

No. 715,215.

Patented Dec. 2, 1902.

P. J. RIDDELL.
BOWLING ALLEY PIN SPOT.

(Application filed Mar. 26, 1902.)

(No Model.)

Fig. 1,

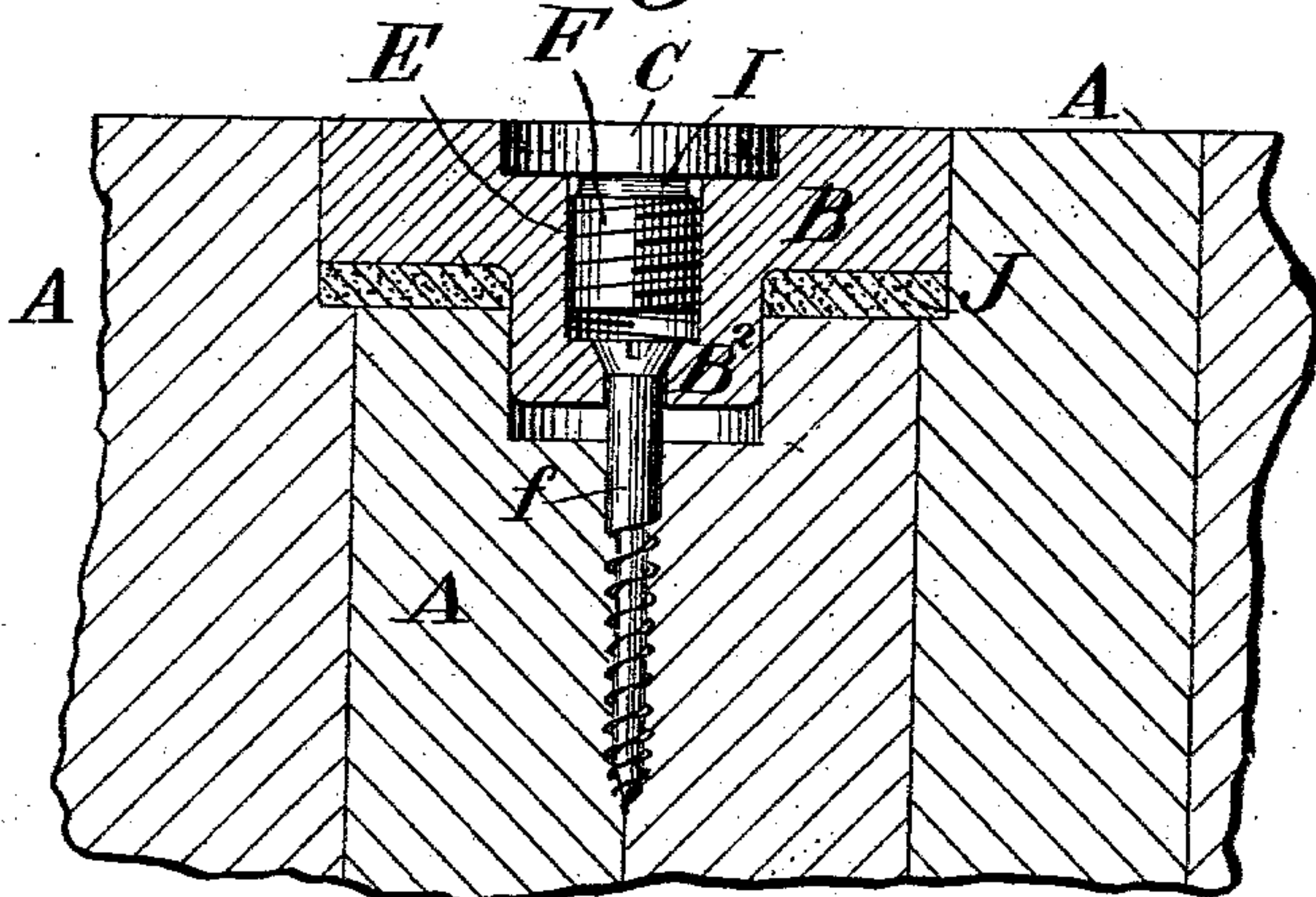


Fig. 2,

