No. 765,907. PATENTED JULY 26, 1904.

E. R. SUTCLIFFE.

MOLD FOR BRICK MAKING MACHINES.

APPLICATION FILED JAN. 19, 1904.

NO MODEL.

Fig. 1.

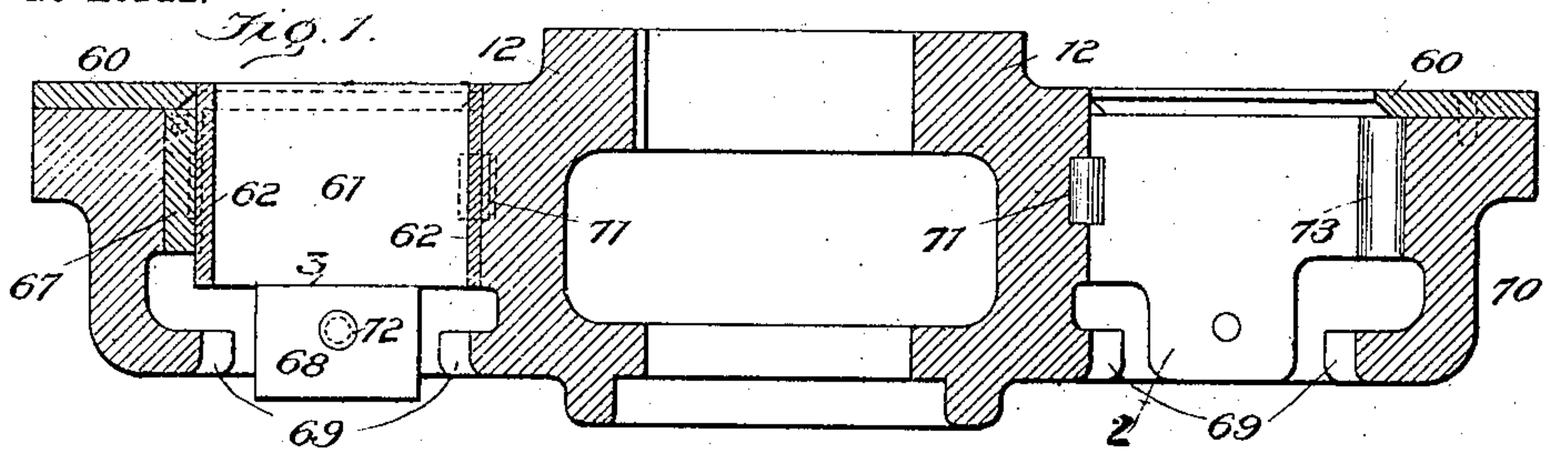


Fig. 2.

