

No. 835,296.

PATENTED NOV. 6, 1906.

G. W. BELL.  
PRESSING OF GUNCOTTON BLOCKS.  
APPLICATION FILED APR. 8, 1904.

Fig. 1.

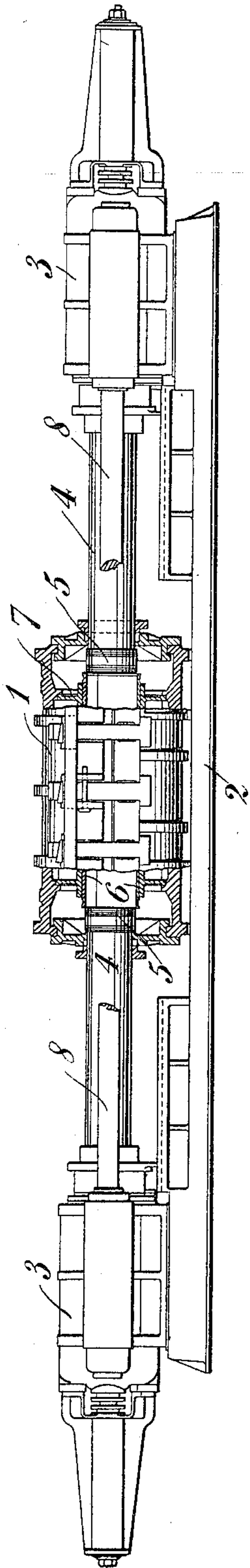
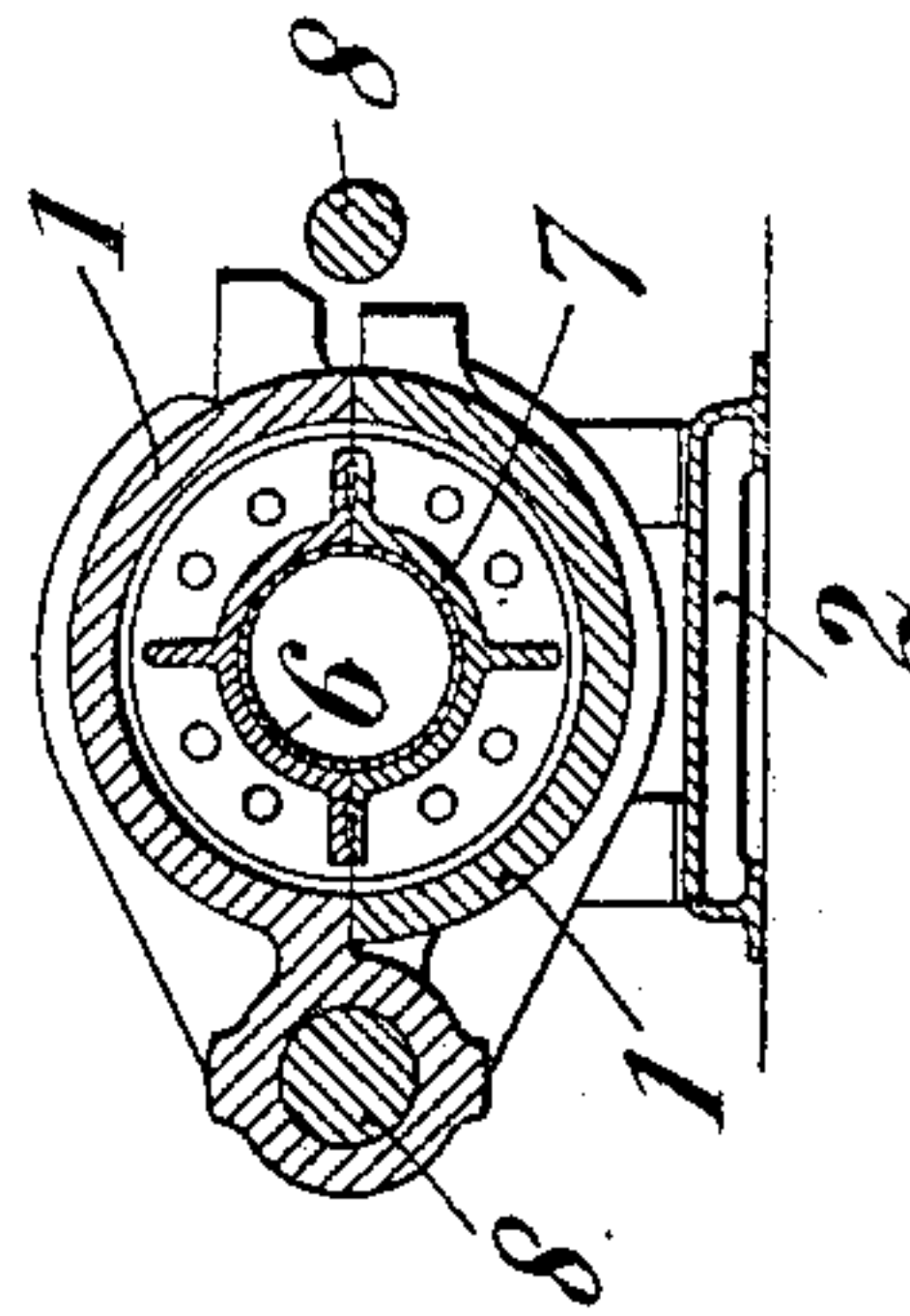