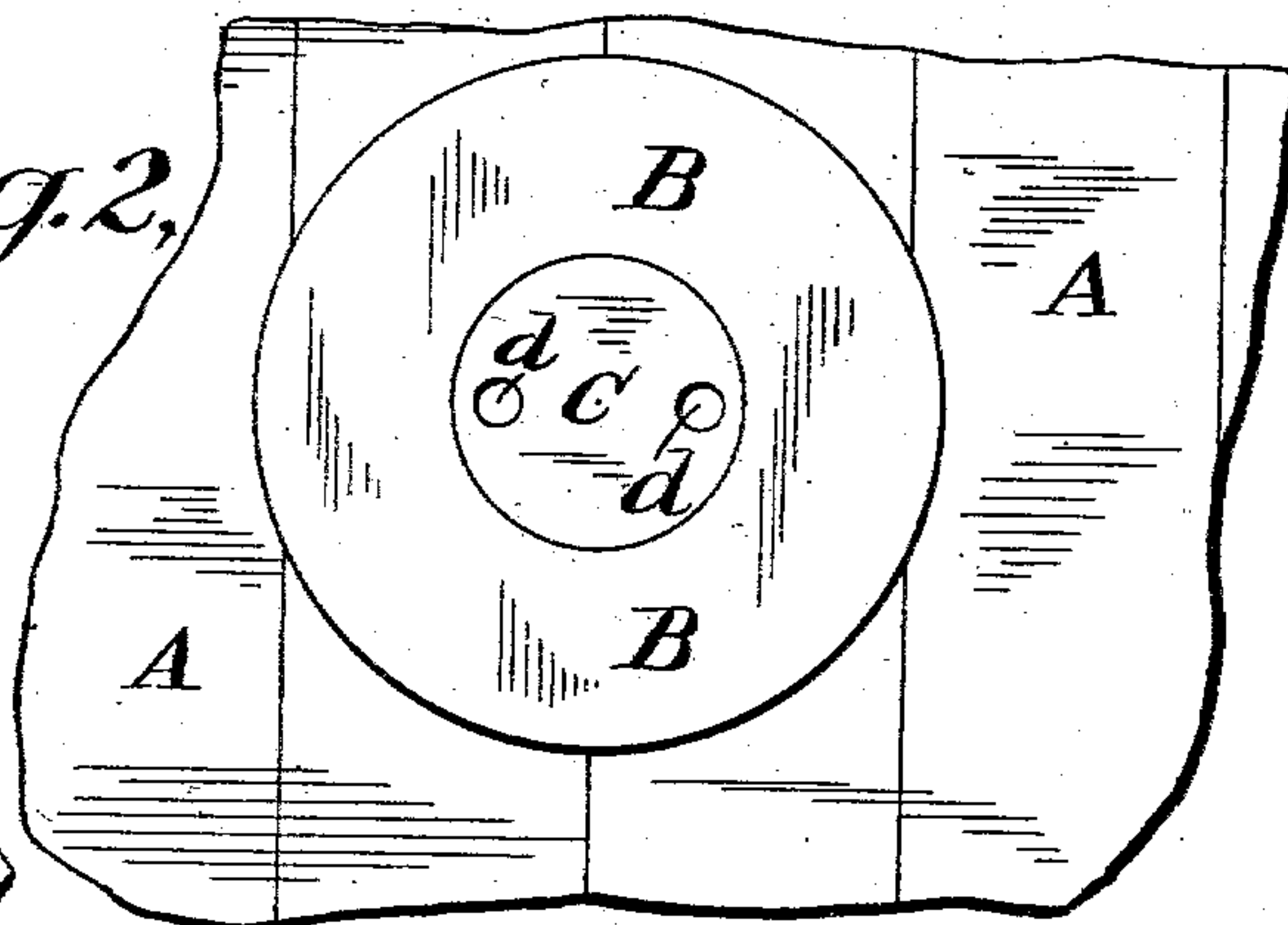


Fig. 4,

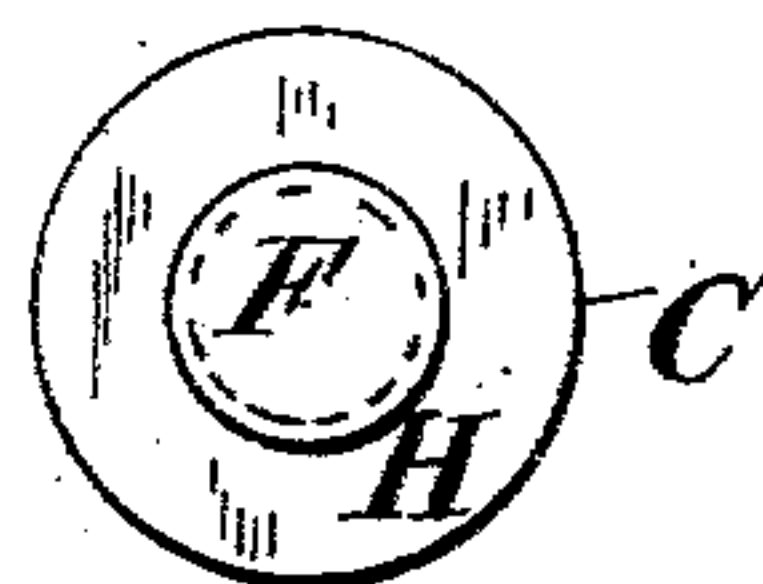


