No. 864,720. PATENTED AUG. 27, 1907.

N. BARRY, Jr.

BUTTON MAKING MACHINERY.

APPLICATION FILED DEC. 22, 1906.

Fig. 1.

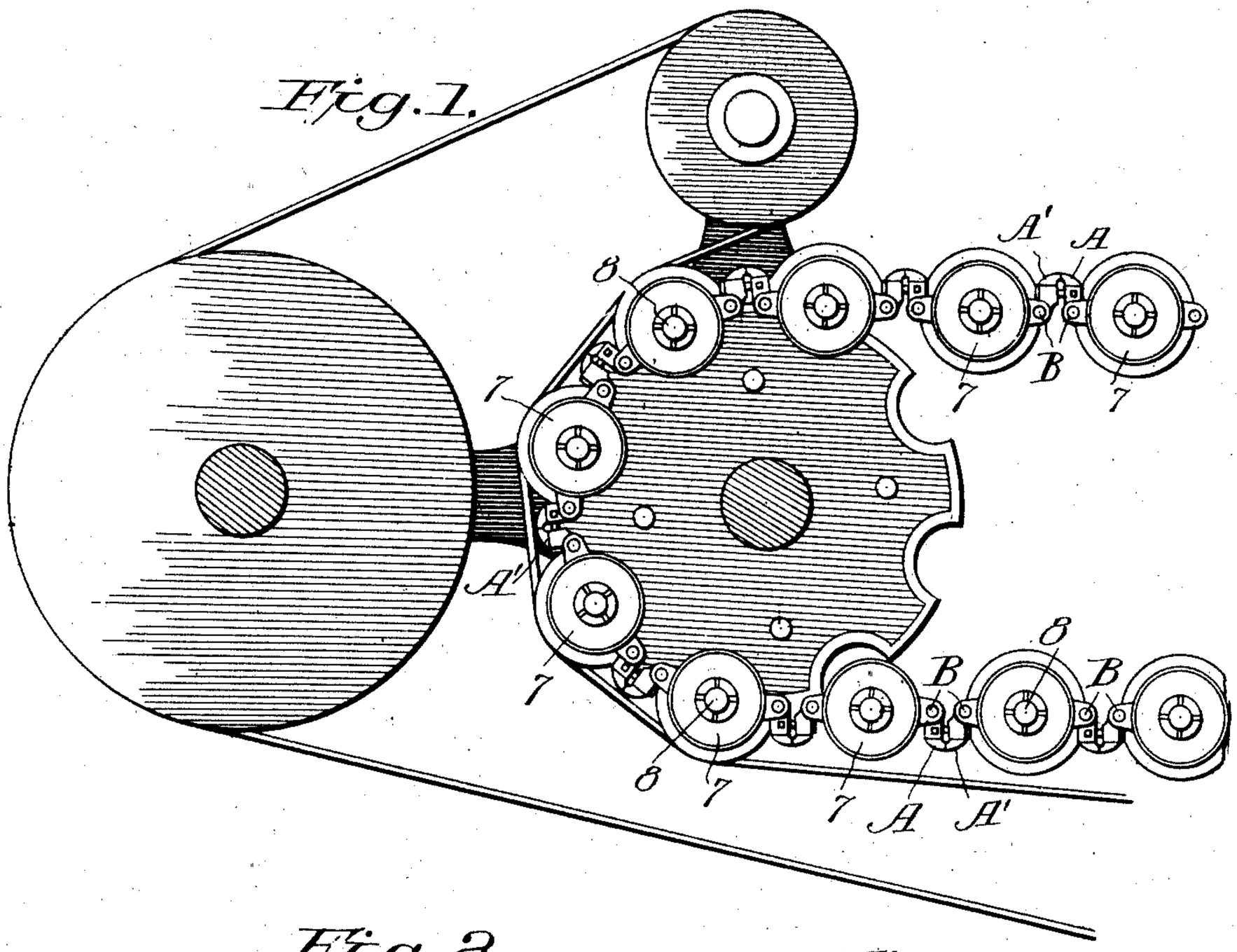


Fig. 2.

