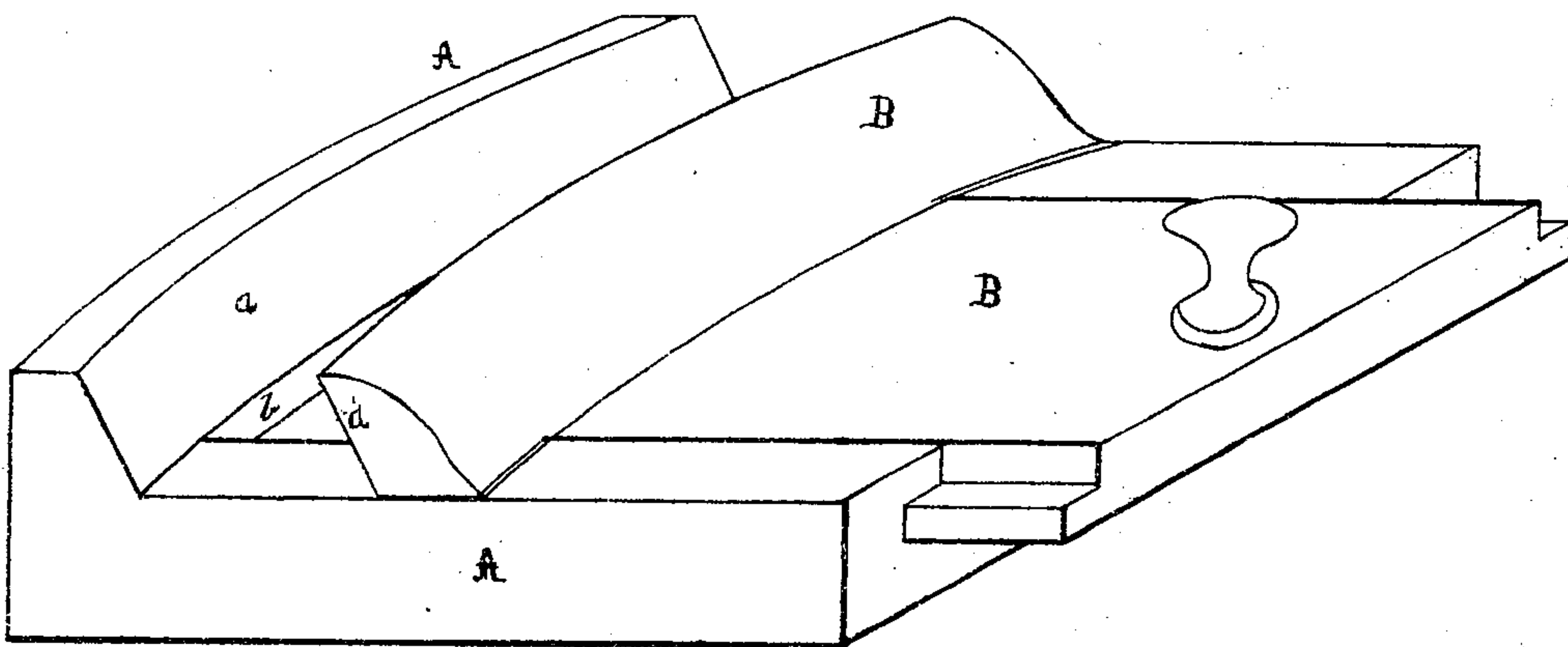


*S. S. Gray,  
Collar Machine.*

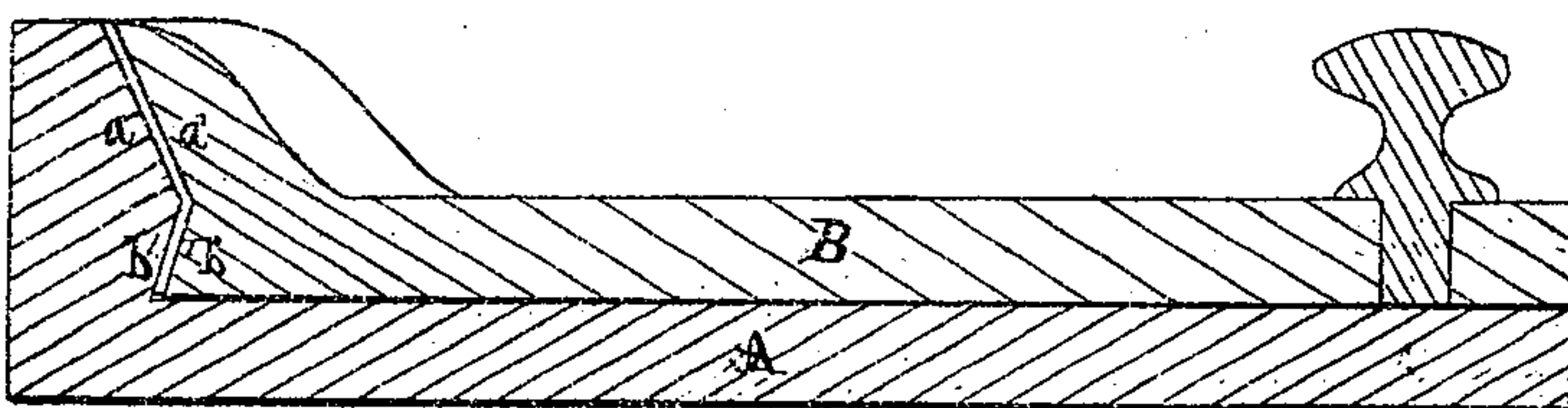
*No. 70,996.*

*Patented Nov. 19. 1867.*

*Fig. 1*



*Fig. 2.*



*Witnesses.  
M. S. G. Wilder.  
David Kelleher.*

*Solomon S. Gray*

# United States Patent Office.

SOLOMON S. GRAY, OF BOSTON, MASSACHUSETTS.

*Letters Patent No. 70,996, dated November 19, 1867.*

## IMPROVEMENT IN APPARATUS FOR MOULDING COLLARS.

The Schedule referred to in these Letters Patent and making part of the same.

### 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 Moulds for Paper Collars, &c., or other material of which pulp is an essential component; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the mould.

Figure 2 represents a vertical longitudinal section through the same.

Similar letters refer to the same parts in the separate figures.

The object of my invention is to provide a simple and efficient means for moulding to the proper shape a paper collar, so as to enable it to be fitted neatly and comfortably to the neck of the wearer; and the invention consists of a mould formed of metal or other suitable material, and composed of two dies or formers, the faces of which are curved in the direction of their length, and in transverse section present an obtuse angle in such a manner as to give to the upper portion of a standing collar, or to a turn-down collar, after the latter is folded, the proper flaring form, and thus render it capable of being turned down without puckering or wrinkling, and securing a neat and accurate fit to the neck.

