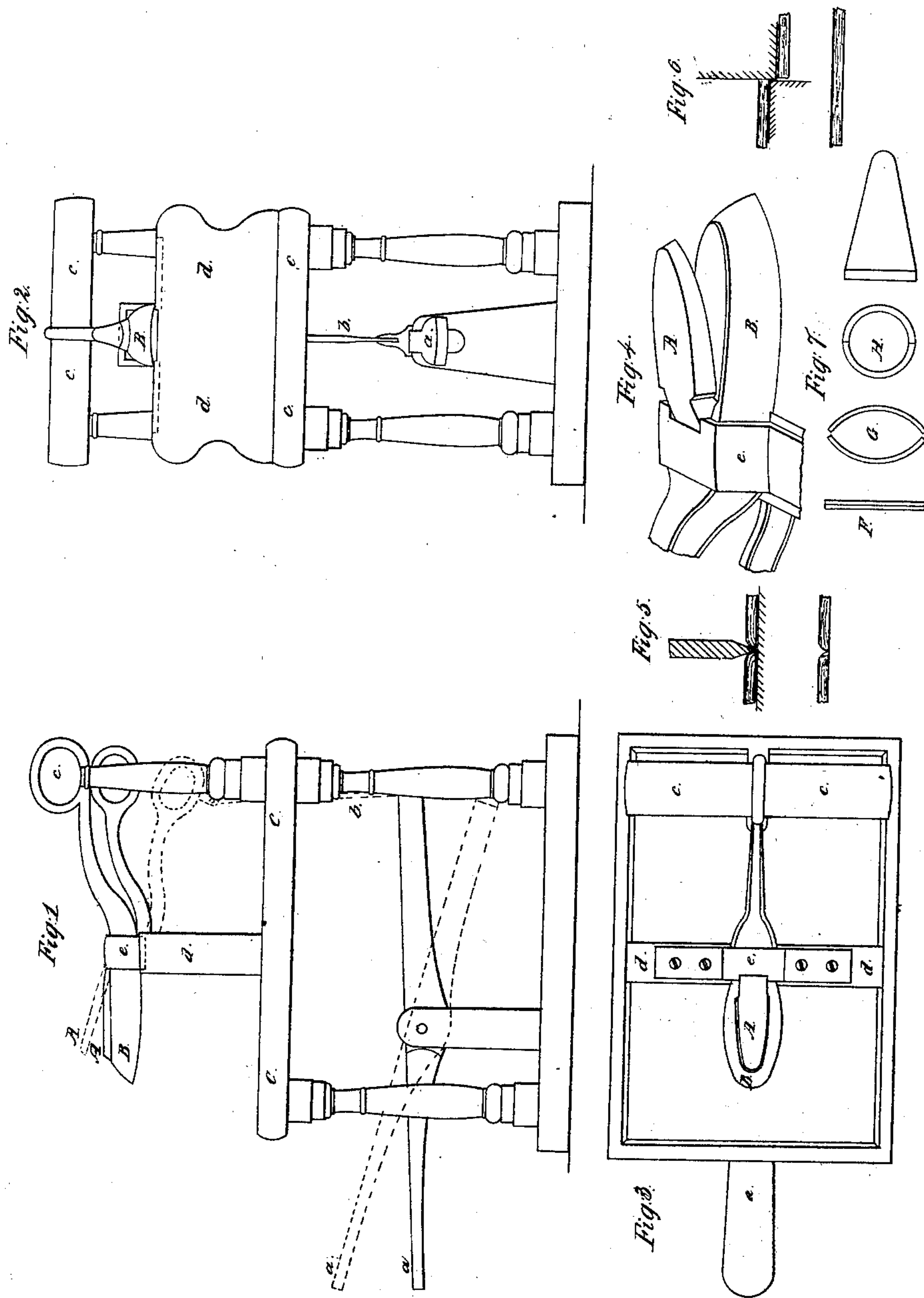


D. D. PARMELEE.
MANUFACTURE OF INDIA RUBBER GOODS.

No. 21,697.

Patented Oct. 5, 1858.



UNITED STATES PATENT OFFICE.

DUBOIS D. PARMELEE, OF NEW YORK, N. Y.

TOOL FOR MANUFACTURING GOODS OF CAOUTCHOUC.

Specification of Letters Patent No. 21,697, dated October 5, 1858.

