it is impossible so to fold the collar made therefrom as not to separate the enamel from the paper or break the paper at the fold, and in either result the folded collar so produced is imperfect.

Now, it is the object of my invention to manufacture folded paper collars so that both the enamel and paper of which they are composed shall fold without fracture and with a perfectly smooth finish on the folded edges of the collar; to which end my invention consists in the use of a paper made wholly or in great part of linen stock, and intimately combining therewith an enameling composition that shall be intimately incorporated with the fibers of the paper on its finished surface.

In the manufacture of the paper from which I make my improved collars I am careful not to reduce the linen stock to a finer pulp than is absolutely necessary for paper of the thickness required; that the fibers may remain long and the body of the paper be uniformly flexible, or I am careful only to purchase for my manufacture linen paper having these characteristics—namely, a long fiber and uniform flexibility. Taking paper so made I moisten and steam it until all its pores or the spaces between its fibers are opened to the degree required to receive the composition, which constitutes the enamel of the collar when finished. The composition I prefer for this purpose consists of about four parts of blanc fix, one part of white wax, and a trace of ultramarine to give the required tint. The blanc fix being digested (like the ultramarine) in hot water, and the white wax being melted, are mixed in about these proportions and stirred thoroughly to-

gether until the wax is intimately incorporated with the other materials and the whole reduced to a thin homogeneous paste, which is now applied warm to the steamed paper by a brush or by coating a warm metal plate and then laying the paper sheet by sheet upon the plate and letting the composition be absorbed from its surface. The paper thus coated with the composition described is now passed between smooth or polished heated rollers, which exercise a heavy pressure, sufficient to smooth and polish brightly that surface of the paper to which the enamel was applied and render the adhesion and union of the enamel with the fibers of the paper complete.

I thus accomplish two results that have not hitherto been achieved in the manufacture of paper for folding collars—first, the enamel is completely incorporated with the fibers of the surface of the paper to which it is applied, so that both the paper and enamel will closely adhere together when bent or folded, and, secondly, the paper is rendered so thoroughly and uniformly flexible that it can be folded in the closest manner without rupturing its fiber.

From the paper thus prepared and finished I cut by the most approved modes the collars of the shape desired for ladies or gentlemen and fold them as shown in the drawing.

It is obvious that the collar can be embossed or punched or printed as desired, for the surface of my enamel will receive without injury either style or ornamentation or any punch desired. It is also obvious that my collars thus made from paper prepared as described will always be perfectly smooth on their folded edge, and can be manufactured without any waste from defects in the fold.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

The new article of manufacture herein-described, constituting a turn-down or folded collar, made and finished substantially in the manner and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

JAS. H. HOFFMAN.

Witnesses:

WM. D. BALDWIN,
HENRY BALDWIN.