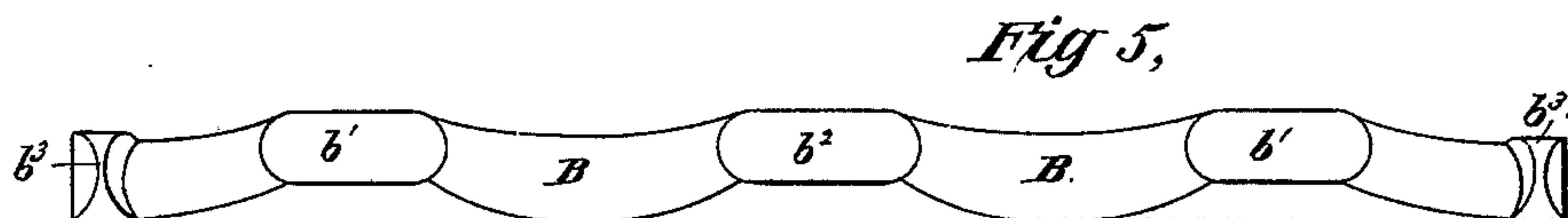
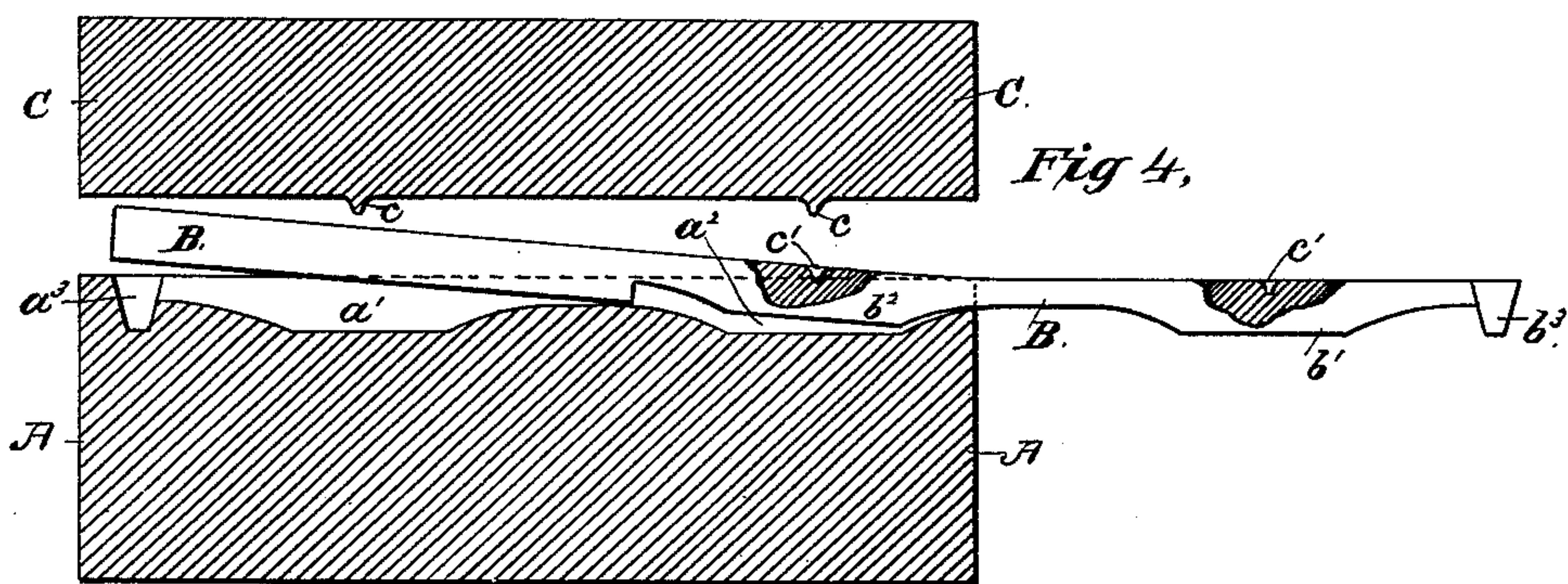
