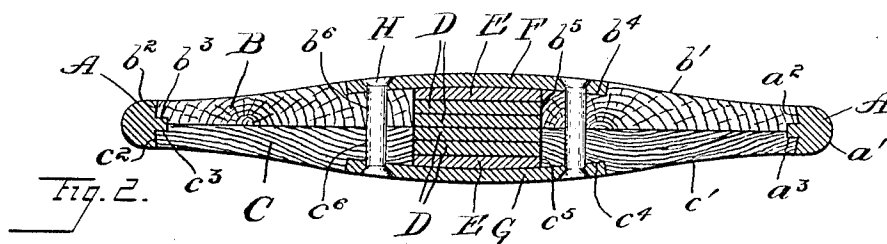
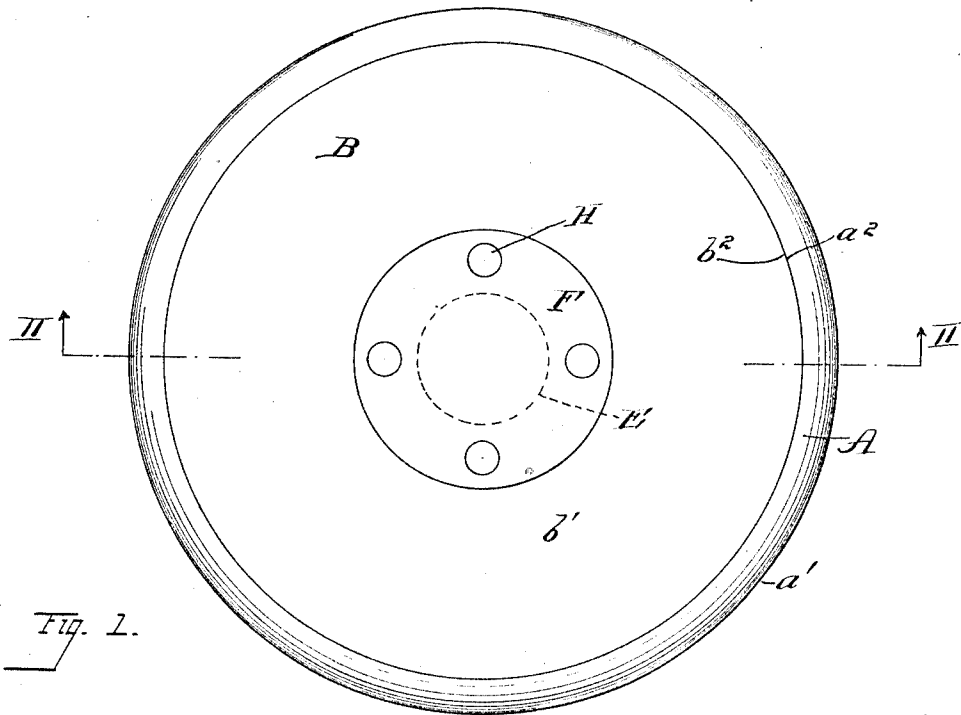


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DISCUS.
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DISCUS.

1,040,851.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILHELM BERG, a subject of the Emperor of Germany, resident of Erlengstegen, Kingdom of Bavaria, and Empire of Germany, have invented a new and useful Improvement in Discuses, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to a discus.

One object of the invention is the provision of an article of this specific character which will generally adapt itself more efficiently to the purpose to which it is intended to be put. A more specific object is a relative disposition of its weighting means and torsional resistance members, whereby the loosening or entire displacement of any of its parts is measurably less apt to occur when subjected to the sudden impacts or shocks necessarily attendant upon its use.

The said invention consists of means which are hereinafter fully described and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail certain means embodying my invention, the disclosed means, however, constituting but one of various mechanical forms in which the principle of my invention may be applied.

Referring to the drawing: Figure 1 is a plan of a discus embodying my invention. Fig. 2 is a section on line 11—11 of Fig. 1.

It will be noted that the construction comprises as is customary, a peripheral metal ring A. The ring A according to my manufacture has a rounded exterior surface a' and an angular interior surface a^2 . This inner surface is fashioned at its middle with an inwardly projecting annular flange a^3 .

A pair of complementary disks B and C, which may be of any suitable resilient material, though preferably of wood as shown, comprise the prime intermediary members. The disposition of the grain of the disks B and C should, furthermore be substantially reversed as clearly seen in Fig. 2. Each of the disks B and C is circular and of diametrical dimension slightly greater than the diametrical dimension intervening between diametrically opposite points on the interior

surface a^2 of the ring. The outer surfaces b' and c' of each of the disks B and C taper away from their centers and in fact to a combined cross-sectional dimension corresponding with the greatest cross-sectional dimension of the ring A as clearly seen in Fig. 2. The outer peripheries b^2 and c^2 of each of the two disks are fashioned at adjacent inside edges with a cut-out or rabbeted portion b^3 c^3 in such a manner that these portions together form an annular groove corresponding precisely in dimension with the annular projection a^3 . In this manner, as should be readily apparent, when the adjacent surfaces of the two disks are drawn flush with each other in a manner to be presently described, an exceedingly snug fit will be effected between the ring and both of them.