Fig. 5,

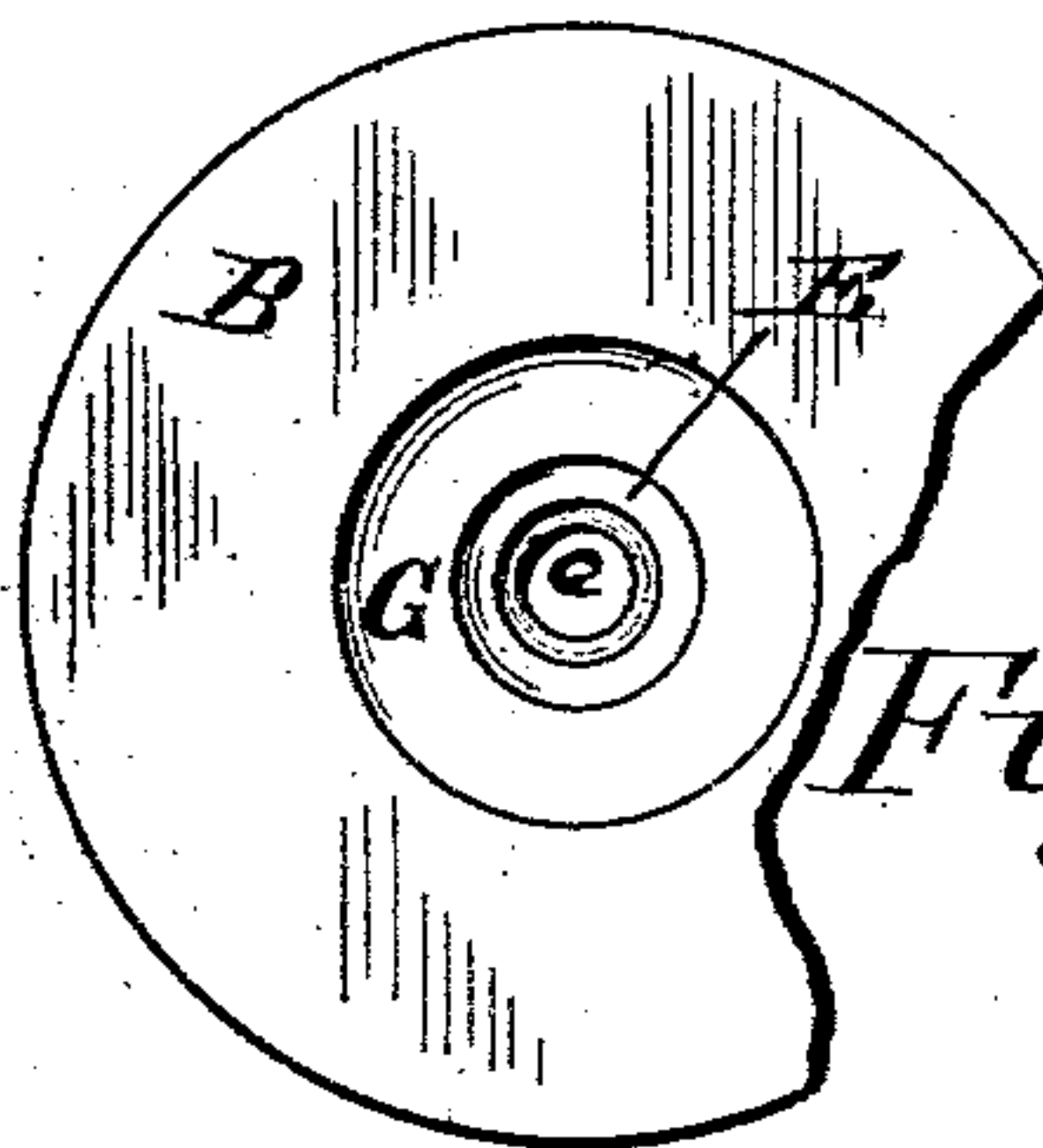
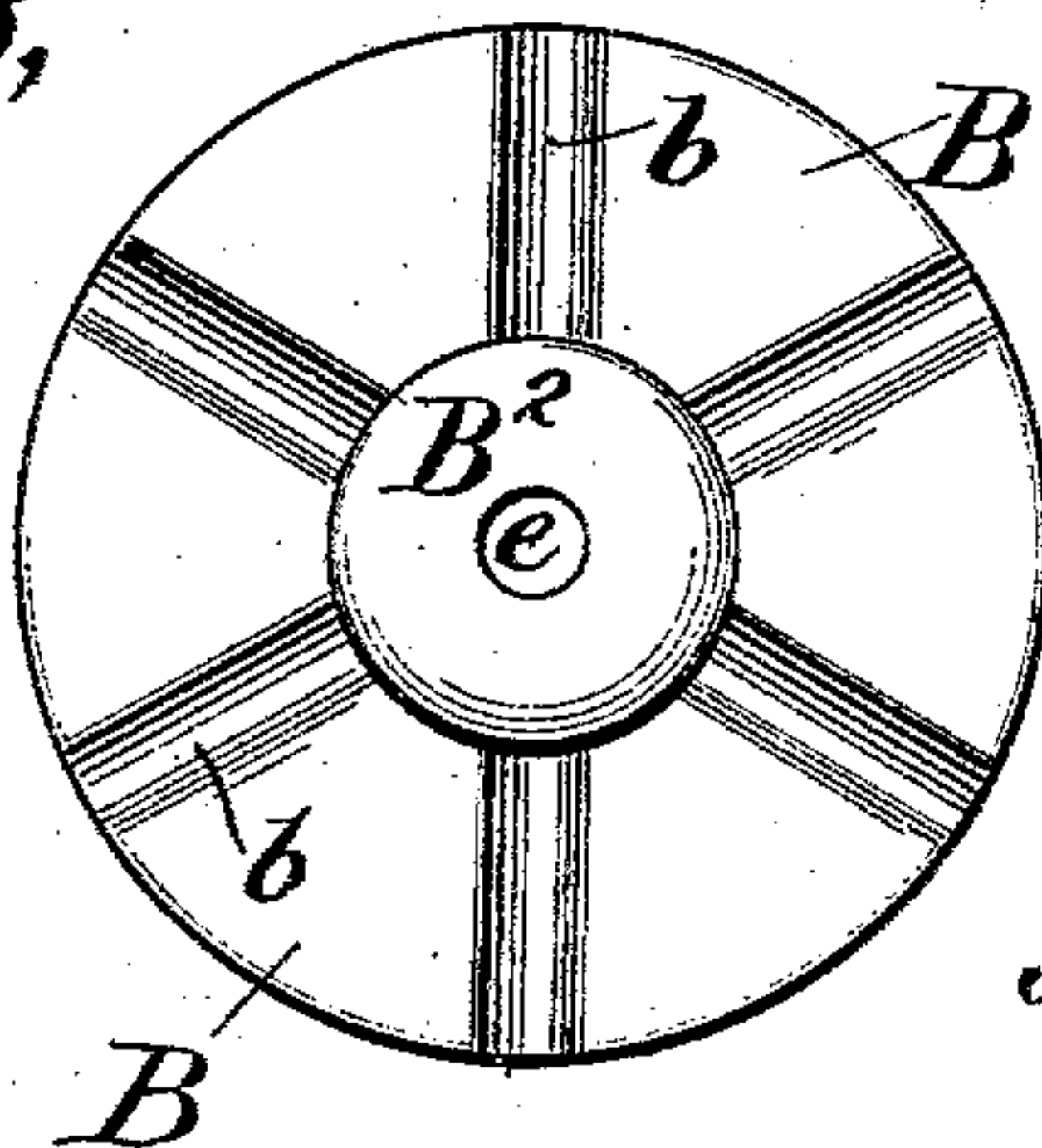


