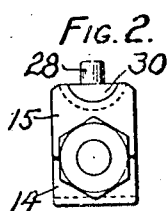
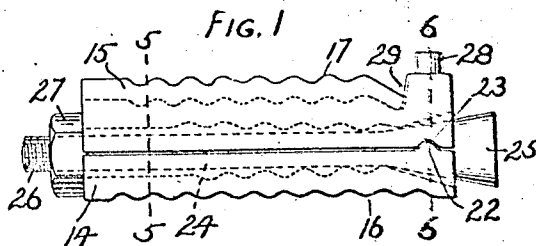
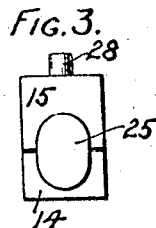
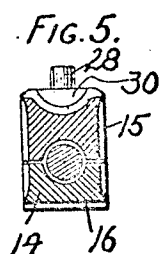
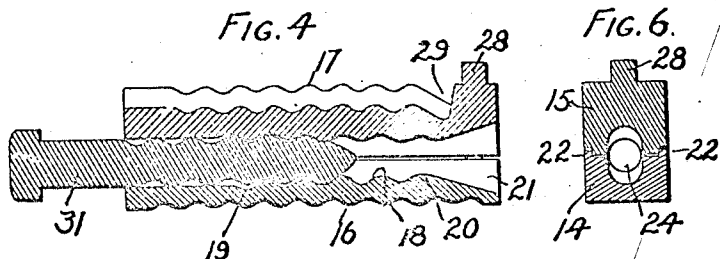
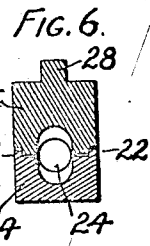
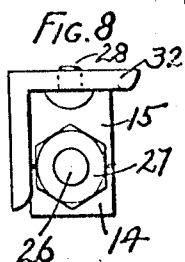
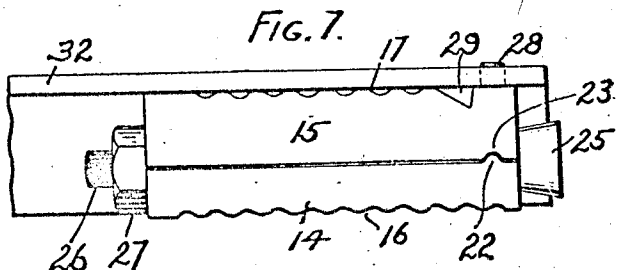
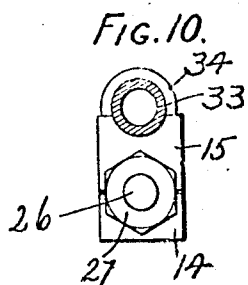
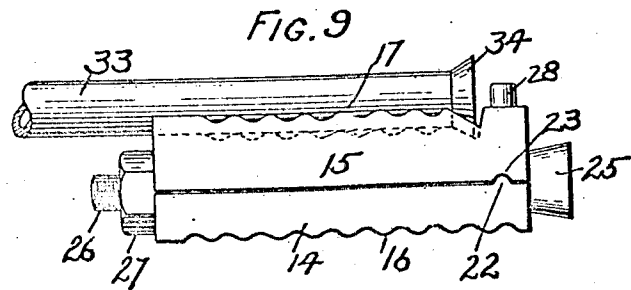
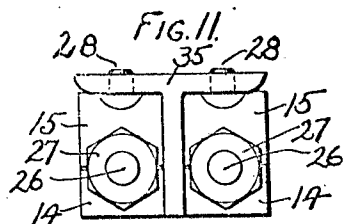
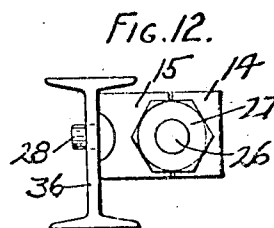
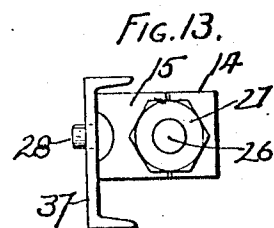


No. 895,158.

PATENTED AUG. 4, 1908.

L. CAPUTO.
EXPANSION BLOCK.
APPLICATION FILED JAN. 14, 1908.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LOUIS CAPUTO, OF EAST BOSTON, MASSACHUSETTS.

EXPANSION-BLOCK.

No. 895,158.

Specification of Letters Patent.

Patented Aug. 4, 1908.

Application filed January 14, 1908. Serial No. 410,768.

To all whom it may concern:

Be it known that I, LOUIS CAPUTO, a citizen of the United States, residing at East Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Expansion-Blocks, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to expansion blocks for use in walls of brick, stone or other material for fastening bars, girders or other beams in place or for holding fire-escape brackets in place on brick walls.

