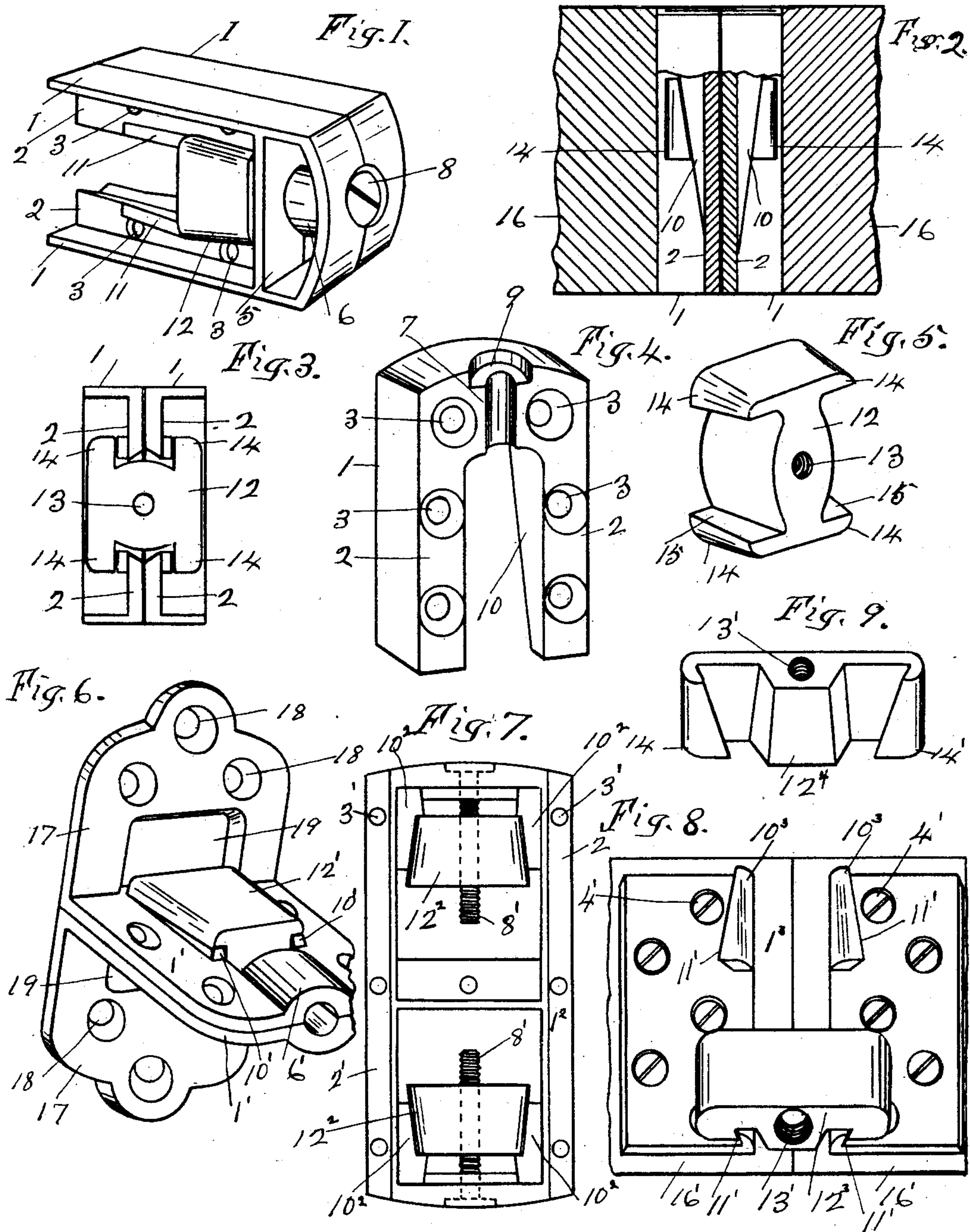


No. 707,596.

Patented Aug. 26, 1902.

E. J. KISS.
FOUNDRY PATTERN CLAMP.
(Application filed July 18, 1901.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

ERNEST J. KISS, OF FORT WAYNE, INDIANA.

FOUNDRIY PATTERN-CLAMP.

SPECIFICATION forming part of Letters Patent No. 707,596, dated August 26, 1902.

Application filed July 18, 1901. Serial No. 68,768. (No model.)

To all whom it may concern:

Be it known that I, ERNEST J. KISS, a citizen of the United States, residing at Fort Wayne, in the county of Allen, in the State of Indiana, have invented certain new and useful Improvements in Foundry Pattern-Clamps; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in foundry pattern-clamps.

It is well known that foundry pattern-pieces are usually secured together in use by nails, screws, bolts, or dogs and that such devices are not only inconvenient, but are injurious and destructive to the patterns.

The object of my present invention is to provide a cheap, simple, and convenient pattern-clamp adapted to make perfect connection of the parts in any-sized pattern and by means of which a part of a pattern can readily be united to another part, which is "rammed up" or buried in the sand and by the use of which such part can be more readily "drawn."

My invention consists of the following co-operating parts, viz: two plates, a clamp, wedge, or key connecting said plates, and means for tightening up the wedge.

