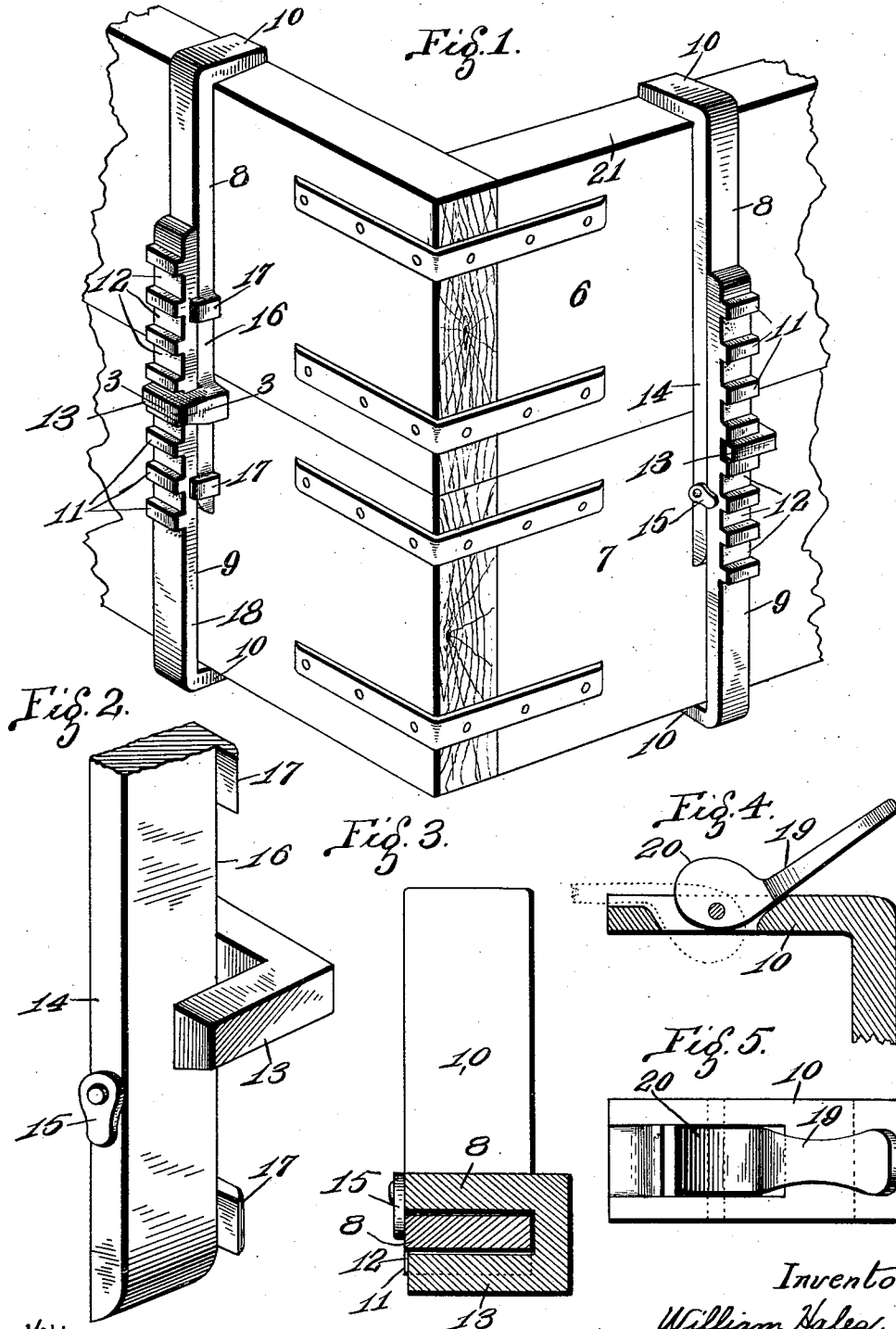


W. HALES.
ADJUSTABLE CLAMP.
APPLICATION FILED NOV. 21, 1910.

1,011,950.

Patented Dec. 19, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM HALES, OF ST. LOUIS, MISSOURI.

ADJUSTABLE CLAMP.

1,011,9

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed November 21, 1910. Serial No. 593,576.