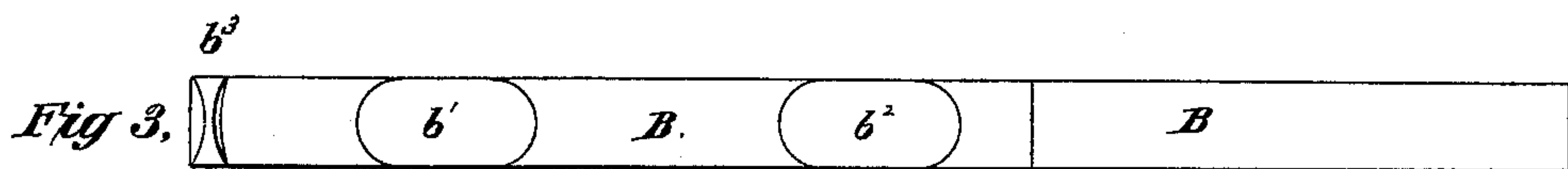
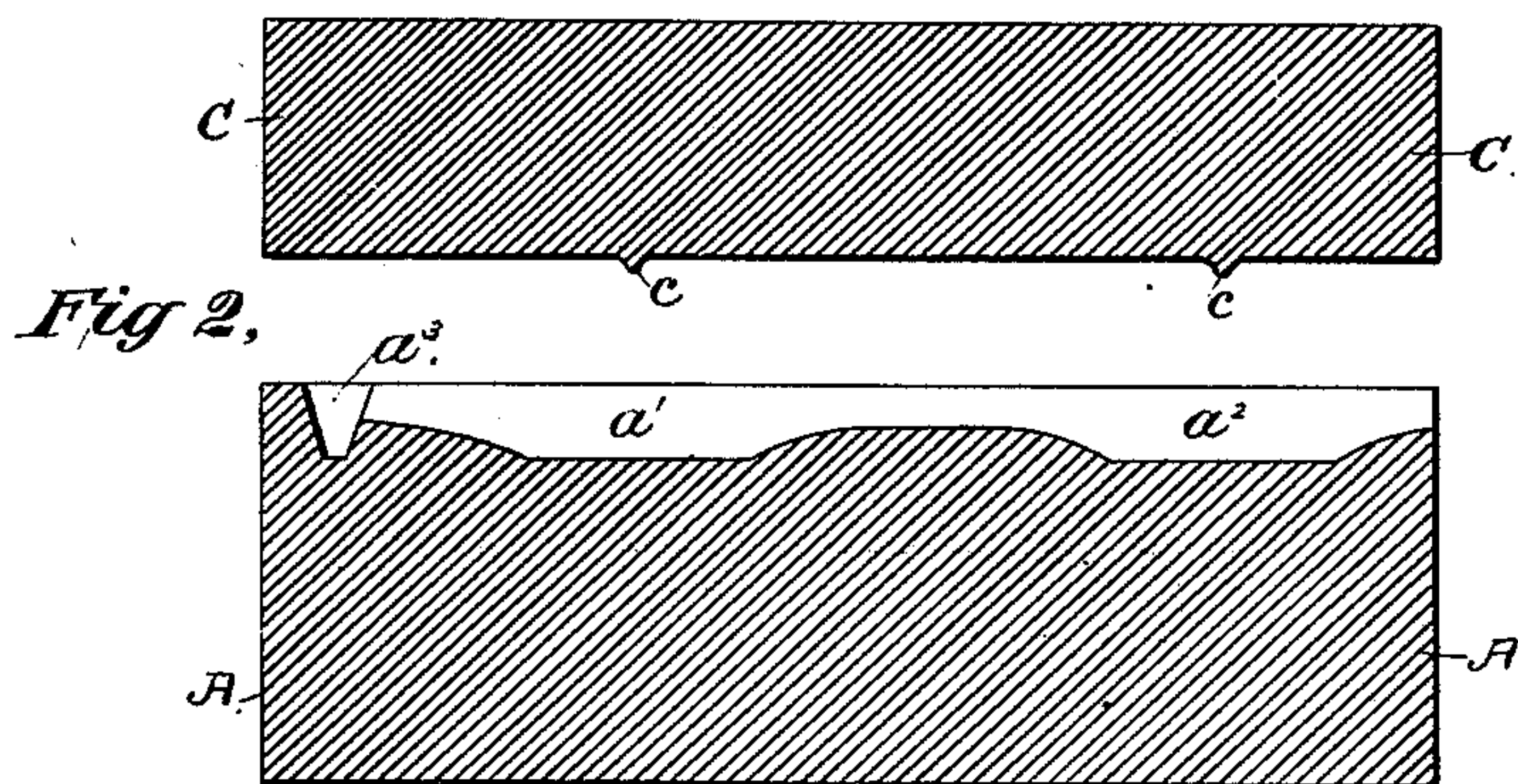
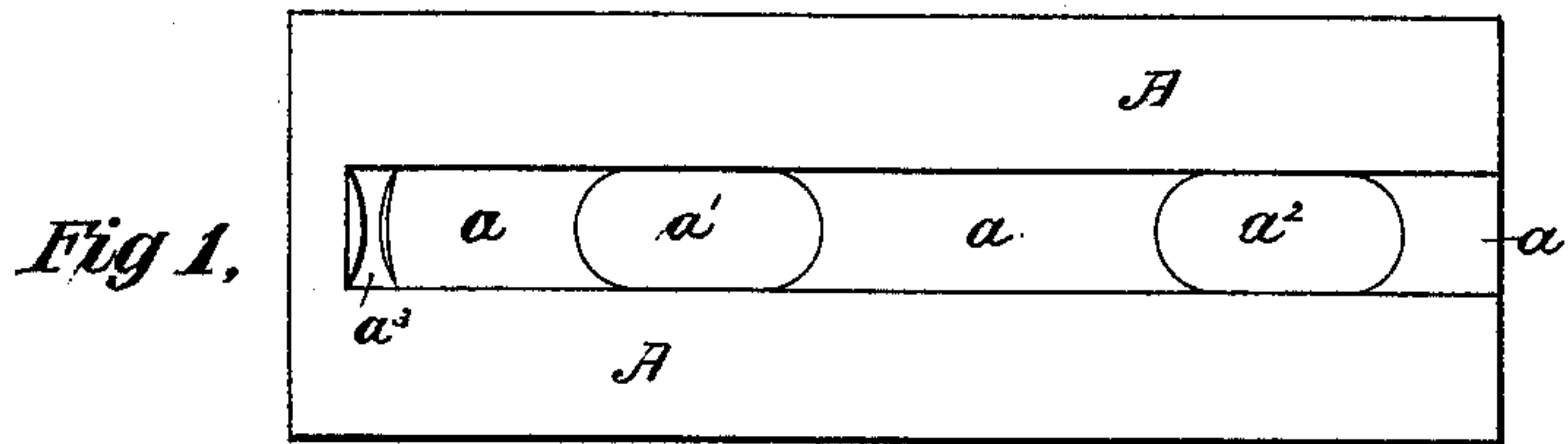