In the accompanying illustrative drawings, Figure 1 is a perspective view of my invention, showing all the parts united in their interlocked position. Fig. 2 is a plan view of the same in position uniting two pattern parts and broken away in part to show the inclined faces with which the clamp or key interlocks. Fig. 3 is an inner end view of Fig. 1, showing the relative arrangement of the coöperative parts. Fig. 4 is an enlarged perspective detail of one of the coöperating plates, and Fig. 5 is an enlarged detail of the interlocking clamp or key. Fig. 6 is another perspective view of my improvement, showing a modified form of the plates with the connecting clamp or key interlocked therewith. Fig. 7 is a plan view of another modified form adapted for use in large patterns and employing a duplication of the clamps or keys. Fig. 8 is a per-

spective view of another modified form with one of the duplicate clamps or keys removed and shown in a perspective detail in Fig. 9.

All parts of my invention are made of suitable metal.

Referring now particularly to that form of my improvement shown in Figs. 1 to 5, inclusive, the metal plates 1 are identical in size, form, and construction, have their adjacent faces provided with the inwardly-projecting lateral flanges 2, extending around upon three sides thereof, Fig. 4, and provided with proper recessed openings 3 for the screws 4, by means of which these plates are rigidly secured to the pattern-sections. Near the forward end of said plates 1 is arranged an integral cross-web 5 and a thickened longitudinal portion 6, having a recess 7, which when the two plates are united form an opening for the adjusting-screw 8, whose head is preferably countersunk in a suitable recess 9. Upon the inner face and the adjacent edges of the said flanges 2 are arranged the ways or lugs 10, whose inner inclined faces 11 are adapted for an interlocking union with the clamp or key 12. This clamp or key 12, of proper dimensions, has a screw-threaded opening 13 for the said screw 8 and is provided upon each end thereof with a pair of opposite lateral lugs 14, whose inner faces 15 are longitudinally inclined as follows: The said faces of each pair of the lugs 14 are inclined in one direction, but in a direction opposite to that of the said faces of the other pair, thereby adapting them for a clamping engagement with the said ways in the manner hereinafter described. This form of my improved pattern-clamp is specially designed to secure the sections 16 of cylindrical patterns, and therefore the outer ends of the plates 1 are correspondingly convex, as shown.

In Figs. 6, 7, and 8 the plates 1, 1², and 1³, respectively, are slightly modified in contour as follows: In Fig. 6 these plates are provided upon their inner end with the right-angular flange 17, having openings 18 for proper holding-screws and an opening 19, through which the clamp or key 12' is passed in placing it upon the ways 10'; otherwise the relative arrangement of the coöperative parts are identical and are provided upon their outer end with the thickened portion 6'. In Fig. 7 the lateral

flanges 2', having the screw-openings 3', are arranged upon the outer instead of the inner faces of the plate 1², and the inclined ways 10² are duplicated, a pair being arranged at each end thereof. In Fig. 8 the plates 1³ are flangeless and have the inclined ways 10³ upon each plate arranged in longitudinal alinement instead of transverse arrangement, whereby the opposite ways 10³ will be in parallel arrangement, as in the other above-described forms. The contour of the clamp or key 12³ is modified in Fig. 8 in this that it has but one pair of ways or lugs 14'; but the coöperation of its inclined faces 11' with the ways 10³ in the operation of clamping the parts of the pattern together is identical with that of the other described forms. In this form the screws 4' are arranged in the body of the said plates, as shown, the opening 13' is arranged midway of the ends of the clamp, and the pattern-sections 16' may be of any proper form.

The modified forms shown in Figs. 6 to 9, inclusive, are adapted for large-sized patterns.

The operation and manner of employing my invention thus described is obvious and, briefly stated, is as follows: The plates 1 being in position in the respective pattern-sections, the clamp or key 12 is then placed upon the inclined ways 10 and forced upward thereon by means of the said adjusting-screw 8 until the pattern-sections are firmly united. In that form shown in Fig. 8 both of the keys 12³ are preferably secured in their interlocked position by means of a single screw. (Not shown.)

Having thus described my invention and the manner of employing the same, what I desire to secure by Letters Patent is—

1. A foundry pattern-clamp consisting of a pair of centrally-slotted plates, having in-

clined ways upon their outer face adjacent to said slot as shown; a clamp or key provided upon its opposite ends with a pair of inclined faces, arranged in said slot and adapted for a binding engagement with the said inclined ways; and the means described for securing said plates in such engagement.

2. In a pattern-clamping device a pair of plates having a longitudinal recess therein, and inclined ways adjacent to said recess; a clamp slidably mounted in said recess and having upon each end thereof a pair of inclined faces adapted to engage the said inclined ways as shown; and means for forcing the said clamp upward on said ways and for securing the same in such position for the purpose specified.

3. A pattern-clamp consisting of a pair of plates provided with inclined ways; an interlocking clamp mounted on said ways and provided with faces adapted to engage said ways; and means for forcing said wedge upward on said ways.

4. In a pattern-clamp the combination of a pair of plates rigidly secured to the pattern-sections, each of which plates is provided upon its outer face with a pair of inclined ways; a clamp having upon two opposite sides thereof a pair of oppositely-arranged inclined faces adapted to engage said ways; and a screw mounted within said plates and adapted to force the said wedge into a holding engagement with the said ways.

Signed by me at Fort Wayne, Allen county, State of Indiana, this 16th day of July, A. D. 1901.

ERNEST J. KISS.

Witnesses:

ADELAIDE KEARNS,
AUGUSTA VIBERG.