Referring to the drawings, A represents a recessed base-plate, in which is fitted, to slide freely, a plate, B, the sides of the latter being arranged to slide in grooves or guides on the inner sides of the raised portion of the base A. At one end of the base A is a raised portion, A', the inner surface of which is curved in the direction of its length, and in transverse section presenting an angle so as to form two faces, *a b*, inclining in opposite directions, as shown in fig. 2. The bed of the base-plate A forms a gauge, upon which the lower edge of the material rests while being operated upon, thus insuring a regular and uniform finish to the collar. The inner edge of the plate B is also provided with a raised portion, B', the face of which is shaped to correspond with that of the portion A', as seen in fig. 2. The ends of the upper faces *a a'* of the curved surfaces of the mould extend beyond the lower faces *b b*, as seen in fig. 1, to conform to the projecting ends of the collar.

The faces of the formers or dies A B, instead of forming an angle, may join on a curve.

The paper strip to be operated upon, being properly prepared, is placed between the dies A B, the lower edge of the said strip being placed or resting upon the bed of the die-plate A, when the die B is forced forward by any suitable mechanical means, thus imparting to the collar the proper or desired form.

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

A combined gauge and mould or former for placing and shaping paper collars, constructed and operating substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SOLOMON S. GRAY.

Witnesses:

M. S. G. WILDE,  
DAVID KELLEHER.