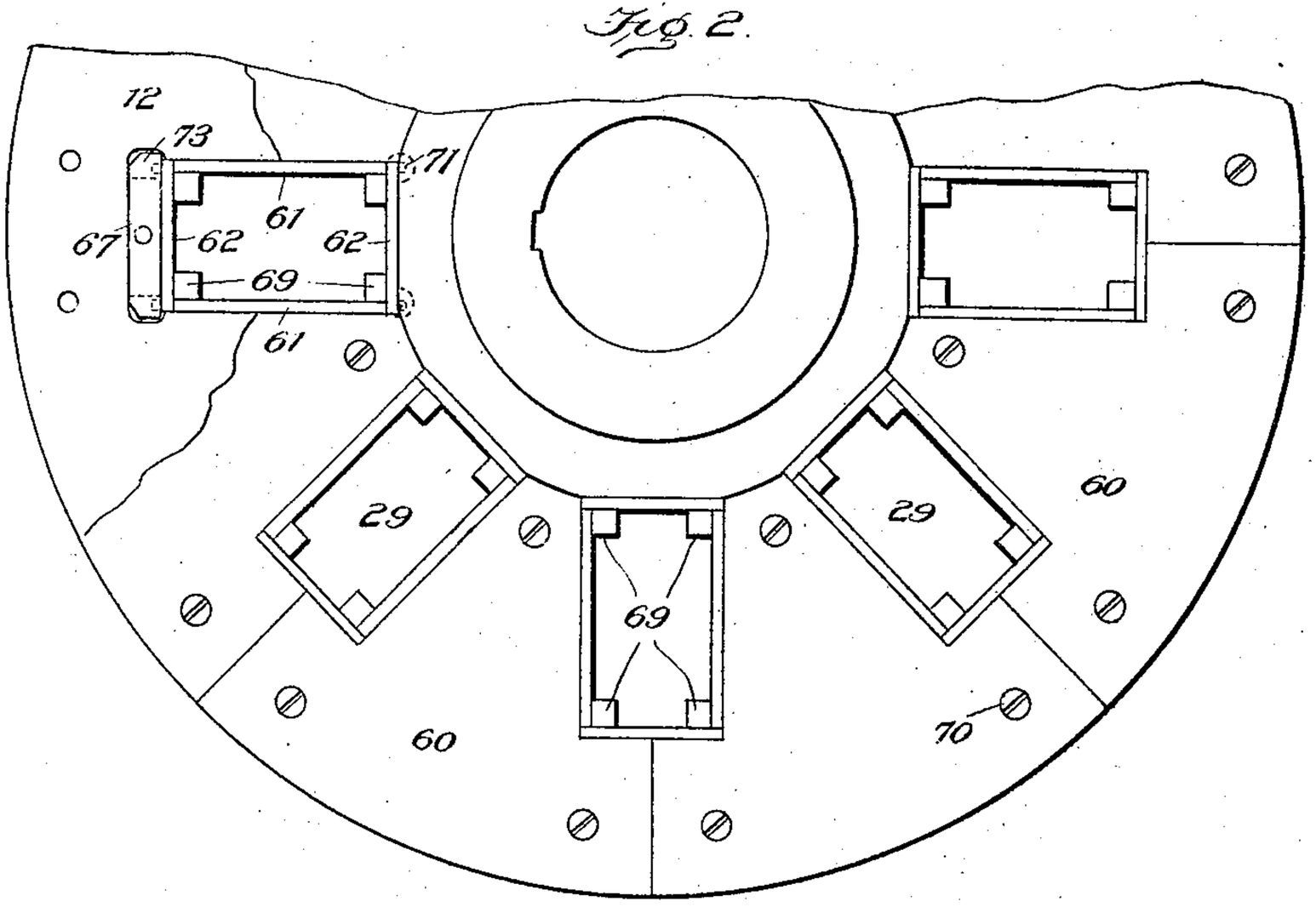


Fig. 3.

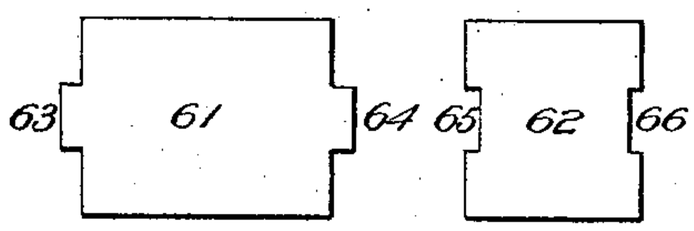
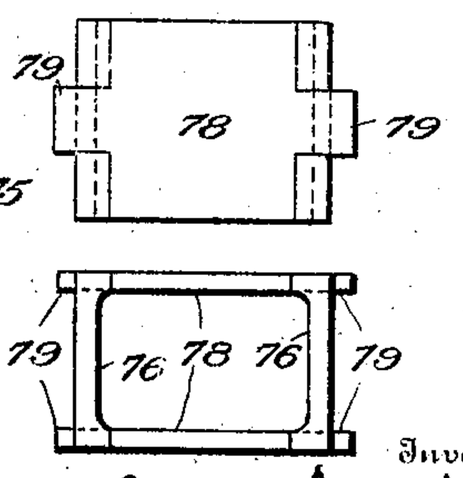


Fig. 4.

Fig. 5



Witnesses

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UNITED STATES PATENT OFFICE.

EDGAR ROUSE SUTCLIFFE, OF LEIGH, ENGLAND, ASSIGNOR TO SUTCLIFFE, SPEAKMAN AND COMPANY, LIMITED, OF LEIGH, COUNTY OF LANCASTER, ENGLAND, A COMPANY OF GREAT BRITAIN.

MOLD FOR BRICK-MAKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 765,907, dated July 26, 1904.

Application filed January 19, 1904. Serial No. 189,714. (No model.)

To all whom it may concern:

Be it known that I, EDGAR ROUSE SUTCLIFFE, a subject of the King of Great Britain, residing at Leigh, in the county of Lancaster, England, have invented certain new and useful Improvements in Molds for Brick-Making Machines, of which the following is a specification.

My invention relates to improvements in the construction of the molds in which the material is pressed into shape on a brick-making machine, and is applicable more especially to the type of machine set forth in my American Patent No. 744,430, of November 17, 1903, in which a revolving table is employed carrying a number of molds which receive pressure at one point of the revolution and deliver the brick at another point. In such machines the pressure employed is so great as to cause considerable wear on the inside surfaces of the mold, which in time gives rise to bad bricks owing to the variation from the parallel. To counteract this defect, the molds are lined with hardened steel plates called "liners;" and the object of this invention is to construct the mold in such a manner that these liners may be readily renewed, and especially to arrange that as much wear as possible shall be obtained from each liner. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the table of a brick-making machine. Fig. 2 is a part plan of the same. Fig. 3 shows a side liner and an end liner, respectively. Fig. 4 shows a plan and side elevation of a complete four-walled lining, and Fig. 5 shows a plan and side elevation of a lining with round corners, but separate sides and ends.