Fig. 3,



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UNITED STATES PATENT OFFICE.

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BOWLING-ALLEY PIN-SPOT.

SPECIFICATION forming part of Letters Patent No. 715,215, dated December 2, 1902.

Application filed March 26, 1902. Serial No. 99,995. (No model.)

To all whom it may concern:

Be it known that I, PARIS J. RIDDELL, of the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Bowling-Alley Pin-Spots; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

As is well known or understood by those skilled in the art of building bowling-alleys and familiar with their uses, there are always arranged on the face of the alley-bed at its pin end a series of "spots," ten in number and arranged so that the figure or contour formed thereby is that of an equilateral triangle, each spot being circular and of a size corresponding to the circular area of the base of the tenpin, these "spots," as they are called, being for the purpose of enabling the pin-boy or pit-boy to set up the tenpins in the proper relative position and each on exactly the right spot on the surface of the alley-bed. It has been a common practice almost from time immemorial to have these circular spots painted or produced by the application of some dark-colored pigment or stain to the finished surface of the alley-bed; but as in the use of the alleys these spots thus made on the bed's surface are apt to soon wear away or become obliterated, or partially so, thus rendering it difficult for the pit-boy to quickly perceive the spot and set the base of the pin to exactly match the spot, various more durable means or devices have been suggested and employed to a more or less extent to more durably accomplish the ends of what are called these "pin-spots."

Of course, as is well understood, a spot painted or colored on the surface of the wooden bed is naturally the best kind of pin-spot, barring the fact of its lack of durability, on account of, first, its obliteration by the frictional wear of setting up and knocking down the pins on the spots, and, second, its obliteration by the planing off or leveling and smoothing or finishing operation to which bowling-alley beds have frequently to be subjected to keep them in perfect playing con-

dition. Therefore many substitutes in the way of both wooden and metallic devices inserted into the wood of the alley-bed have been suggested and used, but great practical difficulties have been encountered in the use of all such devices, first, because of the liability of any such inserted device having its upper or exposed surface on which the pin is placed getting out of perfect plane with the wooden top of the bed itself, and, second, because of the difficulty of removing such inserted spots whenever the surface of the bed may have to be trued up and then replacing them so as to occupy precisely the same perfectly flush condition with the trued-up bed-surface which they occupied with said surface when originally combined therewith. Furthermore, in the use of all such removable pin-spots with which I am familiar it has been exceedingly difficult to insert the spots, whether made partially or wholly of metal, with their top surfaces perfectly flush with the surface of the alley-bed and so permanently or durably secure the spots in place that their top surfaces would never work out of the original and proper positions at their top surfaces.

I have devised a new kind of pin-spots, made of metal, which cannot only be readily and securely attached in precisely the proper position at the designated point in the bed-surface, but which will always retain its proper position, while at the same time for any necessary purpose it can be very readily removed and replaced to serve perfectly the designed purposes of a pin-spot.