To all whom it may concern:

Be it known that I, WILLIAM HALES, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Adjustable Clamps, of which the following is a specification.

This invention relates to improvements in adjustable clamps and has for its object two sections adapted to interlock and hold the members in adjusted position so as to accommodate various heights of foundry flasks to which the improved clamp is preferably adapted.

A further object of my invention is to construct a clamp of two members so arranged as to be adjusted at various lengths, the same being provided with a locking means by which the adjusted sections are held in position against the article to which the clamp is applied.

Figure 1 is a perspective view of a portion of a foundry flask showing my improved clamp in its operative position. Fig. 2 is an enlarged detail perspective view of the interlocking end of one of the clamp members. Fig. 3 is a horizontal sectional view taken through the clamp in a position indicated by the line 3—3 of Fig. 1. Fig. 4 is a detail sectional view of the contacting end of the clamp in a modified form showing a means by which the clamp may be secured to the flask. Fig. 5 is a top plan view of the same.

Referring to the drawings in detail 6 and 7 indicate the two members of a foundry flask, the same being placed together after the mold has been properly formed, and in order to hold both of said members of the flask in position I apply my improved clamp or any number thereof, the same consisting of two sections 8, 9, each of said sections having one end bent approximately at a right angle to the member forming what I call a tooth 10. The under, or contacting surface of said teeth may be slightly curved so that when the same are brought into contact with the upper and lower edges of the flask, the same will have a tendency to force both sections of the flask together. The clamp is driven in position by means of a clamping bar, hammer, or other suitable instrument.

The sections 8 and 9 are provided with a plurality of ridges or projections 11 forming between

each of the same a recess or pocket 12 in which is adapted to be inserted the prong or hook portion 13 formed on the section 8, and on the edge 14 of the section 8 is provided a locking device 15, which when both sections are placed in position as shown in Fig. 1, retains both sections in a locked position, its operative connection being clearly shown in both of the clamps illustrated in Fig. 1. The opposite edge 16 of the section 8 is provided with a pair of lugs 17, which contact with the edge 18 of the section 9 and is for the purpose to rigidly support, and retain both sections in proper alinement with each other.

The recesses or pockets 12 in which the hook 13 is seated are so arranged at each adjustment of the clamp as to shorten, or lengthen the device either a quarter, a half, or one inch depending upon the size of the clamp and the flask to which the same is to be applied. For small flasks a clamp is constructed having its recesses or pockets a quarter of an inch apart, which will permit small adjustments. On medium size flasks the pockets are arranged one-half or an inch apart.

I may if desired provide the projecting end or tooth 10 with a cam adjusting device 19 as shown in Figs. 4 and 5, this is for the purpose that, after the clamp has been adjusted to fit over the edges of the flask, and should there be any small space or lost motion between the tooth and the edge of the flask, the same can be firmly supported by placing the cam 19 in a position as shown by dotted lines in Fig. 4, the contacting edge 20 of said cam firmly binding against the edge 21 of the flask.

The device is simple in construction and can be readily and easily adjusted to accommodate various heights of flasks, and by the mere operation of the locking device 15 both sections of the clamp can be disconnected, and the hook 13 placed into any one of the pockets when it is desired to lengthen or shorten the clamp, and when once placed in position the mere operation of the locking device 15 will retain both sections in a rigid and locking position.

The device has been especially constructed so as to avoid the inconvenience of making solid clamps of a great number of various sizes and the waste of time of searching among a great number of clamps to find a required number of the same size.

Having thus fully described my invention, what I claim as new and desire to have secured to me by the grant of Letters Patent, is:

- 5 A clamp of the class described composed of two sections each provided with a right angular projection on one end thereof, a plurality of projections located on the outer surface of one of said sections, the smooth
10 surface of each section arranged to contact together, a hook formed integral with one section and arranged to span over the other section and seat itself between a pair of the projections formed on said section, lugs
15 formed integral on the section provided with

the hook, one located on each side thereof and arranged to contact with the side of the other section, and a pivotal locking device carried by the section provided with the hook and arranged to contact with the other side of the other section to lock both sections in proper alinement, substantially as specified.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

WILLIAM HALES.

Witnesses:

ALFRED A. EICKS,
WALTER C. STEIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."