

(No Model.)

R. E. VAN COURT & C. R. MADEIRA.

CLAMP FOR MOLDING FLASKS.

No. 532,847.

Patented Jan. 22, 1895.

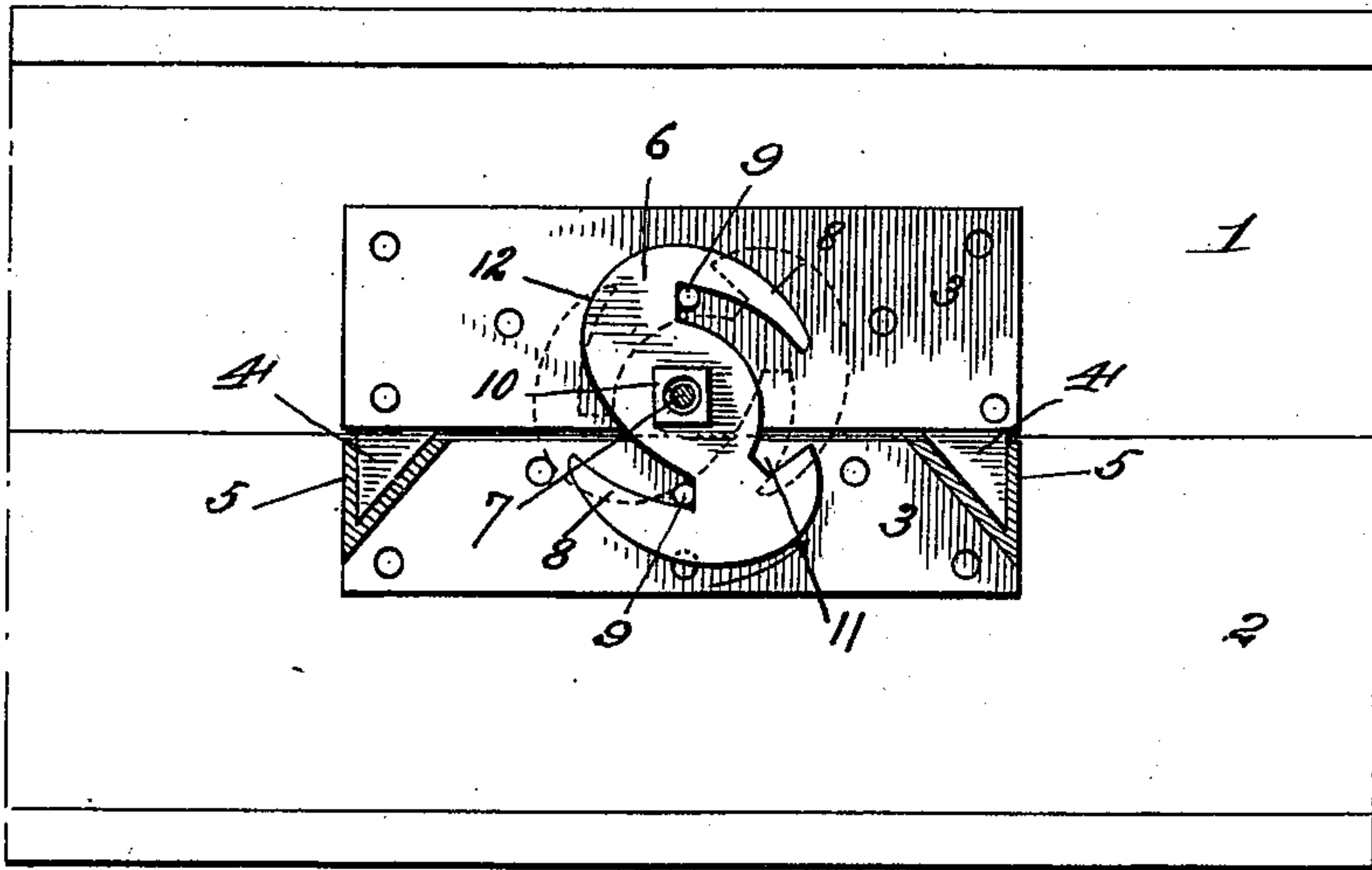


Fig. 1.