Each of the disks is provided centrally with a depressed portion b^4 and c^4 respectively, and each of these depressions is in turn provided centrally with an opening b^5 and c^5 respectively as will be manifested by a further inspection of Fig. 2. The disks B and C are moreover provided each with four concentrically disposed registering openings b^6 and c^6 . Into the registering opening b^5 c^5 a plurality of circular weighting disks are inserted. These are preferably of lead in order to lend a maximum weight at the very center of the complete discus. In the present instance four disks D of equal dimension are disposed in the middle, while two additional disks E have their outer surfaces of a curvature conforming to that which it is desired to have imparted to the central portion of the finished discus. These six disks are designed to constitute together a thickness corresponding to twice the thickness of either the disk B or C at the depressed central portion thereof. Finally, two additional disks F and G are provided and adapted to precisely fit the depressions b^4 and c^4 . These disks F and G are preferably and for obvious reasons, of metallic material such as brass for instance. As clearly appearing in Fig. 1, these disks F and G are each provided with a plurality of surface-reamed openings adapted to register each with a corresponding number of pairs of openings b^6 and c^6 respectively. Through each of the quartet of four registering open-

ings, illustrated in the drawing by way of exemplification, suitable rivets H may be jammed in a manner such that the absolutely precise wedging of all the component parts is eventually effected.

The consideration of the finished construction of a discus embodying my invention discloses the following enumeration of advantages. In place of the screw threads heretofore employed in some manner or another to the adjoining parts for the purpose of constituting a mode of fastening, I have improvised a unitary structure which is rigidly and firmly maintained as a unit by reason of the compressed relation of the component parts. Moreover the loosening of such parts as have been so secured, due to the inordinate shocks regularly met with, is avoided throughout, and by such avoidance a smooth surface is forever guaranteed to the grasp of the hand. The disposition of the grain in the oppositely disposed primary disks B and C is such, as has been earlier intimated, that shocks of differing character will be most effectually offset by one or the other of these disks according to its particular resistance powers to any specific shock. Again, continual usage has clearly demonstrated that a discus is most apt to maintain throughout its flight the requisite sailing equipoise, when the greatest weight, if not almost the entire weighting means proper, is positioned as near the center as possible. This last mentioned feature is moreover of decided advantage in connection with the athlete's initial effort to impart the start of a strong rotary movement on the part of the discus at the very inception of its flight.

Having now fully described my invention, what I claim and desire to secure by Letters Patent is:

1. As a new article of manufacture, a discus comprising the combination of a ring provided with an interiorly projecting portion, a plurality of members positioned within said ring and adjacent such portion and means for securing said members relative to said ring.

2. As a new article of manufacture, a discus comprising the combination of a ring provided with an interior annular projection, a pair of disks disposed on opposite sides of said projection and means for fixing said disks to each other.

3. As a new article of manufacture, a discus comprising the combination with an

annular member, of a pair of fibrous disks inclosed by said member, the fibers of said disks extending transversely with respect to each other.

4. As a new article of manufacture, a discus comprising the combination with an annular member provided with a radially projecting portion, intermediary members contiguous with opposite sides of said portion and with each other, said members being of relatively different grain, and means for fixing said annular and intermediary members with respect to each other.

5. As a new article of manufacture, a discus comprising the combination of a ring, a plurality of members interiorly contiguous thereto, a weighting member centrally disposed relative to such other members and said ring, and means for simultaneously securing each of said members relative to said weighting member and ring.

6. As a new article of manufacture, a discus comprising the combination with a plurality of disks having complementary depressions forming a peripheral groove; of a ring provided with an interior annular projection adapted to occupy said groove.

7. As a new article of manufacture, a discus comprising the combination of a pair of confronting disks having their inside edges rabbeted and forming together a peripheral groove, a complementary ring seated in said groove, and means for fixing said disks to each other.

8. As a new article of manufacture, a discus comprising the combination of a pair of symmetrical superimposed disks having registering cut-out portions forming respectively a groove and openings, a plurality of weighting members disposed in one of said openings, and independent securing means respectively associated with another of said openings and with said groove.

9. As a new article of manufacture, a discus comprising a pair of complementary disks provided with registering centrally and concentrically disposed openings, a weighting member positioned in said central opening, and means associated with said radially disposed openings for fastening said disks together.

Signed by me, this 10th day of April, 1912.

WILHELM BERG.

Attested by—
OSCAR BOCK,
GUSTAV HAGER.