D. WILCOX.
 Dies for Swaging Blanks for Fifth Wheels.
 No. 233,128. Patented Oct. 12, 1880.



Attest:
 Geo. T. Smallwood Jr.
 Walter Allen

Inventor:
 Darius Wilcox
 By *Knight Bros* attys.

UNITED STATES PATENT OFFICE.

DARIUS WILCOX, OF DERBY, ASSIGNOR TO WILCOX & HOWE, OF
BIRMINGHAM, CONNECTICUT.

DIE FOR SWAGING BLANKS FOR FIFTH-WHEELS.

SPECIFICATION forming part of Letters Patent No. 233,128, dated October 12, 1880.

Application filed October 14, 1879.

To all whom it may concern:

Be it known that I, DARIUS WILCOX, of Derby, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Processes and Appliances for Swaging Fifth-Wheel Blanks, of which the following is a specification.

My invention relates in part to a novel mode of swaging blanks for fifth-wheels; and it consists in swaging a part (more than one-half) of the blank at the first operation in a suitable die, and then, by reversing the partly-formed blank end for end, swaging the final end in the same or a precisely similar matrix, so as to produce ends of accurately corresponding shape, and use the center first formed to gage the length of the end last formed, so that the ends of the blank will be exactly alike in shape and exactly equal in length from a determined center.

The invention further relates to a die for carrying the process into effect.

In Letters Patent No. 221,886, granted the 18th of November, 1879, to Wilcox & Howe, assignees of Darius Wilcox, I described dies in connection with which adjustable gages are used to determine the length of the successive ends of a blank swaged at two operations.

Under my present invention I dispense with such gages, having devised a mode of operation and a form of die especially adapted for blanks whose sides and ends are respectively alike, so that their ends may be swaged successively in the same matrix.

In the accompanying drawings, Figure 1 is a plan of a bed-die illustrating my invention, adapted for forming a blank with three bolt-hole spots. Fig. 2 is a vertical longitudinal section of the said bed-die and an upper die used in connection therewith. Fig. 3 is a plan of a partly-formed blank after the first swaging operation. Fig. 4 is a vertical longitudinal section of the two dies with the blank between them in position for the second swaging operation. Fig. 5 is a perspective view of the complete blank as swaged in two operations on its successive ends by means of the dies shown in Figs. 1, 2, and 4.

A represents a bed-die, formed with a groove,

a, having a concave curvature in transverse section adapting it to impart the desired transverse convexity to the body of the blank B.

Within the groove *a* are pockets *a'* *a*² to produce the prominent surfaces or spots *b'* *b*² on the blank B, the said spots being adapted for use for the reception of bolt-holes for attaching either a single or double reach, or for other purposes, according to the character of the gear to which the fifth-wheel is to be applied or for which it is made.

At the extremity of the groove *a* is formed a pocket, *a*³, to produce the lugs *b*³ on the extremities of the blank; but this is not essential to the invention. The said end lugs are not always used.

C represents the top die by which the blank is struck.

It will now appear that the first operation of the dies A C will produce the partly-formed blank shown in Fig. 2, with a projecting spot, *b*², centrally located, or at a distance from the finished end equal to one-half the length of the finished blank. By now changing the partly-formed blank end for end and replacing the central spot, *b*², in reversed position over its forming-pocket *a*², the end of the said central spot which is nearest to the first or finished end of the blank may be set down within the pocket *a*² of the die, as illustrated in Fig. 4. The said forming-pocket and central spot thus constitute a guide for accurately setting the partly-formed blank for the final swaging operation, and insure the formation of the second end precisely like the first, both in shape and length.

To insure the filling out of the spots without the use of iron as heavy as would otherwise be required, I prefer to form on the face of the upper die, C, projections *c*, located centrally above the spot-pockets of the lower die and adapted to form depressions *c'* in the back of the blank. In addition to the advantageous effect of this displacement of metal in filling out the spots and avoiding the necessity of using such heavy metal as to cause much waste at the thinner parts of the blank, the cavity itself effects a saving of labor in drilling the bolt-hole,

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The mode or process of forming fifth-wheel blanks by swaging one end and the central portion in dies constructed substantially as herein described, and then changing the partly-formed blank end for end and swaging its second end in the same or corresponding dies, so as to gage the length of the second end from the center first formed and produce ends of precisely corresponding shape.

2. The dies constructed, as herein described, with pocketed grooves alike on both sides of their longitudinal center, to adapt them, by swaging the two ends of a bar successively in the same groove or matrix, to form fifth-wheel blanks with ends of precisely uniform or corresponding shape and of equal length from a determined center.

DARIUS WILCOX.

Witnesses:

OCTAVIUS KNIGHT,
WALTER ALLEN.