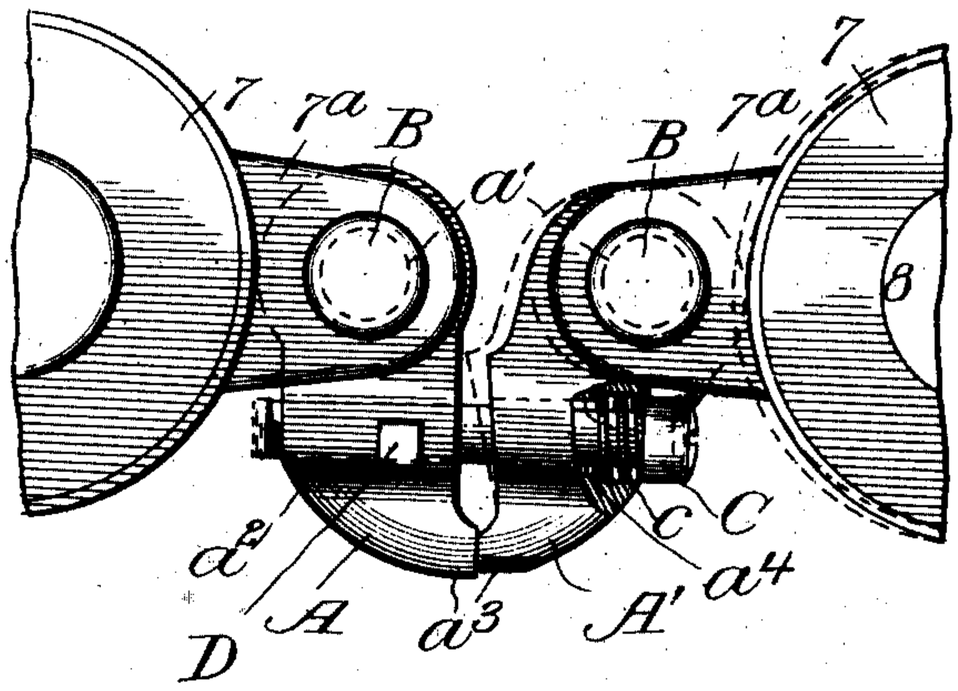
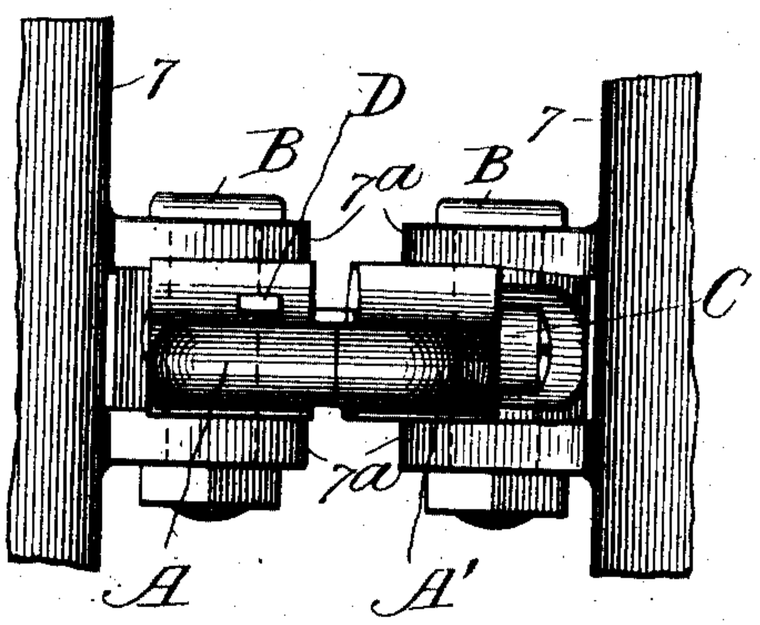


Fig. 3.



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BUTTON-MAKING MACHINERY.

No. 864,720. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed December 22, 1906. Serial No. 349,110.

To all whom it may concern:

Be it known that I, NICHOLAS BARRY, Jr., of Muscatine, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Button-Making Machinery; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in button making machinery, and has particular reference to automatic button facing and drilling machines, such as are shown in Patent No. 766,014, granted July 26, 1904 to myself and Patrick J. Barry, and the present invention relates particularly to the endless chain of blank-holders as shown in said patent and used in such machines, and its object is to improve such chains and provide novel means for taking up wear in the links and thus keeping the blank-holders in the chain properly and accurately spaced apart, and the endless chain properly taut at all times.

The invention will be clearly understood from the following description and drawings, and summarized in the claims appended to the specification.

