

No. 693,900.

Patented Feb. 25, 1902.

H. J. PERRY.
BREECH CLOSURE.

(Application filed June 19, 1901.)

(No Model.)

Fig 1.

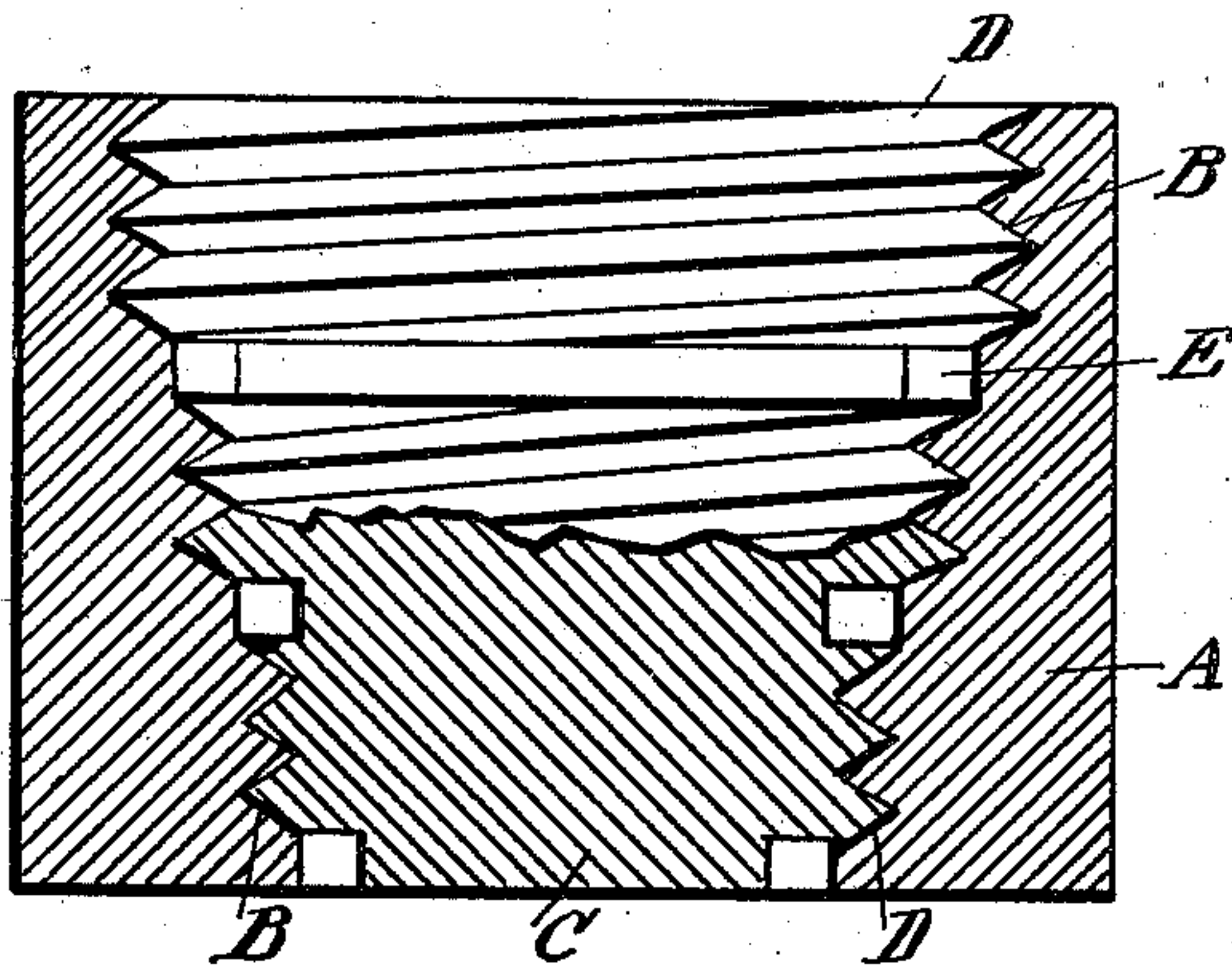
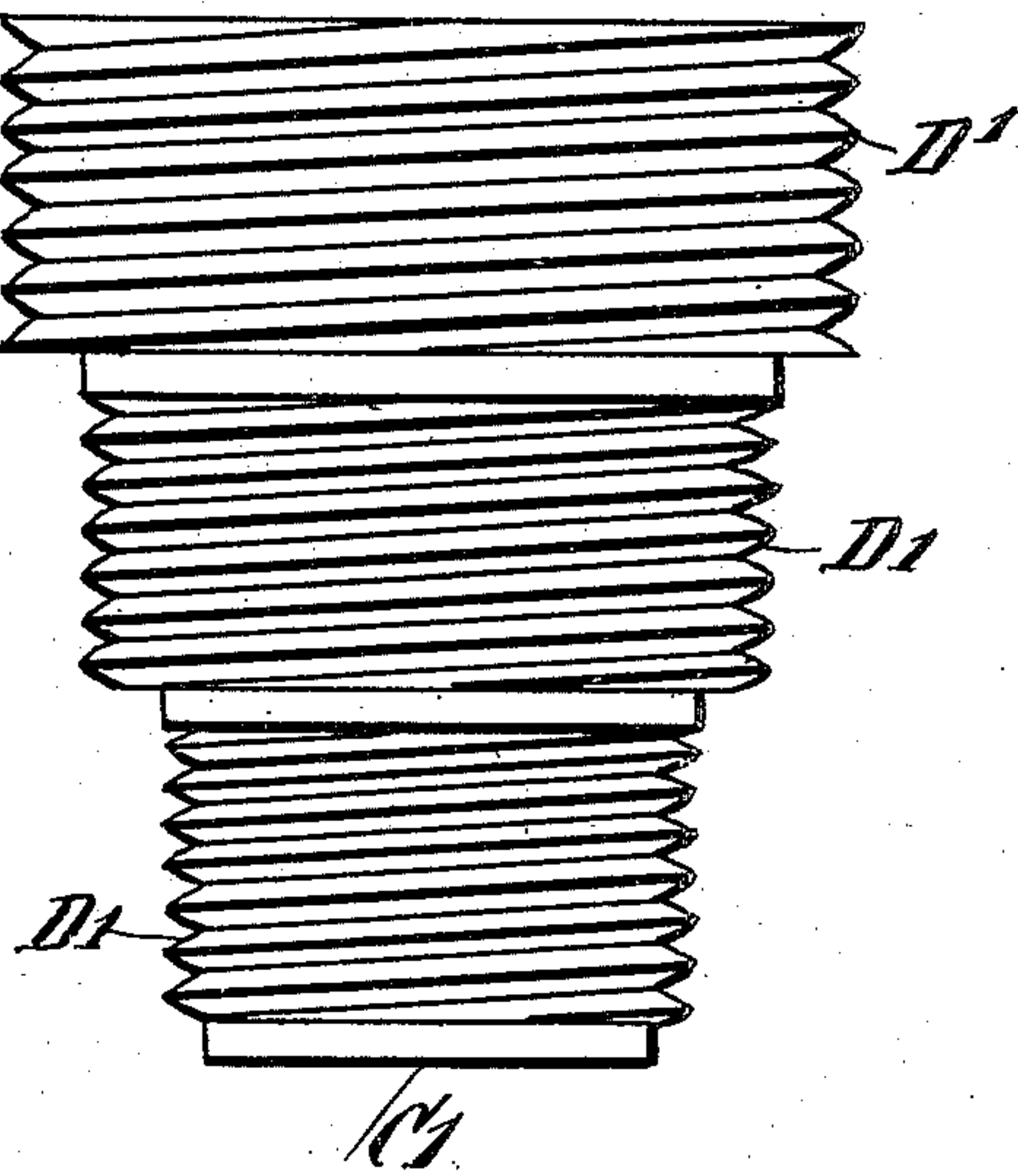


Fig 2.