To all whom it may concern:

Be it known that I, DUBOIS D. PARMELEE, of the city of New York, in the county and State of New York, have invented a new and improved machine or tool for the manufacture of goods made up in part or in whole of caoutchouc of a hollow or annular form or of any other shape requiring for its production from said caoutchouc or india-rubber sheets the formation of joints at the edges thereof; 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, which forms part of this specification, and in which—

Figure 1, represents a side view of the tool as constructed for the cutting of nipples; Fig. 2, a front view thereof; Fig. 3, a plan and Fig. 4, a view in perspective of the cutting portion of the tool as shaped for cutting nipples. Figs. 5, 6, and 7, are diagrams in illustration of my improvement.

My invention has for its object the manufacture, in a more rapid and perfect manner than is now known in the arts or to the trade of that description of india rubber goods, which are made by first cutting out of caoutchouc or its compounds in the sheet, forms, the cut edges of which are designed to be afterward united by sticking them together to make the article required. To illustrate, my invention is admirably adapted to the making of "artificial nipples", from which example it will readily be inferred how varied and numerous are the articles of the material mentioned that, by shaping the cutting edge of the tool to suit, may be made according to this my improvement, or by it.

Referring to the accompanying drawing, Figs. 1, 2, 3, and 4, of the tool as shaped for cutting nipples it will be seen that this tool is composed mainly of two levers or jaws with handle continuations somewhat resembling a pair of shears, and I here show the same provided with loops at the back ends, so that the tool may, if it is preferred, be held and opened and closed by hand after the manner of a pair of scissors or be otherwise driven or worked, but it is here shown as operated, that is the one jaw (A), by foot acting on a treadle (a) and connecting rod (b) from below, the other jaw (B) being supposed to be stationary and held by a cross stick (c) passing through its end loops and uniting it with the frame and further

held or resting on a cross piece (d) of the table or frame (C) on which the tool is mounted. Thus arranged, the one jaw (A) acts within the other jaw (B) from a fulcrum pin or pivot (e) as a center of motion, the former jaw (A) being of a tongue configuration at its front end and working down within the front end of the lower jaw of a mouth configuration, the edges of said tongue and mouth being sharpened to cut as they pass—the former into or within the latter—on each side simultaneously and beginning gradually from the end nearest the fulcrum. The under surface of the tongue is so shaped as to hold air between it and the material being cut to prevent adhesion of the latter to the former and to obviate the necessity of the operator fingering or damaging the "form" cut, also to facilitate the discharge of the cut form by the jar produced by the end loop of the operating jaw striking the end loop of the other jaw in finishing the cut.

The "form", it will be seen, which is cut by the tongue and mouth of the two jaws, on placing two slips together of india rubber on the mouth of the one jaw (B) as a table and working the treadle so as to depress the tongue of the other jaw, will be that of a flattened nipple, with its inner faces in close contact and touching and united along the corners of the inner edges of the two sections as shown at (F) in Fig. 7, so that on opening the cut form as at (G) in the same figure, the two sections or pieces of which it is made will hold each other at their edges in their required relative positions to each other, without risk of slipping therefrom, for sticking together and closing the seams of the article as shown at H in Fig. 7. In this connection it should be specially remarked that to secure the sticking together of the edges of the two sections it is necessary, that the "cut" should be such a fair right-angled one to the epidermis or the thin outside membrane of the rubber as not to draw down the said epidermis over the edges of the sections as would take place by the use of a punch acting in connection with a die as illustrated in Fig. 5 and which is avoided by the jaw action herein described as illustrated in Fig. 6.

By this tool, it will be seen, the whole form may be cut at one action and the cut edges simultaneously joined for subsequent closure and adhesion of the seams prepara-

tory to finishing them, the cut forms, with their two seams partially joined to hold them in place and with their edges cut so that they will readily adhere, falling on the
5 table below each fresh feed of the slips or sheets of rubber and depression of the tongue or operating jaw that by its configuration and jar given it at close of the stroke insures the speedy delivery of the cut forms. In this
10 way many articles of the description I have mentioned, varying in shape according to the design of the cutting edges of the tool, be made with smooth and perfect seams much more rapidly and accurately, than is
15 now done by scissors operated by hand and gradually worked around to give the required form to the 2 sections without drawing down the epidermis of the rubber material over the edges of the sections—a necessary feature to observe in such manufacture.

20 Having thus fully described my improvement I wish to be understood as not limiting myself to the precise form and construction

of the parts described herein, as these may be varied without affecting the principle of my invention. But

I claim—

The instrument or tool for cutting sheets of india rubber or its equivalent, constructed substantially as described, consisting essentially of two jaws, provided with cutting edges, shaped according to the form intended to be produced—when one jaw is to operate within the other so as to effect shears action for cutting forms at one stroke and leaving edges thereon which are capable of being united in a more perfect and expeditious manner than has ever been done heretofore.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

DUBOIS D. PARMELEE.

Witnesses:

A. BLEAL,

EDM. F. BROWN.