In the drawings—Figure 1 is a sectional plan view of part of the machine and of the endless chain series of chuck-holders employed therein, such chain embodying my novel adjustable connecting links. Fig. 2 is an enlarged plan view of one of the connecting links. Fig. 3 is a side view of Fig. 2.

In the aforesaid patent a series of blank-holders 8 are rotatably mounted in sleeves 7 pivotally connected by intermediate links, and together therewith form an endless chain carrier for the series of blank-holders which are traveled successively to and by the operating tools, the endless carrier being supported by and between notched disks 6^d. In the practical operation of such machines the pivotal connections between the links and sleeves eventually wear, and the endless carrier becomes somewhat slack, and this sometimes causes trouble in that the holders may not accurately present the blanks to the tools. By my present invention any such wear in the joints of the carrier can be readily compensated for, and the carrier always kept properly tensioned, and the holders therefore will be always accurately positioned relatively to the tools.

Instead of the simple chain-links shown in the aforesaid patent, I employ composite links as shown in the drawings. These links consist of opposite substantially similar members A, A′, having eyes a' by which they are respectively pivoted by pins or bolts B to and between lugs 7^a on the adjacent sleeves 7. The members A, A′, project outwardly and substantially parallel, and are connected by a bolt C, which passes through an opening a in member A′ and engages an internally threaded opening a^2 in member A, as shown in Fig. 2.

The members A, A′, are preferably provided on their outer ends and opposed edges, with lugs a^3 which impinge against each other when the bolt is properly adjusted and these lugs form a fulcrum to which the separating pull on the link imparted by pins B, B, is transmitted through bolt C, and said fulcrum also serves to measurably relieve bolt C from lateral deflecting strain, and if bolt C is tightened the pivoted inner ends of members A, A′,—with pins B, B, and connected sleeves 7, 7,—will be drawn closer together, as indicated in dotted lines in Fig. 2. The lugs a^3, moreover, serve to prevent,—or materially lessen,—lateral play or rocking of the members A, A′, relative to each other, and in practice the links appear substantially rigid when the machine is in operation.

When the links are properly adjusted the bolt C can be locked as adjusted by means of a setting-bolt D tapped through the member A and engaging the threaded part of the bolt C as indicated in the drawings.

If any wear occurs between the pivot pins B, B, and the link-members, or if the sleeves 7, 7, are too far apart, they can be drawn together to proper position by turning bolt C so as to draw the pivot pins toward each other, as indicated in Fig. 2; or if the sleeves should be too close they can be eased up by partly unscrewing bolt C.

As I preferably unite all the sleeves by such links it is obvious that the distance between the centers of each pair of sleeves can be adjusted with the utmost nicety, and that any wear can be easily compensated for.

In some cases if desired springs may be used in connection with the links,—thus as shown in Fig. 2 a stout helical spring c can be interposed between the head of bolt C and the member A′, and concealed in a recess a^4 in the member A′, such spring exciting a constant drawing or contracting pressure upon the link, and tending to automatically take up wear and prevent rattling.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. An endless chain carrier for button blank-holders, comprising sleeves adapted to the holders, and adjustable links between and pivotally connected to adjacent sleeves, and forming therewith an endless chain carrier, for the purpose set forth.

2. An adjustable link for the purpose described, comprising opposite members provided with contacting lugs on their outer ends, a bolt arranged at right angles to the members and transfixing one member and engaging a threaded opening in the other member to adjustably hold the members together.

3. A link for the purpose described, comprising opposite members provided with eyes at one end and contacting lugs, a bolt transfixing one member and engaging a threaded opening in the other member to adjustably hold the members together; and a spring for yieldingly drawing the members together, substantially as described.

4. An adjustable link for the purpose described, com-

prising opposite members provided with contacting lugs on their outer ends, a bolt arranged at right angles to the members and transfixing one member and engaging a threaded opening in the other member to adjustably hold the members together; and a spring interposed between the head of the bolt and one member for yieldingly drawing the members together, substantially as described.

5. In an endless chain carrier for button blank holders, the combination of links, an adjustable link connecting two of said links, said adjustable link comprising opposite members, one of which is pivoted to one of said links and the other to the other of said links and projecting at right angles to the run of the carrier and provided with contacting lugs on their outer ends and an adjustable connection between said members.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

NICHOLAS BARRY, JR.

Witnesses:
V. B. HUDKINS,
M. W. STAPLETON.