

G. J. GRIFFITHS.
 PROCESS OF CONNECTING A RELATIVELY THIN ARM TO A ROCK SHAFT.
 APPLICATION FILED SEPT. 2, 1910.

993,057.

Patented May 23, 1911.

Fig. 1

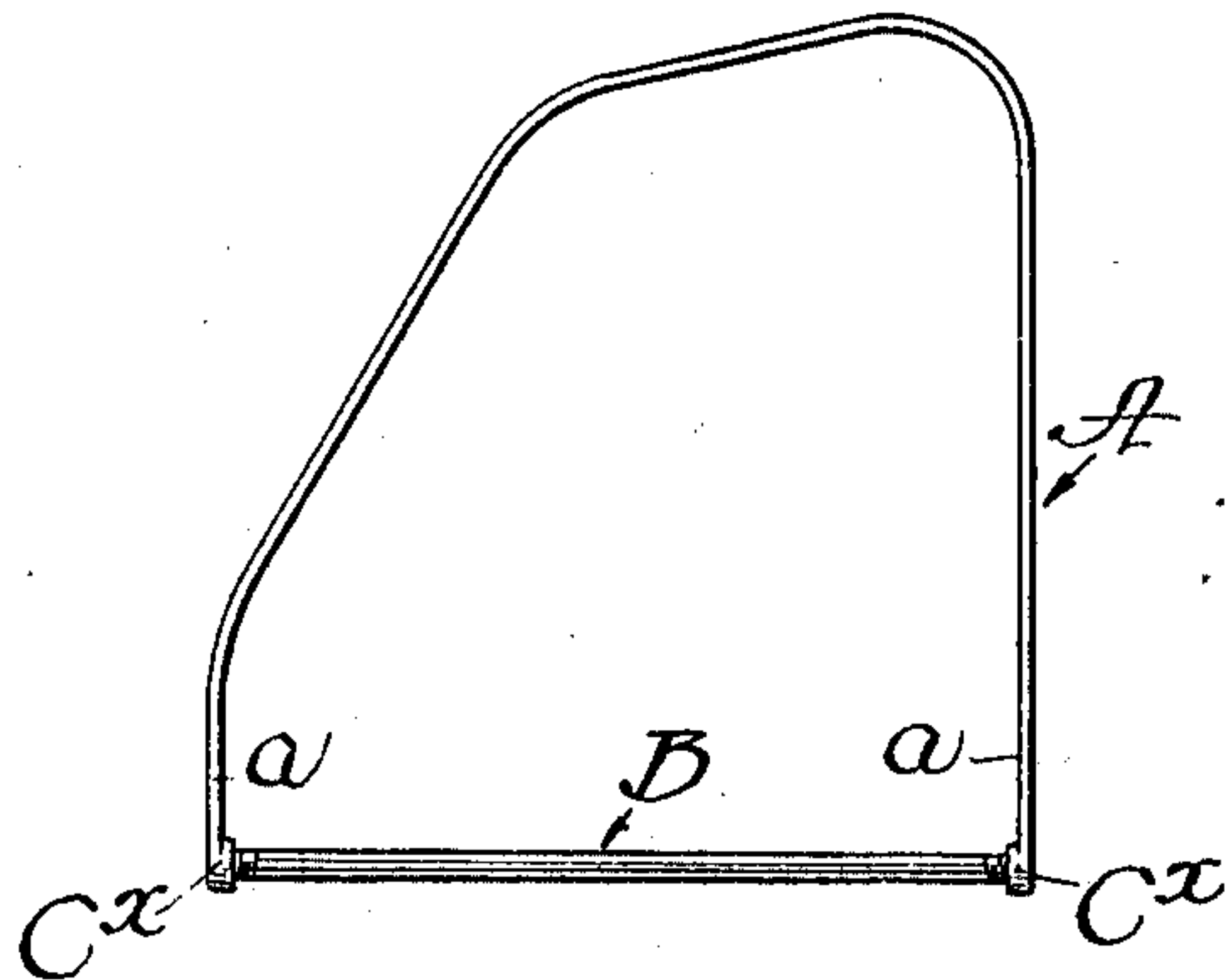


Fig. 2.