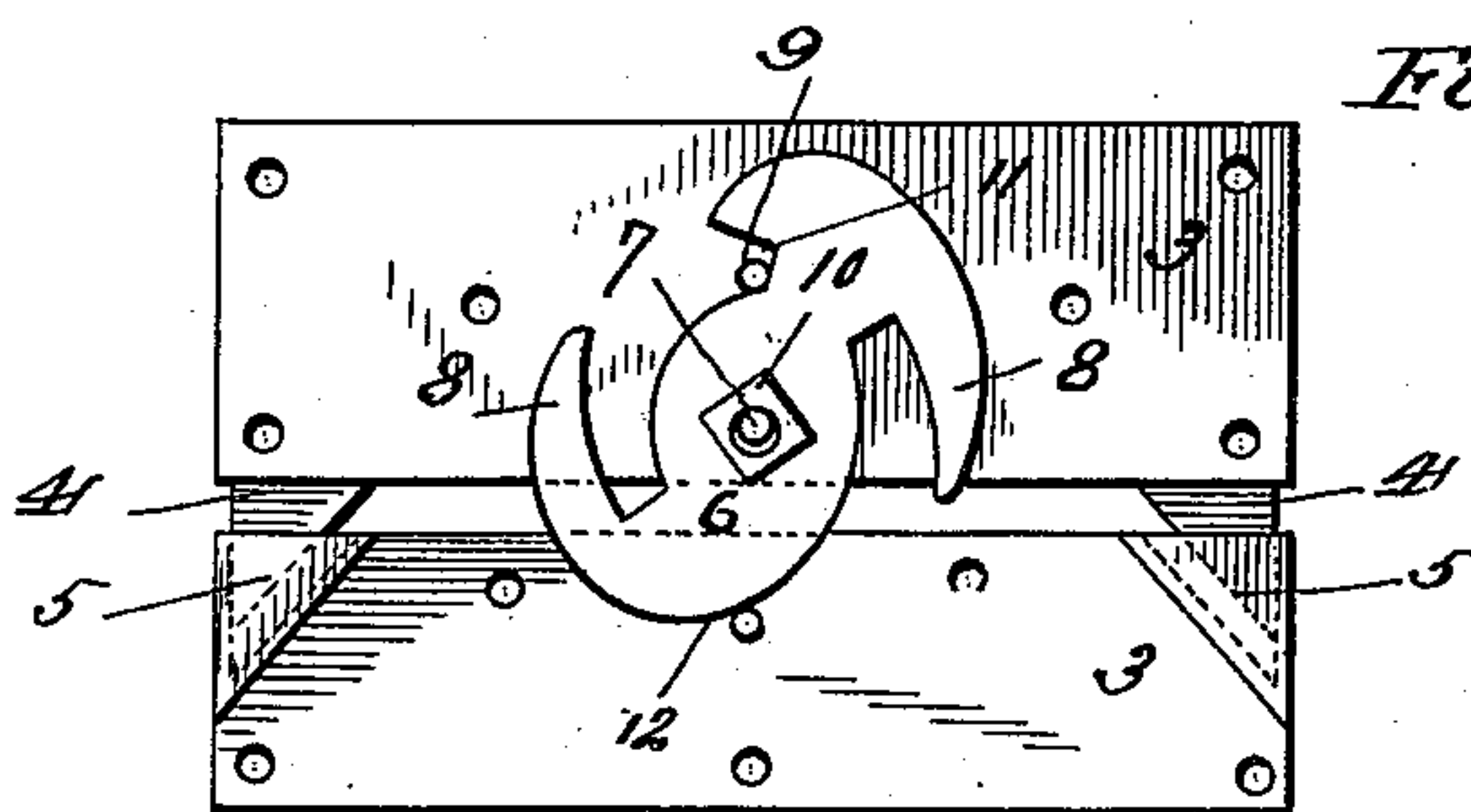


Fig. 2.

