S. C. O. BERG.

DOWEL PIN.

APPLICATION FILED NOV. 23, 1908.

949,611. Patented Feb. 15, 1910.

Fig. 1.

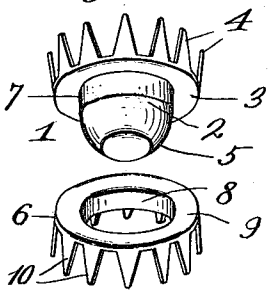



Fig. 2.

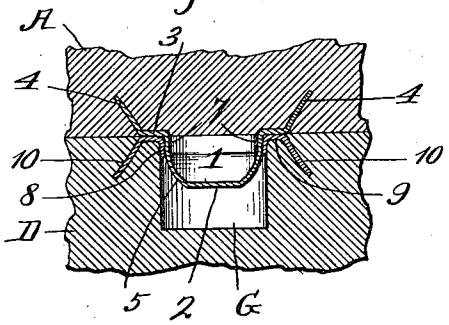



Fig. 3.

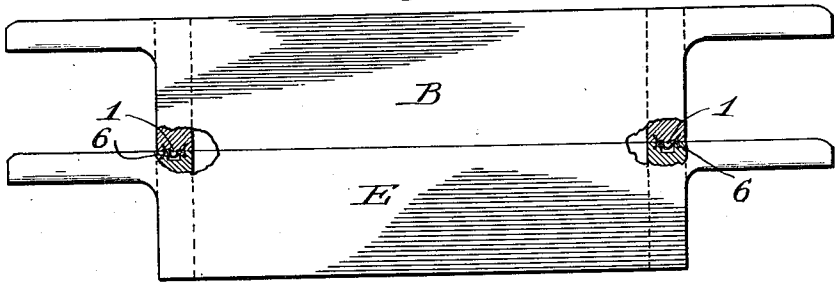
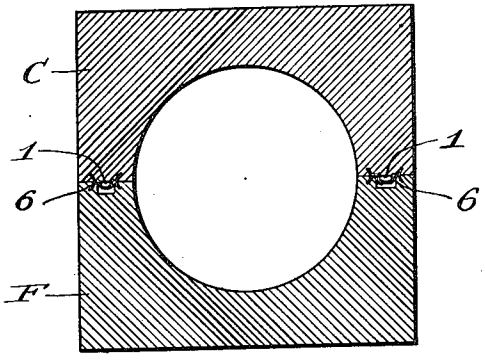



Fig. 4.




Witnesses:

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# UNITED STATES PATENT OFFICE.

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## DOWEL-PIN.

949,611. Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed November 23, 1908. Serial No. 464,049.

*To all whom it may concern:*

Be it known that I, SEGVART C. O. BERG, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Dowel-Pins, of which the following is a specification.

My invention relates to improvements in dowel-pins, and my object is to provide a simple device of this character which can be manufactured at small cost and is practically indestructible.

The device can be employed in any capacity to which the ordinary dowel-pin is put, but is especially adapted for use on patterns, core-boxes, flasks, and other articles comprising sections which are frequently put together and taken apart.

Referring now to the accompanying drawing, which illustrates the invention: Figure 1 is a perspective view of the two parts of the device. Fig. 2 is a vertical section showing the device applied to the two sections of a pattern, or other separable object. Fig. 3 is a broken side elevation of two sections of a flask provided with the device. Fig. 4 is a vertical section of a core-box provided with the device.

In carrying out the invention I employ a dowel-pin 1, which is preferably formed from a single piece of sheet-metal. Said dowel-pin comprises a tubular stud 2, a marginal annular shoulder 3 projecting from the upper end of said stud and at right angles thereto, and marginal prongs 4, projecting upward from said shoulder, so that the dowel-pin may be readily applied to the section A of the pattern, the section B of the flask, or the section C of the core-box. Stud 2 tapers at its lower end 5, so that it will readily enter a thimble 6, and is parallel at its upper end 7, so that it will fit snugly within said thimble, and be held thereby from lateral movement. Prongs 4 slope outward slightly toward their upper ends so that when they are driven into one section of an object they will diverge as plainly shown in Fig. 2, and thus reliably secure the dowel-pin in position.

Thimble 6 comprises a tubular portion 8, an annular marginal flange 9 surrounding the upper end of said tubular portion, and extending at right angles thereto and marginal prongs 10 depending from said shoulder, so that said thimble may be readily secured to the section D of the pattern, section E of the flask, or section F of the core-box. Prongs 10 slope outward slightly at their lower ends so that they, like prongs 4, will diverge when driven into an object and thus reliably hold the thimble in position.

In applying the device to the pattern for instance, sockets G are bored into section D of sufficient diameter to receive the tubular portions of the thimbles 6, which latter are then driven downward with a suitable punch until the upper surface of shoulders 9 is flush with the upper surface of section D. Dowel-pins are now placed in position in the thimbles, and section A is placed upon the prongs 4, care being taken to have the vertical sides of section A in line with the vertical sides of section D, so that the hollow portions of the patterns containing the design to be cast, will properly register with each other. Section A is then given a slight blow to embed the prongs 4 therein, after which it is removed from section D and turned over so that the dowel-pins may be driven downward by a suitable punch until shoulders 3 are flush with the face of the section. By thus applying dowel-pins to section A, the face of the latter need not be measured to properly locate said dowel-pins, hence considerable time and annoyance is saved and perfect registration of the dowel-pins with the thimbles is assured. Sockets G are bored somewhat deeper than the studs 2 of the dowel-pins, so that should small quantities of sand or dirt fall into said sockets, it will not interfere with the insertion of the studs.

Having thus described my invention, what I claim is:—

1. A device of the character described, consisting of a thimble having an internal tubular portion with parallel sides, a marginal shoulder surrounding said tubular portion and extending at right angles thereto, and fastening devices projecting from said shoulder, in combination with a dowel-pin comprising a tubular stud tapered at one end to enter the tubular portion of the thimble and parallel at its opposite end to snugly engage said tubular portion of the thimble, a shoulder surrounding the parallel end of the stud and extending at right angles thereto to bear against the shoulder on the thimble, and prongs projecting at an angle

from the outer margin of the dowel-pin shoulder, substantially as shown and described.

2. The combination with two sections of a pattern or the like, one of which has sockets therein, in combination with a plurality of thimbles each of which comprises a depending tubular portion open at its lower end and adapted to fit snugly within a socket, an annular shoulder surrounding the upper portion of said tubular portion and extending outwardly at right angles thereto, prongs depending at an angle from the outer margin of said shoulder whereby the thimble is secured to its respective pattern section, dowel-pins secured to the opposing pattern section, each of which comprises a tubular stud adapted to extend through the tubular portion of the thimble and into the socket containing the same, an annular flange surrounding the upper end of the stud and projecting at right angles thereto to rest upon the annular shoulder of the thimble, and prongs extending upward at an angle from the outer margin of said shoulder whereby the dowel-pin is secured to its respective pattern section, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses.

SEGVART C. O. BERG.

Witnesses:

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