To all whom it may concern:

Be it known that I, ANDREW SCHRAG, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Molding-Boxes and the Like, of which the following is the specification.

My invention relates to improvements in molding boxes and the like, and the object of the invention is to devise a simple expandable box capable of being instantaneously withdrawn away from the sides of the concrete block when set.

A further object is to make the mold of such a character that it can be readily and expeditiously removed and lifted.

A still further object is to make the mold of such a character as is adaptable for molding flasks.

A still further object is, when it is used as a molding flask, to dispense with weights, which are now commonly used to prevent the sand rising with the expansion of the metal when molding in metal.

To effect these objects I have constructed the mold of four sides having from the edges on two of the sides projecting tongues set at substantially an angle of forty-five degrees to the plane of the side and extending through correspondingly set orifices in the adjacent side, bars connected to the two opposite sides at the outer ends held in suitable guide-ways on the sides intervening and an expandable device for extending the bars so as to throw the sides apart, the parts being arranged and constructed in detail as herein-after more particularly explained.

Figure 1, is a perspective view of the preferred form of my invention. Fig. 2, is a sectional plan of Fig. 1. Fig. 3, is a longitudinal section through Fig. 1. Fig. 4, is a perspective view of a modification.

In the drawings like letters of reference indicate corresponding parts in each figure.

A A are two sides and B B are the intervening sides or ends of the mold. The sides A and B may be formed of wood or metal and the sides B are provided with strips B' attached thereto near the ends of the sides and provided with tongues B' preferably at the top and bottom, although intermediate tongues may be provided if desired. The tongues B' are set at an angle of forty-five degrees to the planes of the sides A and B respectively and extend through orifices A' at a corresponding angle set. The sides A have projecting slotted lugs A' through slots in which extend the reduced ends C' of the bars C. The bars C are also supported in guide-ways D secured to the ends B and have at their inner ends pins C', which extend into the slots E' in the operating block E. The operating block E extends between the brackets D and is provided with a top lifting lip E'.

The slots E' it will be noticed are vertical near the top and then inclined outwardly toward the bottom where they extend downward vertically.

The blocks E are provided with inwardly extending projections E', which extend into the vertical slot E' made in the ends B. It will now be seen that by lifting the blocks E the four sides of the mold or flask will be forced apart simultaneously on account of the tongues B' having the angle set in the orifices A' as hereinbefore described.

In Fig. 4, I show tongues B' and orifices A' at two corners only, the orifices in this case being formed in blocks A' forming part of the strip A' and the tongues having the inner end suitably secured to the sides as indicated. The plate A' is provided with a slotted lug A' projecting parallelly with the face of the plate and into this slotted lug extends the turned end F' of the link F, which is also provided with a notch F'. A lever G provided with a suitable handle G' is pivoted on a bolt G'', when the mold is closed extends through the notch F'. The lever G is connected by a pin or bolt G' to the end of the link F. A cam-shaped stop H is provided, so as to hold the link down and consequently the mold closed. To throw open the mold all it is necessary to do is to raise the cam shaped stop H and swing the lever G toward the tongues, whereupon the mold or flask will be immediately expanded similarly and with equal facility to that described of the form of mold shown in Figs. 1 and 2 and 3.

While I intend particularly to utilize my mold for molding concrete it will, of course, be understood that it may be adapted for molding in a foundry. In case it is used for foundry purposes as a flask I preferably provide an open frame I consisting of the side longitudinal bars I' and the cross bars I'. Two or more of the bars I' extend beyond the edges of the mold or flask and have the hooks J attached to the sides hook over them, so as...
to hold down the molding frame and prevent the rising of the molding sand by the expansion of the metal when the casting is being made.

5 What I claim as my invention is:

1. In a molding box, the combination with the sides, of tongues fastened to the ends of one of the sides and set at an angle of forty-five degrees to the plane of the sides, and orifices in the sides forming the adjacent angle, set at a corresponding angle and through which the aforesaid tongues extend, slotted lugs attached to two of the sides, bars projecting through the slotted lugs and means for imparting longitudinal movement to the bars as and for the purpose specified.

2. In a molding box, the combination with the sides, of tongues fastened to the ends of one of the sides and set at an angle of forty-five degrees to the plane of the sides, and orifices in the sides forming the adjacent angle, set at a corresponding angle and through which the aforesaid tongues extend, slotted lugs attached to two of the sides, bars projecting through the slotted lugs, guides for the bars attached to the sides and means for imparting longitudinal movement to the bars as and for the purpose specified.

3. In a molding box, the combination with the sides, of tongues fastened to the ends of one of the sides and set at an angle of forty-five degrees to the plane of the sides, and orifices in the sides forming the adjacent angle, set at a corresponding angle and through which the aforesaid tongues extend, slotted lugs attached to two of the sides, bars projecting through the slotted lugs, guides for the bars attached to the sides, pins projecting from the ends of the bars, an adjusting and lifting block having inclined slots in the same into which the pins extend as and for the purpose specified.

ANDREW SCHRAG.

Witnesses:

R. COBAIN,
D. E. CRAIGIE.