To this end and object my invention may be said to consist in a metallic cylindrical piece of exactly the circumference of the base of the pin to be set thereon and formed with a downwardly-projecting hub or boss like projection adapted to be inserted within a properly-made cylindrical recess or depression in the wooden bed, formed also with a smaller central cavity or recess, a suitable approximately incompressible but yielding packing being arranged between the under side of the cylindrical part and the bottom of the larger portion of the cylindrical recess in the bed, means for securing the said metallic device

at the vicinity of its downwardly-projecting hub-like portion to the wood of the bed, a means for covering and protecting the upper end of this securing device, which latter means
 5 may be screwed into and out of place without the exposure of any screw-heads and in such manner that its top surface, perfectly flush with the top surface of said metallic device and also with the surface of the bed, cannot
 10 be affected in a manner to unscrew it in the slightest degree by the action of the bases of the pins when the latter are being either slid along on top of or knocked off of the pin-spots.

To enable those skilled in the art to which
 15 my improvement relates to make and use pin-spots embodying my invention, I will now proceed to more fully describe the latter, referring by letter to the accompanying drawings, which form a part of this specification, and
 20 in which I have shown my invention carried out in precisely that form in which I have so far very extensively practiced it with perfect satisfaction.

In the drawings, Figure 1 represents a partial vertical section of an alley-bed, taken in a plane which passes centrally or diametrically through one of my improved pin-spots attached to said bed. Fig. 2 is a top view of the same. Fig. 3 is a bottom view of the metallic body or main portion of the inserted pin-spot detached from the alley-bed and from the other parts of the device with which it is shown combined at Fig. 1. Fig. 4 is a detail bottom view of one of the parts shown detached. Fig.
 30 5 is a partial top view of the main metallic portion of the pin-spot detached, and in the several views the same part will be found always designated by the same letter of reference.

A represents part of an ordinary wooden alley-bed, and B is the main or body portion of my improved metallic pin-spot, formed, as seen at Fig. 1, with a central hub or boss like portion B², these integral main and boss-like
 45 portions of this metallic device fitting snugly within correspondingly-sized circular depressions bored or cut in the wooden bed A, as clearly illustrated at Fig. 1.

The larger of the two circular depressions
 50 in the bed is made somewhat deeper, it will be seen, than the depth or thickness of the main cylindrical portion B of the metallic device, so that when the latter shall have been forced down until its top surface is perfectly
 55 flush with the top surface of the bed A it will rest upon and be supported by a packing J, (see Fig. 1,) composed, preferably, of putty, onto which the metallic pin-spot is forcibly pressed or seated, while the smaller cylindrical bore or recess of the wooden bed, within
 60 which the part B² of this metallic device is inserted, is made somewhat deeper, it will be seen, than the hub-like portion B² when the latter is finally positioned, so that the seating
 65 ing of the metallic device will be solely on the annular packing of putty J. This metallic device B is bored or turned out, as will be