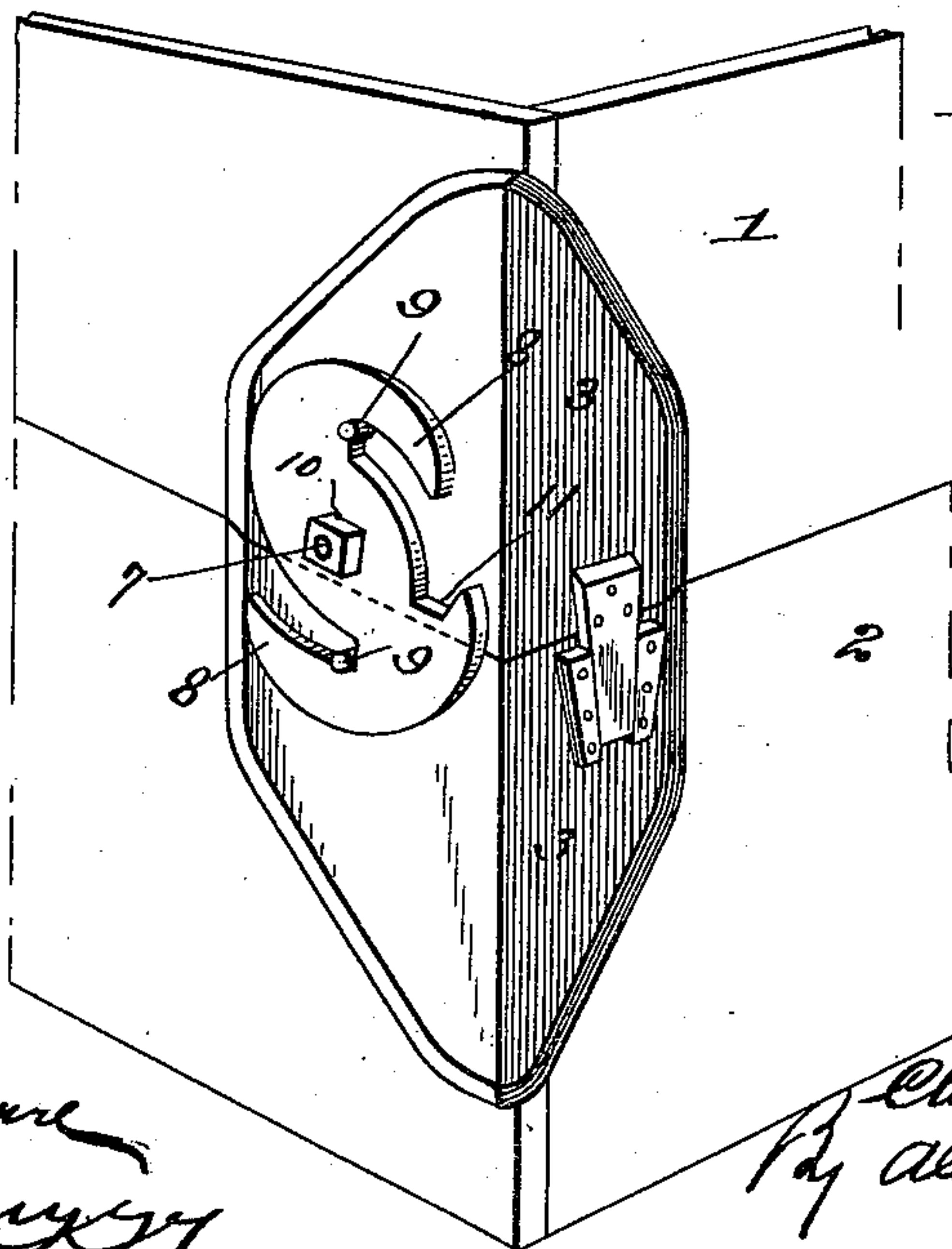


Fig. 3.

Witnesses
G. M. Lawrence
Chas. A. Mays

Inventors,
R. E. Van Court and
Charles R. Madeira
By *Alexander Davis*
Attorneys

UNITED STATES PATENT OFFICE.

ROBERT E. VAN COURT AND CHARLES R. MADEIRA, OF ELKTON, VIRGINIA.

CLAMP FOR MOLDING-FLASKS.

SPECIFICATION forming part of Letters Patent No. 532,847, dated January 22, 1895.

Application filed May 10, 1894. Serial No. 510,790. (No model.)

To all whom it may concern:

Be it known that we, ROBERT E. VAN COURT and CHARLES R. MADEIRA, citizens of the United States, residing at Elkton, in the county of Rockingham and State of Virginia, have invented certain new and useful Improvements in Clamps for Molding-Flasks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and improved locking and clamping device, and guide for the sections of molding flasks, and it has for its object to provide a device simple in construction and adapted to withstand the rough usage these tools receive.

The invention consists in securing permanently to the sides of the sections of the molding flask guides and locks of peculiar construction, the locking device being adapted to be used as a cam for separating the sections after the molding operation is completed, all of which will be hereinafter set forth.

In the drawings:—Figure 1 is a side elevation partly in section, showing the sections locked together; Fig. 2, a similar view showing the locking-device used as a cam for forcing the sections slightly apart; and Fig. 3 a perspective view of a corner of a molding flask showing the locking device secured to one side of the corner stay.