Similar figures refer to similar parts in the several views.

The table has an opening in the central portion 12, in which is fitted the supporting-shaft, with which it revolves in carrying the molds from the pressing to the filling or pushing-out apparatus. A series of openings are left in the table, in which are formed the mold-passages 29, the mold being completed by the use of movable plungers of the same size and shape as the mold, which are raised by suitable mechanism to compress the material in the mold and when out of action rest on the corner-brackets 69, all as shown and described in my said patent.

The particular feature of this invention is the method of securing the liners, such as 61 62, within the mold-passages by means of the recesses 71 and 73, which receive and securely hold projections or lugs 63 64, formed integrally with two of the liners, and thus prevent the displacement of the liners when under pressure without the necessity for screws or bolts through the face of such liners for the purpose of securing them.

Preferably the side liners 61 are made with projecting lugs 63 64, and these fit into corresponding recesses 65 66, formed on the edges of the end liners, so as to be flush with them sidewise, but so as to project beyond them in a lengthwise direction. These projecting pieces enter the recesses 71, formed in the body of the table, at one end, where they are securely held. At the other end a space 73 is left for the insertion of the plates, which is afterward filled up with a closely-fitting packing-piece 67, having overhanging top pieces 67, which catch the projecting lugs 63 of the side liners and prevent them rising. The packing-piece 67 itself is held in place by the covering-plate 60 of the table, which is made preferably of steel and is secured to and forms the working surface of the table by the countersunk screws 70. The liners when thus secured by the packing-piece will not move in the mold, and they are made of such a depth that when the top inner sides of the liners are worn out they may be turned upside down and the bottom parts worn, after which they may be reversed altogether and both the top and bottom of the reverse sides used in the same way. In order to provide a further guide for the plungers which are used in such a machine, an additional plate 68, Fig. 1, is bolted below the side liners so

as to be flush with them, and these form a further stay to prevent the downward movement of the liners under the action of the pressure. The lugs or brackets 69, formed integrally with the body of the table, are provided at each corner for the plunger to rest on when out of action.

The modification shown in Fig. 4 consists of a complete mold-liner 74 in one piece, provided with projections 75, formed on its end surfaces. This mold may be reversed by turning it upside down, so as to utilize the unworn surfaces at the bottom end of the mold. It may be used with either round or square corners.

The modification shown in Fig. 5 consists of separate liners arranged so as to form a round-cornered brick, separate side liners 78 being provided with projections 79, which fit into special end liners 76, which are formed with a round corner-piece integral therewith. In this case also the lower surfaces may be utilized by turning the liners upside down; but, as will be obvious from the drawings, only one side of the liners can be used on account of the projecting corner-pieces.

Looking at Fig. 1, one of the mold-openings is seen without the liner-plates to show the recesses in the end walls by which the liner-plates are secured in place. At its sides the mold has an extension 2, depending as means for fastening the plate 68, which forms the bottom extension for each side wall of the mold to form guides for the plunger. These guide-plates, by reason of being riveted to the wall extensions 2, form shoulders 3, on which the liner-plates are supported against the downward movement of the plunger. In this figure is also seen the lugs 69 as being cast on the hollow part of the table just beneath the open end of the mold, so that the plunger in its position as forming the bottom of the mold is supported upon these lugs, which are in vertical alinement with the corners of the inner walls of the mold.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In molds for the table of a brick-making machine, and in combination, reversible liners formed with fitting projections and recesses, corresponding recesses formed in the body of the table to engage the projections on the liners, a packing-piece for filling a space left at one end for the insertion of the liners, and a top plate forming the working surface of the table, substantially as set forth.

2. In molds for the table of a brick-making machine, and in combination, reversible liners formed with fitting projections and recesses, corresponding recesses formed in the body of the table to engage the projections on the liners, a packing-piece with a projecting top, a top surface plate, a plunger guide-plate attached to the body of the table, and brackets or lugs on the table forming a support for the plunger when out of action, all substantially as set forth.

3. In molds for the table of a brick-making machine, and in combination, a reversible mold formed with projections on its ends, corresponding recesses formed in the body of the table to engage the projections on the mold, a packing-piece with a projecting top, a top surface plate, a plunger guide-plate attached to the body of the table, and lugs or brackets on the table forming a support for the plunger when out of action, all substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EDGAR ROUSE SUTCLIFFE.

Witnesses:
HENRY HAYDEN,
ALBERT EDWARD ROBERTS.