seen at Fig. 1 and also at Fig. 5, with a shallow cylindrical cavity G, from whence a counterbore or smaller cylindrical chamber E extends downwardly and through the boss-like portion B², from the bottom of which larger chamber or counterbore there is made entirely through the end of the boss portion B²
 70 a smaller cylindrical hole e, having its upper end portion chamfered or slightly countersunk to receive the frustum-shaped end of an ordinary wood-screw f, which, as clearly shown at Fig. 1, after having been inserted and screwed home operates to securely hold
 80 downwardly in a rigid and in a durable manner the metallic device B B², all as clearly shown. After the placement or securement in position thus of the casting B B², firmly seated on the packing-ring J and with its top
 85 surface perfectly flush with the surface of the wooden bed A, a metallic device, such as clearly shown in the drawings and composed of a disk-like top C, a smaller depending cylindrical portion F, and an intermediately-annular groove or recess I, is inserted and
 90 screwed downwardly within the smaller cylindrical chamber or bore E of the casting B B² until the bottom surface H (see Fig. 4) of the disk-like part C of this device shall have come
 95 into forcible contact with the surface G (see Fig. 5) of the shallower bore or cylindrical depression of said casting B B², said smaller cylindrical chamber E of the casting being not only threaded, it will be understood, to
 100 receive the male thread on the exterior F of the inserted and screwed-home device, it being understood that this exteriorly-threaded part F is somewhat shorter, as shown at Fig. 1, than the depth of the interiorly-threaded
 105 chamber E, into which it is screwed, for the purpose of insuring always a perfect bearing between the said bottom surface H of the inserted device and the surface G of the main casting of the pin-spot. In order to facilitate
 110 or readily permit the insertion and removing of this central metallic device with its disk-like top portion C, the latter is provided (see especially Fig. 2) with two small cylindrical depressions d d, in which may be inserted the
 115 points of a tool of a well-known character adapted to turn or screw any devices which are not provided with a nick adapted to receive the end of a screw-driver, and preferably the under surface of the casting B is
 120 formed, as seen at Fig. 3, with a series of radially-arranged groove-like depressions simply for the purpose of having the lower surface of the part B molded into, so to speak, the batch or body of putty J, onto which the
 125 casting B B² is placed and forcibly pounded down until the plane of its top surface shall have been made to perfectly coincide with the top surface of the alley-bed.

It will be understood that by the use, as
 130 shown and described, of the casting B B², forcibly and durably seated in exactly the right position or manner on the packing J and then securely fastened in position by the

use of the wood-screw *f*, as shown, this pin-spot casting B B² will be very permanently and perfectly combined with the alley-bed, (though removable therefrom and replaceable therein when necessity may require,) and that by the combination with this casting B B², made as shown and described, of the central covering-disk C, with its depending shank screwed into the said casting in such manner as to be certainly turned home to a perfect and very firm bearing where the under surface H contacts with the surface G of the cylindrical depression in the upper part of said casting, a concrete metallic pin-spot is produced, which, with the exception of the two small cylindrical depressions *d d* in the top surface of the central disk-like part C, presents a perfect plane over which the pin-bottoms may slide or move with perfect freedom, since these two little depressions *d d* are too small to have any appreciable effect on the movements along over the pin-spot of the base of a pin, and that while the entire pin-spot device or contrivance is easily removable when necessary no reasonable amount of use in practice of an alley-bed and pins supplied with pin-spots of this description can ever lead to the slightest loosening or getting out of proper position of the said pin-spot device or contrivance. At the same time my improved pin-spots may be economically manufactured in quantity, and the parts thereof being perfectly interchangeable can, if occasion required it, be used with great expedition and satisfaction in the building of bowling-alleys.

What I claim as new, and desire to secure by Letters Patent, is—

1. A metallic pin-spot device, adapted to be applied to the pin-platform of a bowling-alley bed, and composed of two parts; one of

which has a cylindrical socket, is inserted within a cavity in the alley-bed and is securely, but removably, fastened in place therein by a wood-screw, located within said socket, so that its upper surface shall be perfectly flush with the alley-bed surface; and the other of which is a concentrically-arranged, hub-like, piece, the hub, or neck portion of which is threaded to engage with a female thread on the interior of said socket and the under surface of the upper, disk-like, portion of which comes to a forcible bearing on an opposing surface within said socket; all substantially as and for the purposes set forth.

2. In a metallic pin-spot, the combination, with a cylindrical casting such as B, B², adapted to be inserted within a suitable cavity made in the wooden bed; means for securing said metallic device within the wooden bed, as specified; a suitable packing located between the base of the metallic device and the cavity in the wooden bed within which it is inserted; and a centrally-arranged, disk-like, covering device, the downwardly-projecting threaded stem of which is adapted to be screwed into the threaded central chamber of said casting, in such manner as to force the under bearing-surface of the disk-like portion C into forcible and lasting contact with that surface of the casting B on which is seated the lower or bearing surface of the disk-like portion C; all substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 25th day of February, 1902.

PARIS J. RIDDELL.

In presence of—

THOS. A. DWYER,
J. N. MCINTIRE.