In the drawings which form part of this specification,—Figure 1 represents a view in side elevation of the expansion block with the expansion member or key in place. Fig. 2 is a front end elevation of same. Fig. 3 is a rear end elevation of same. Fig. 4 is a longitudinal sectional view of the expansion block with another form of expansion member or key partly inserted. Fig. 5 is a transverse sectional view on the plane indicated by the broken line 5 5 of Fig. 1. Fig. 6 is a transverse sectional view on the plane indicated by the broken line 6 6 of Fig. 1. Fig. 7 is a side view of my expansion block supporting a girder. Fig. 8 is a front end elevation of same. Fig. 9 is a side view of my expansion block supporting a bar. Fig. 10 is a front elevation of same. Fig. 11 is a front elevation of a pair of my expansion blocks supporting a T-shaped girder. Figs. 12 and 13 show the expansion block as applied to other forms of girders.

My expansion block consists of the two oblong plates 14 15, which when fitted together have an opening extending therethrough the outer end of the opening being circular and the inner end of said opening being in the form of a funnel 21 to receive the conical-shaped head 25 of the expansion member or key 24, of the preferred form as shown in Figs. 1, 7 and 9. This conical-shaped head 25 of the expansion member is preferably oval-shaped, as shown in Fig. 3, so that when it is inserted into the opening it will not turn in said opening. The mouth of the funnel is slightly larger than the head of the expansion member so that the member will press always against the inner end of the mouth as shown in Fig. 1, and when the nut 27 is turned in on the thread 26 of the member 24 the rear end of the expansion block will be expanded, that is the rear end of the plate 15 will be pushed

upward from the rear end of the plate 14. The opening in these plates 14 15 is also threaded as at 18 and the bore of the thread decreases in diameter from its forward end 19 to its rear end 20. The expansion member 24 may be threaded if desired but is preferably smooth except a portion of its forward end 26 upon which the nut 27 turns, but if desired an expansion member 31 may be used in the form of a lag screw as shown in Fig. 4, which when inserted from the front end of the expansion block will gradually expand the rear end as it is turned inward. Both plates 14 and 15 are provided on their outer sides with concaved surfaces, preferably rough to cause friction, the plate 14 also having a series of teeth 16 on its bottom side and the plate 15 a series of teeth 17 on its upper side for causing friction for purposes as hereinafter stated.

The plate 15 is provided with slots 23 for receiving the lugs 22 on the plate 14 when in a closed position, so that the two plates can be readily held together when being inserted into a hole in the wall. Plate 15 is provided with an ear 28 to be inserted through an opening in the girders 32, 33, 36 or 37 to lock them into position within the opening in the wall. Plate 15 is also concaved on its upper side, as at 30, to allow of the resting thereon of a bar or tubing 33, and is provided with a notch 29 in which the head 34 of the tube or bar 33 will rest so that the tube or bar will be locked within the opening in the wall. The teeth 17 preferably extending around the concaved surface 30 to grip or cause friction on the tube or bar on its lengthwise motion.

Figs. 7 and 9 show the expansion block with its expansion member partly in place and with the girders or tubing in place, all ready to be inserted into the opening in the wall. An opening is made of the desired size in the brick wall and the expansion block and girder inserted in place, then the nut 27 is turned inwardly on the thread 26 causing the conical head 25 to be pulled into the opening 21, expanding the plates 14 15, so that a grip is made on the inner walls of the opening in the wall and the block and girder held tightly in place. When desired the expansion block can first be inserted into the opening in the wall and the expansion member of a form shown in Fig. 4 afterwards inserted.

It is to be understood that my invention is not limited to the specific details of con-

struction shown in the accompanying drawing, but that said details may be varied in the practical carrying out of my invention. It is also to be understood that the combinations specifically set forth in the several claims are intended to be separately claimed without limitation to the use in connection therewith of other features and details of construction illustrated.

10 I claim as my invention:—

1. An expansion block consisting of two plates 14, 15, which when fitted together having an opening extending therethrough, the inner end of said opening being in the form of a funnel, slots 23 in plate 15, lugs 22 on plate 14, a conical headed expansion key for the plates, and an outward and upward extending ear 28 on the rear of the plate 15 for holding a girder, substantially as shown and described.

20 2. An expansion block consisting of two plates having a bore extending therethrough,

the walls of said bore being threaded and the thread decreasing in diameter from its forward end to its rear end, an upward extending ear on one of the plates, and an expansion key for expanding the plates from the outer ends.

3. An expansion block consisting of an upper and a lower plate, a bore extending there- 30 through having a rear oblong funnel-shaped mouth, an expansion member provided with an oblong conical-shaped head, a recess 30 and a notch 29 in the outer side of the upper plate and a series of teeth extending around 35 said recess, substantially as shown and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS CAPUTO.

Witnesses:

CHARLES F. A. SMITH.
ALFRED W. ELLS.