

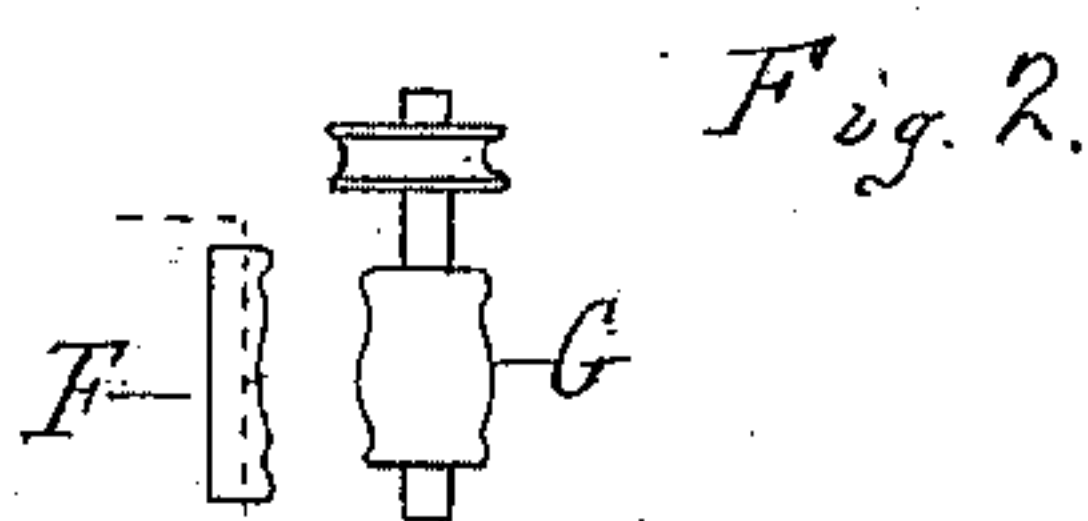
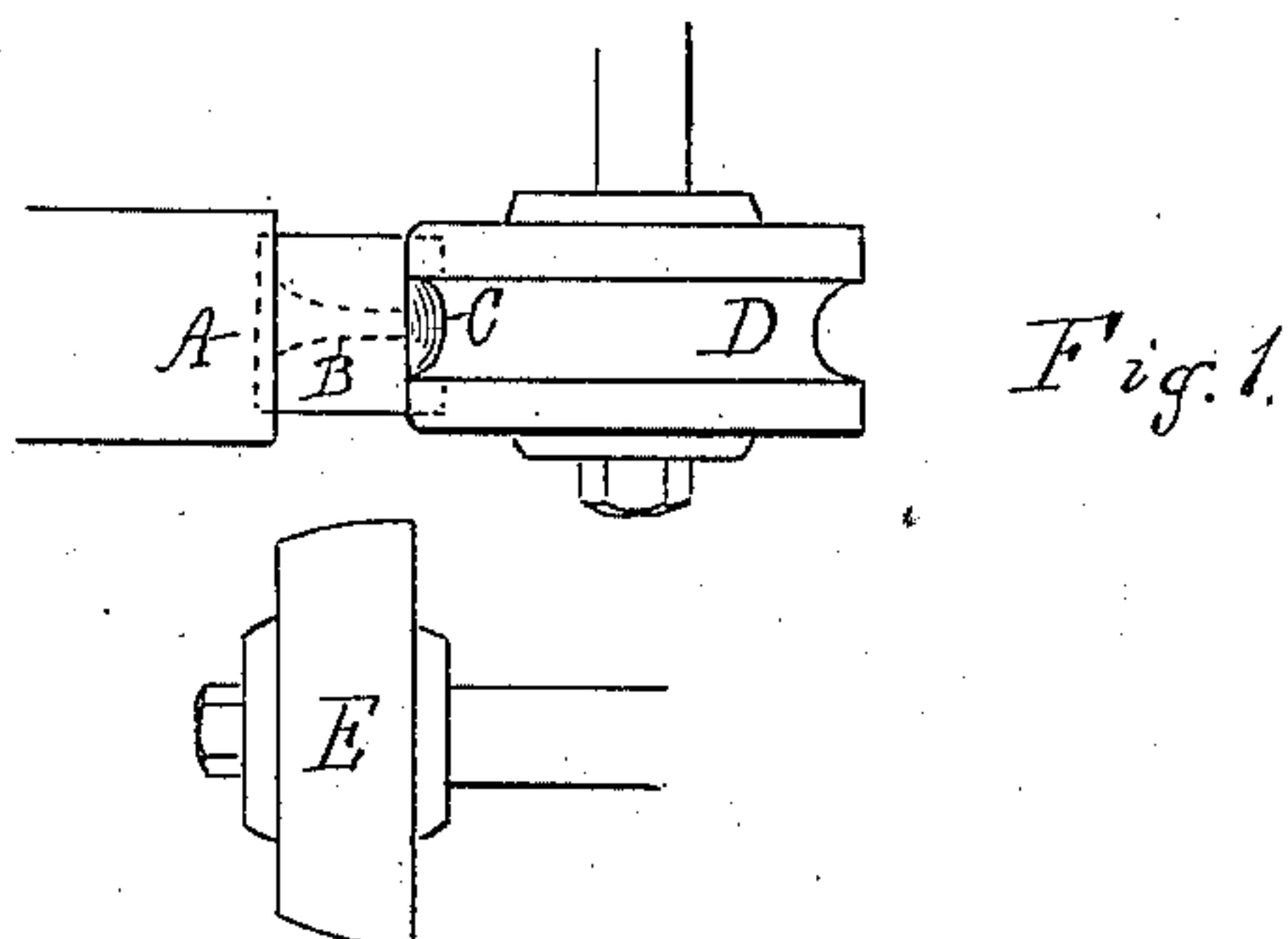
(No Model.)