Referring to the various parts by numerals, 2 designates the drag or lower section of the flask, and 1 the cope or upper section thereof. On each vertical side of the sections of the flask near their adjoining edges is secured a metal plate 3. The plates 3 of the upper section of the flask have formed on their lower edges depending lugs 4, one at each end of the plates, as shown, and the plates secured to the lower section of the flask have formed on their upper edges pockets or recesses 5 which register with lugs 4 of the upper plates and into which said lugs fit. By means of these lugs and pockets it will be readily seen that the two sections of the flask can be quickly adjusted together without the least danger of one section sliding on the other, and when in position they will be fitted together accurately and squarely.

Secured to one of each pair of plates 3, pre-

erably the upper one, is the locking device 6. This locking device is mounted to revolve freely on a pin 7 projecting outwardly from the plate 3 near its lower edge, and is substantially S-shaped, being formed with the two oppositely extending curved hooks or beaks 8. The inner edges of said hooks are formed eccentric to the pivot of the locking-device, the inner ends of said edges being nearer the pivot of the device than the outer ends thereof for a purpose which will presently appear.

Secured to each of the plates 3, in a position to be engaged by the inner edge of each hook 8, is an outwardly projecting pin 9. These pins are so located on the plates 3 that when they are at the inner ends of the hooks 8 the two sections of the flasks will be closely drawn together. The inner edges of the hooks as they are brought into engagement with the pins act on said pins as cams to force the sections of the flask together.

Projecting outwardly from the center of the locking-device and surrounding the pivot pin 7 is a rectangular enlargement 10, over which may be fitted a wrench or other suitable tool to enable the operator to bring the required pressure on the pins 9, through the medium of the cam-edges of hooks 8, to force the sections of the flask together.

In the body of the locking device opposite the point of the hook 8 which engages the pin on the upper plate 3, is formed a recess 11. The inner wall of this recess is slightly eccentric to the pivot of the device and is so located that when the hooks 8 are disengaged from the pins 9 and the sections of the flask separated, the recess 11 will fit over the pin on the upper plate and said pin impinging on the inner cam surface thereof will lock the device in its open position and hold it open against slight jars. It will thus be seen that the locking device is always in operative position.

On the opposite side of the locking-device from the recess 11 is formed the cam 12. This cam is adapted to engage the pin 9 on the lower plate 3 when the hooks 8 are disengaged from said pins, and to raise the upper section of the flask slightly to facilitate the separating of the sections. The cam 12 is so formed that it will operate on the lower pin 9 just

before the inner end of the recess 11 reaches the pin 9 on the upper plate 3.

5 In Fig. 3 our device is shown applied to cornerstays of a flask. A different form of guide is also shown in this view, but it is manifest that the guide shown in Figs. 1 and 2 may be used on this form of device.

10 From the foregoing it will be readily seen that our device is simple; can be operated quickly and accurately; is always in place on the sections of the flask, and is adapted to withstand the rough usage molding flasks receive. It will also be seen that by the use of our device the three operations necessary in using molding flasks are accomplished; as it combines in one device, a guide, a locking and clamping device, and a cam for aiding in separating the sections after the molding operation is completed.

20 If desired the upper pin 9 and hook 8 may be dispensed with, but it is found desirable to use them in order to relieve the pivot pin 7 of all strain. The locking device is loosely mounted on the pin 7 to permit the cam edge of the upper hook 8 to engage the pin 9.

25 Having thus fully described our invention, what we claim is—

30 1. In a molding flask the combination of two superimposed sections, a pivoted plate carried by one of said sections and formed with an open hook 8 at one end, said hook having an eccentric inner edge, and a cam 12

formed at the other end and on the same side with the hook, and a pin carried by the other section of the flask and adapted to be engaged by the eccentric edge of the hook and by the cam 12, substantially as described and for the purpose set forth. 35

2. A clamp for molding flasks consisting of a loosely pivoted plate carried by one of two superposed sections of a flask, said plate being formed with the two open hooks 8 having eccentric inner edges, the cam 12, and the recess 11 formed with the eccentric inner edge, and the pins 9 carried by each section of the flask, substantially as described and for the purpose set forth. 40 45

3. A clamp for molding flasks consisting of the pivoted plate carried by one section of the flask, a hook formed at one end of said plate, said hook having an eccentric inner edge, an enlargement formed at the pivot of the plate and adapted to receive a wrench, and a pin carried by the other section of the flask and adapted to be engaged by the eccentric edge of hook, substantially as described and for the purpose set forth. 50 55

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT E. VAN COURT.
CHARLES R. MADEIRA.

Witnesses:

H. T. WORKMAN,
W. K. COMPTON.