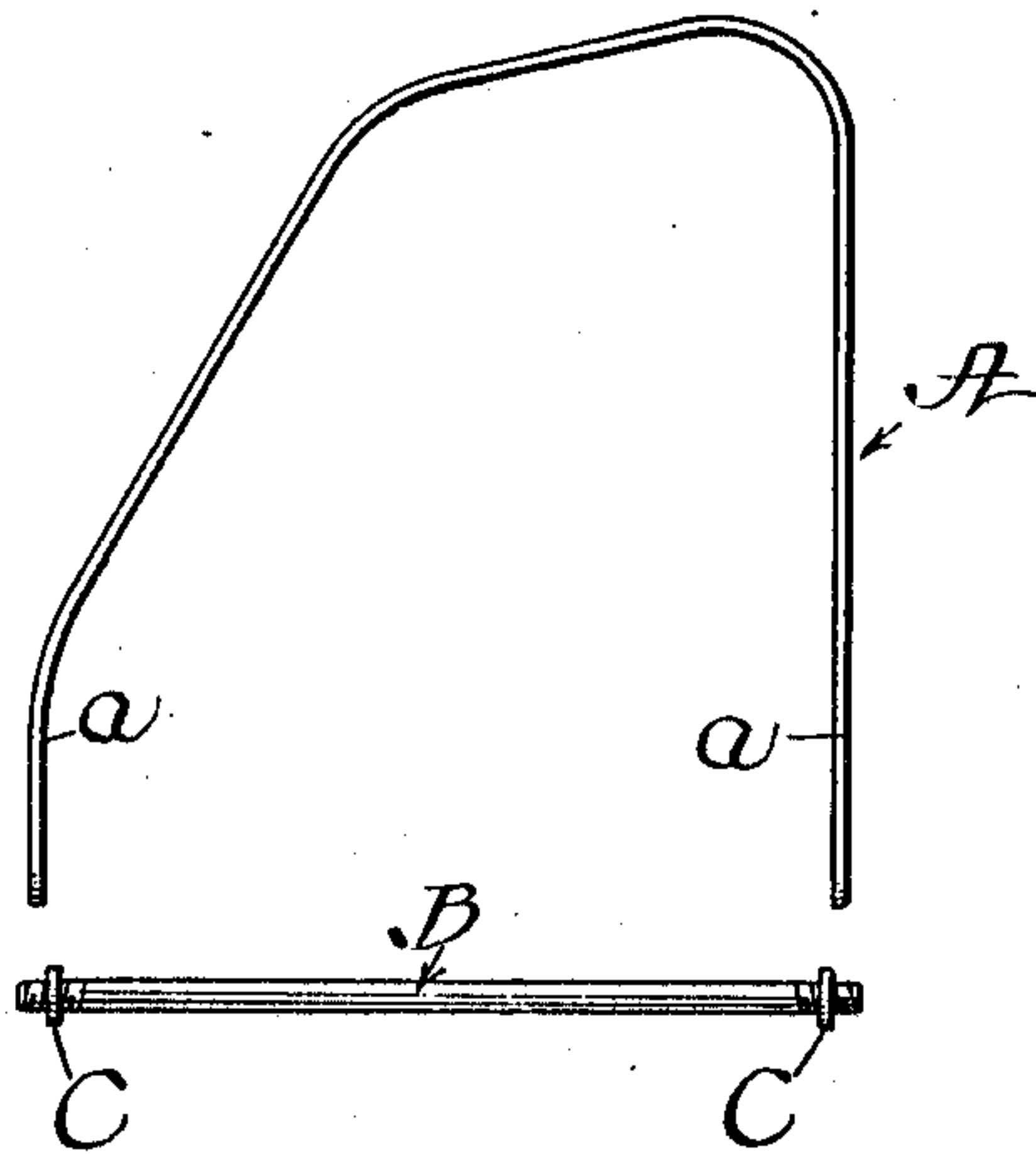


Fig. 3.