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## PRESSING OF GUNCOTTON BLOCKS.

No. 835,296.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed April 8, 1904. Serial No. 202,279.

*To all whom it may concern:*

Be it known that I, GEORGE WILSON BELL, a subject of the King of Great Britain and Ireland, residing at Ipswich, in the county of Suffolk, England, have invented Improvements Relating to the Pressing of Guncotton Blocks, of which the following is a specification.

This invention relates to the pressing of blocks of guncotton; and it has for objects to render the density of a block more uniform from end to end than has hitherto been the case and to produce a given average density with considerably less pressure than has heretofore been required for the purpose in question. For this purpose there are employed a horizontal stationary receiver adapted to hold the mold containing the charge to be compressed and two hydraulic plungers adapted to fit within the mold and to move longitudinally and independently of each other within and in relation to the mold while acting upon the opposite ends of the block, so as to compress it between them. In the way indicated it is possible to press the block with much greater uniformity than has hitherto, so far as the inventor is aware, been produced. The receiver may be hinged at one side and provided with fastening means at the opposite side for facilitating the insertion and removal of the mold.

In order that the manner of carrying out the invention may be well understood, there are annexed hereto drawings illustrative thereof.

Figure 1 is a sectional side elevation of a press for pressing guncotton blocks according to this invention, and Fig. 2 is a cross-section thereof.

1 is a horizontal receiver which is fixed to a base 2, to which are also fixed the cylinders 3 of two hydraulic plungers 4. The plungers 4 are provided with heads 5, that fit within a mold 6, held by means of liners 7 centrally within the receiver 1. The plungers 4 can, independently of each other, be moved longitudinally within and in relation to the mold 6 while acting upon the opposite ends of the block of guncotton so as to compress it between them. To facilitate the insertion and the removal of the mold 6, the upper part of

the cylindrical portion of the receiver 1 is hinged to the lower part, one of the rods 8, by means of which the two hydraulic cylinders 3 are secured together, serving as the hinge-pin for connecting the upper part of the cylindrical portion of the receiver to the lower part thereof. For fastening together the upper and lower parts of the receiver in their position of closure there is provided at the opposite side to the hinge a device similar to that described and shown in the specification of an application for Letters Patent, Serial No. 202,280, filed on the same day as the present application. In the example of apparatus shown in the drawings the receiver is provided with means similar to those described in the said specification for making water-tight joints between the rams and the ends of the receiver and between the fixed and movable parts of the receiver.

The invention is of course intended for the pressing of long blocks of guncotton such as have hitherto usually been built up of pieces and are used for submarine mines, torpedoes, and shells.

The right is reserved to vary according to requirements the forms, proportions, and other details of the carrying out of the invention. Also one or more features of the invention may be employed without another or others. Although the receiver has been described as provided with means for closing it water-tight and making water-tight joints between it and the rams, as is preferred, the invention is not limited to such a receiver, which forms the subject-matter of the aforesaid other application for Letters Patent. Moreover, although the receiver has been shown as incapable of rotation and being hinged to facilitate the insertion and removal of the mold, the cylindrical portion of the receiver might be made in one piece and mounted so that it could be turned about a vertical axis to facilitate the insertion and removal of the mold. The receiver must, however, be stationary or fixed as regards motion toward or away from either of the cylinders 3.

What I claim is—

The method of pressing a long guncotton block consisting in causing a charge to be held horizontally in a mold in a stationary re-



ceiver adapted to prevent the mold from moving longitudinally therein and further causing two plungers acting on opposite ends of the charge to move horizontally and longitudinally and independently of each other within and in relation to the mold, substantially as described.

Signed at Liverpool, England, this 4th day of March, 1904.

GEORGE WILSON BELL.

Witnesses:

WILLIAM JAMES SULIS,  
HUGH WATSON.