G. CARLYLE.

MANUFACTURE OF PEARL BUTTONS.

No. 311,958.

Patented Feb. 10, 1885.



Attest:

N. S. Sprague

J. Paul Mayer

Inventor.

George Carlyle.

By his Atty.

W. S. Sprague

# UNITED STATES PATENT OFFICE.

GEORGE CARLYLE, OF ADRIAN, MICHIGAN, ASSIGNOR OF THREE FOURTHS  
TO LOUIS A. C. WAGNER, GEORGE W. WAGNER, AND JOHN W. WAGNER,  
ALL OF SAME PLACE.

## MANUFACTURE OF PEARL BUTTONS.

SPECIFICATION forming part of Letters Patent No. 311,958, dated February 10, 1885.

Application filed February 23, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE CARLYLE, of  
Adrian, in the county of Lenawee and State  
of Michigan, have invented new and useful  
5 Improvements in Process of Making Buttons;  
and I do hereby declare that the following is  
a full, clear, and exact description thereof,  
reference being had to the accompanying draw-  
ings, which form a part of this specification.  
10 This invention relates to certain new and  
useful improvements in the process of making  
buttons, as hereinafter explained, reference  
being had to the accompanying drawings, in  
which—  
15 Figure 1 is an elevation of a collar stud or  
button, with the outline of the die which forms  
the head and also the die that forms the neck.  
Fig. 2 is a section of a button proper, with the  
die which forms the face.  
20 In the accompanying drawings, which form  
a part of this specification, A represents the  
foot, B the neck, and C the head, of a pearl  
collar-button. The blank from which the but-  
ton is formed is chucked at the end of a re-  
25 volving spindle, and its exposed end is forced  
into contact with the die D, revolving on a  
shaft at right angles to the axis of the chuck,  
and which is of the proper shape to form the  
head, and which may or not, as preferred, re-  
30volve in an opposite direction to that of the  
blank presented. This die is made of emery,  
corundum, or other equivalent material em-  
ployed for grinding purposes, and its attrition  
against the end of the blank forms the head.  
35 The neck is formed in the same manner by  
presenting the die E (which revolves on a shaft  
whose axis is parallel to that of the chuck) to

the side of the blank held in the chuck, as be-  
fore described; and as the mechanism em-  
ployed and described in my application for 40  
Letters Patent thereon is provided with suit-  
able stops, which limit to a certainty the ac-  
tion of this device, it follows as a matter of  
necessity that each button formed in this way  
by attrition is precisely like its fellow. F 45  
represents the flat button, the blank of which  
is chucked, as already described, and present-  
ed to the die G, which performs the same func-  
tion as is done by the die D, the dies simply  
varying in the form necessary to give a differ- 50  
ent form required to the button.

Buttons made of pearl by the attrition or  
grinding process are far superior in finish and  
in uniformity of appearance and size to those  
made by the ordinary process of turning, and 55  
will be preferred by the using public, to whom  
they can be furnished at a less cost of manu-  
facture than where the turning process is em-  
ployed.

What I claim as my invention is— 60

The process of manufacturing a button here-  
in set forth, which consists in setting the blank  
in a chuck, then revolving said blank in con-  
tact with a revolving grinding-surface having  
its acting face at right angles to the axis of 65  
the chuck, and then revolving it in contact  
with another revolving grinding-surface  
whose axis is substantially parallel to that of  
the chuck, substantially as described.

GEORGE CARLYLE.

Witnesses:

H. S. SPRAGUE,  
J. PAUL MAYER.