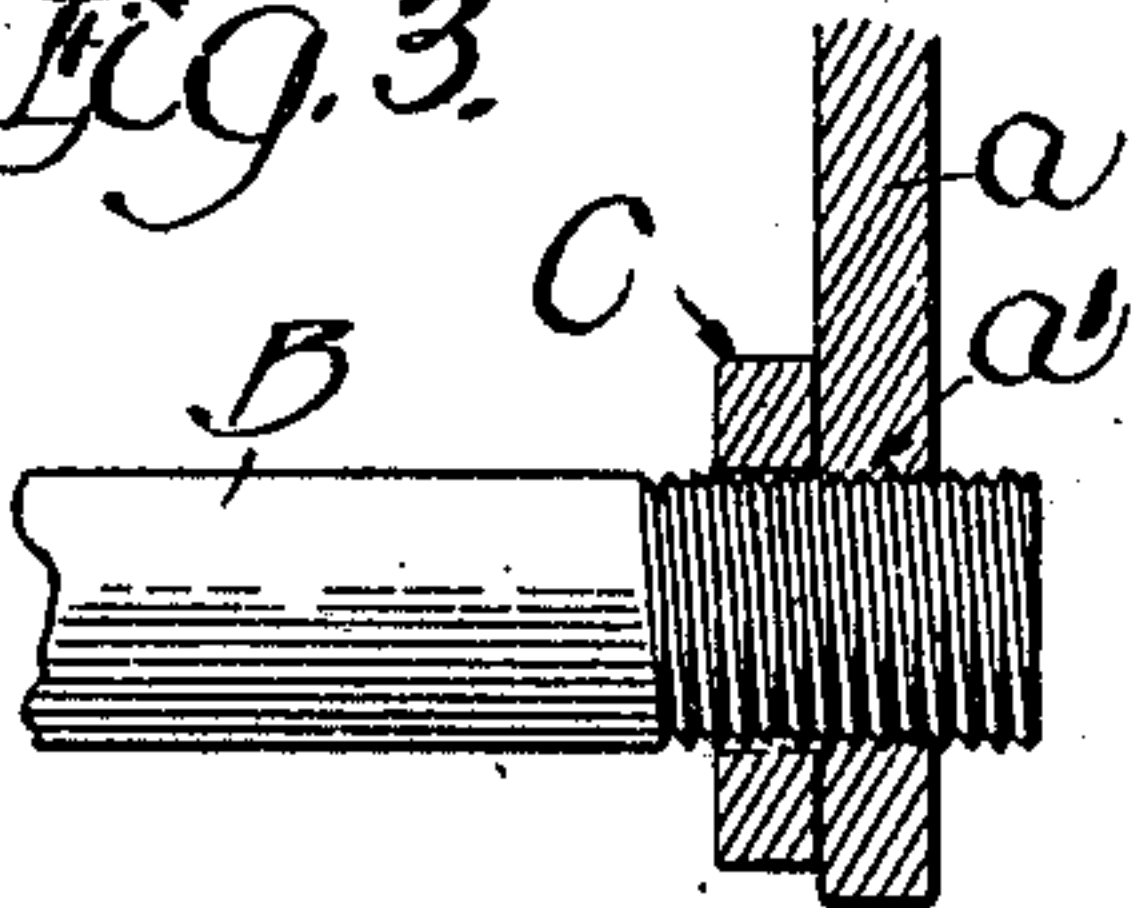
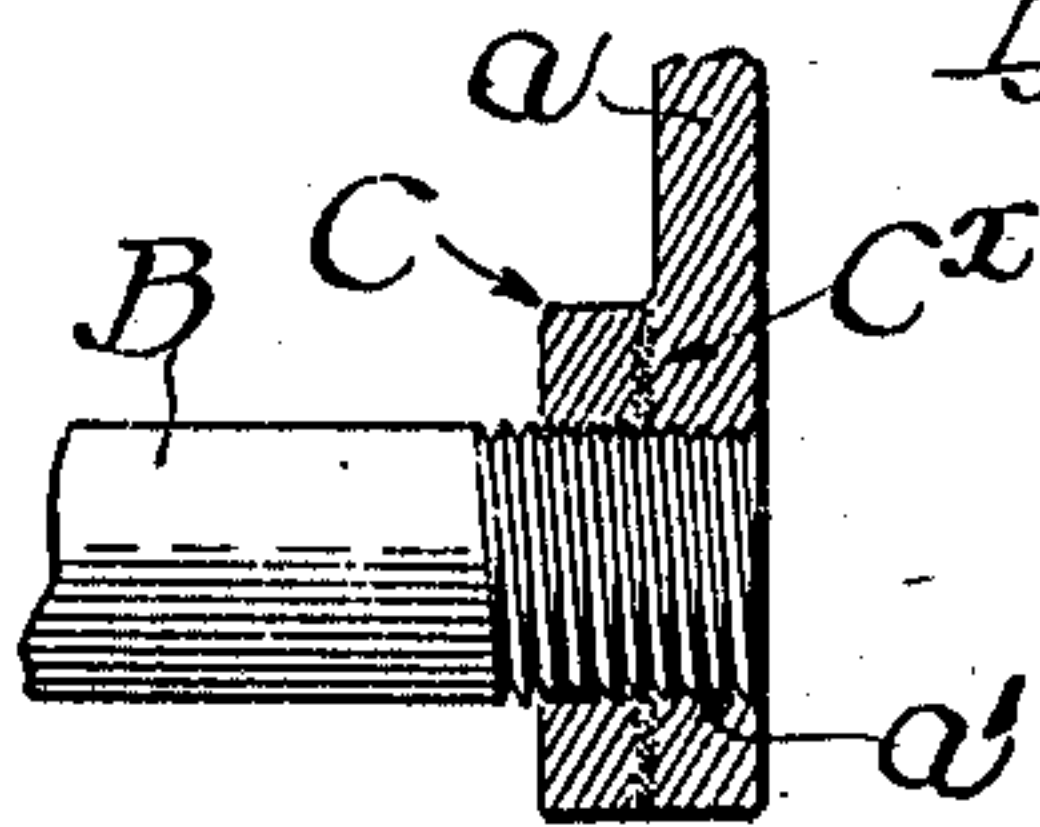


Fig. 4.