WITNESSES

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HERBERT JAS. PERRY, OF CHESHUNT, ENGLAND.

BREECH-CLOSURE.

SPECIFICATION forming part of Letters Patent No. 693,900, dated February 25, 1902.

Application filed June 19, 1901. Serial No. 65,096. (No model.)

To all whom it may concern:

Be it known that I, HERBERT JAS. PERRY, a subject of the King of Great Britain, residing at Waltham New Town, Waltham Cross, Cheshunt, in the county of Herts, England, have invented certain new and useful Improvements in Breech-Closures, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in and in connection with screws in which a quick action is required and at the same time a large thread-surface to give the necessary strength.

The invention is more particularly applicable to the breech of quick-firing guns, the breech block or plug of which is generally secured in the breech by a short turn, causing sections of screws to engage. My invention provides a means by which the same action is effected; but a much larger effective surface of thread is provided, increasing the strength of the breech-closure. The invention, however, is also applicable to any case in which a quick action is required. I propose to make the thread of the screw in a series of steps, preferably three in number, increasing the diameter from the bottom successively to the top. The pitch of the thread in each step is exactly the same, so that as the diameter of the screw decreases from the top the angle of the thread becomes steeper. The difference in diameter of each step is such that when the screw or screwed plug is inserted in the socket having internal threads to correspond the screw or plug can be dropped in until all the steps meet the corresponding steps in the socket, and a turn of the plug simultaneously engages all the threads. As the pitch in each case is the same a turn of the plug acts quickly upon every part of the screw and all the threads engage as if the plug were screw-threaded in the ordinary manner, although the extent of the movement is reduced in proportion to the number of steps employed.

In the accompanying drawings, forming part of this specification, in which like letters of reference designate corresponding parts in

the several views, Figure 1 is a sectional view, with the plug part in elevation, of an internal screwed socket with the stepped plug in position; and Fig. 2 is an elevation of a second plug upon the same principle, but requiring a greater turn.

Referring to Fig. 1, A is the socket, having, as shown, the three internal screw-threads B, the hole decreasing in diameter with each step toward the bottom. Each step is thus an independent screw-thread of the same pitch and is not in any way tapered. The plug C is correspondingly formed with the three steps D, each having a triple screw-thread of equal pitch to that of the socket. In this case a very rapid action is provided, as not only is the screw broken up into three steps, but a multiple thread is employed. This arrangement is particularly applicable to the breech of a quick-firing gun. No means are shown for turning the screw, as any of the ordinary methods employed can be used. Between each step a small space is left in the socket and plug, and the spaces E shown in the drawings between the ledges so formed can be packed with any suitable material.

The plug C' shown in Fig. 2 differs from that in Fig. 1 only in the fact that the screw-thread D' is of smaller pitch and is single, giving a less rapid action.

I do not in any way confine myself to the shape or proportions of the plug or screw, which may be varied according to the requirements, the rapidity of the action varying according to the pitch and number of threads. The form of the screw-thread is also immaterial for the purposes of this invention, as a square, V-shaped, or other form of thread may be used with the stepped construction described.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a breech-closure the combination with a socket or breech provided interiorly with a plurality of continuously or uninterruptedly threaded portions arranged in a stepped manner and increasing successively in diameter outwardly, of a plug provided with a corresponding number of exterior uninterrupted

threads increasing successively in diameter
and corresponding to and adapted to engage
the separate threads of the socket or breech;
the said screw-threads being of the same
5 width.

In testimony that I claim the foregoing as
my invention I have signed my name, in pres-

ence of the subscribing witnesses, this 1st day
of June, 1901.

HERBERT JAS. PERRY.

Witnesses:

H. D. JAMESON,
A. NUTTING.