Witnesses:

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 by Pool & Brown Attys

UNITED STATES PATENT OFFICE.

GEORGE J. GRIFFITHS, OF WOODSTOCK, ILLINOIS, ASSIGNOR TO THE OLIVER TYPE-WRITER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PROCESS OF CONNECTING A RELATIVELY THIN ARM TO A ROCK-SHAFT.

993,057.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed September 2, 1910. Serial No. 580,262.

To all whom it may concern:

Be it known that I, GEORGE J. GRIFFITHS, a citizen of the United States, and a resident of Woodstock, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Processes for Connecting a Relatively Thin Arm to a Rock-Shaft; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a novel process for rigidly connecting a relatively thin arm to a rock-shaft so as to provide a relatively thick part of the arm in the neighborhood of the rock-shaft, and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The improved process is particularly applicable in the manufacture of the U-shaped type-bars such as are used in the "Oliver" typewriting machine, and the object of the process is to produce thickened parts where the arms of said type-bars are attached to the rock-shaft, so as to provide room for milling one face of said arms for more delicate adjustment, without danger of producing a weak connection of the arms with the rock-shaft.

In order to illustrate the process, I attach hereto drawings which show different stages of the process.

Figure 1 is a plan view of an "Oliver" type-bar connected to its rock-shaft by my process. Fig. 2 is a plan view showing the type-bar and its rock-shaft separately. Fig. 3 is a sectional detail through one arm of the type-bar connected to the rock-shaft, but not finished. Fig. 4 is a similar detail sectional view of the connection after it is finished.

In the drawings, A indicates the type-bar having arms a, a which are to be connected to a rock-shaft B. The type-bar A is made of comparatively thin metal and is preferably stamped from a thin sheet. The arms a, a are provided near their ends with threaded apertures a^1, a^1 . In carrying out my process, the rock-shaft B is made somewhat longer than it is finally intended to be and is provided at its opposite ends with right and left screw-threads. The arms a, a

are provided with threaded apertures a^1, a^1 to receive the threaded ends of said rock-shaft.

C, C are washers which are adapted to fit on the rock-shaft.

In connecting the type-bar to its rock-shaft, the washers C, C are slipped on the ends of the rock-shaft and said ends are screwed into the apertures a^1, a^1 . The rock-shaft B is rotated until the arms a, a are adjusted as near as may be to the proper distance apart. In this operation the washers C, C are caused to engage against the inner faces of the arms a, a of the type-bar while the threaded ends of the rock-shaft project beyond the outer faces of said arms as shown in Fig. 3. The projecting ends of the rock-shaft are then filed off and the washers, rock-shaft and type-arms are brazed together, as shown in Fig. 4. This produces the finished article. By the use of a milling machine such, for example, as that shown in Letters Patent No. 821,290, granted May 22nd, 1906, to S. Horr, the inner faces of the washers C, which are now a part of the thickened ends C^* of the arms a, a , may be faced off to adjust them to the distance between the bearing faces against which they abut. Excess metal is thus provided at the ends of said arms to allow for milling off a limited thickness of metal without unduly weakening the connection of the arms with the rock-shaft.

I claim as my invention—

1. The process of forming a rigid connection between a relatively thin arm and a rock shaft and of forming a relatively thick part on the arm at the place of connection of the arm and shaft which consists in screwing the screw-threaded end of the shaft into a threaded aperture in the arm, placing a washer on the shaft and bringing it into engagement with one face of the arm and then brazing the washer, the arm and the shaft together.

2. The process of rigidly connecting the arms of a U-shaped bar made of relatively thin material to a rock shaft and of forming relatively thick parts on the arms at the places of connection with the rock shaft which consists in placing washers on the rock shaft, screwing the shaft, which has been provided with right and left screw-threads into threaded ap-

ertures formed in the arms until said
arms have been brought to the desired dis-
tance apart, bringing the washers to bear
against the opposing faces of the arms, and
5 then brazing the shaft, arms and washers
together.

In testimony, that I claim the foregoing

as my invention I affix my signature in the
presence of two witnesses, this 23rd day of
August A. D. 1910.

GEORGE J. GRIFFITHS.

Witnesses:

E. R. HAY,

B. C. YOUNG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
