No. 789,710. PATENTED MAY 16, 1905.

C. E. BLECHSCHMIDT.

FOUNDRY DEVICE.

APPLICATION FILED OCT. 24, 1904.

Fig. 1.

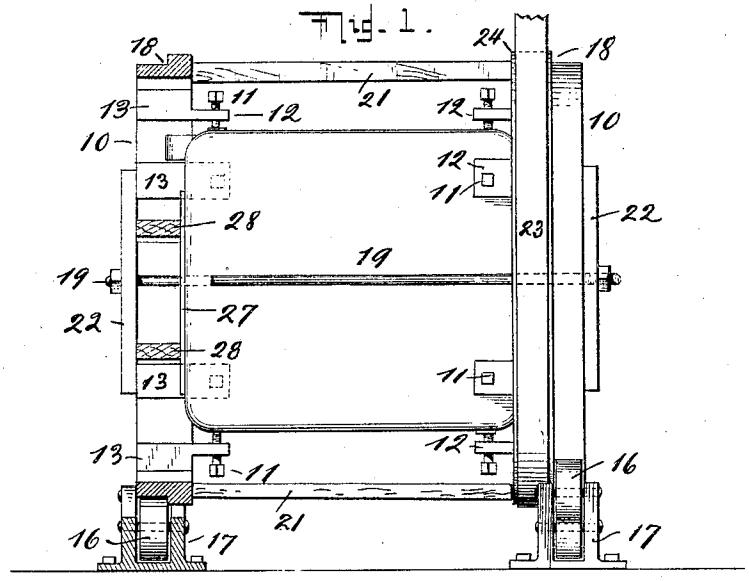

Fig. 2.

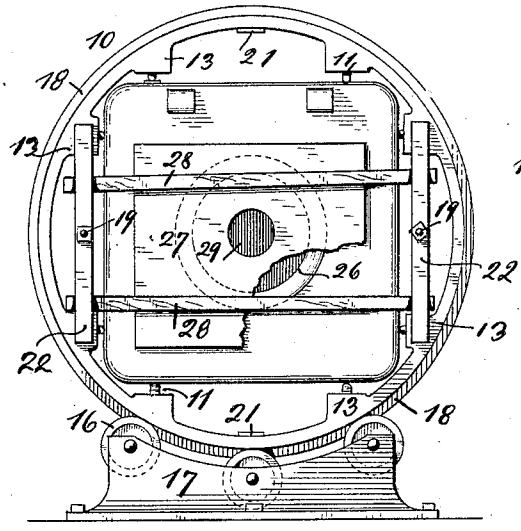

Fig. 3.

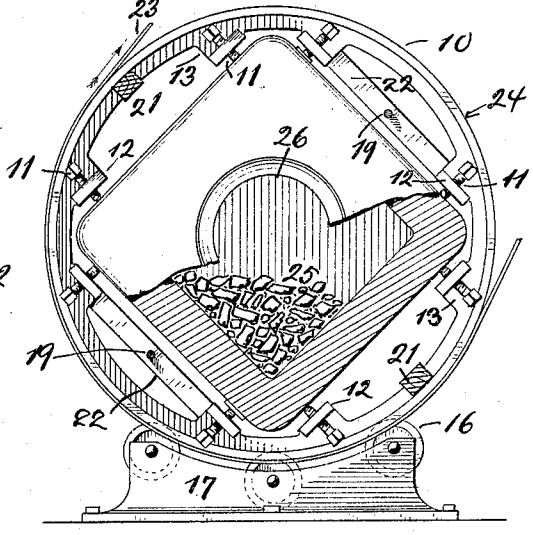

Fig. 4.

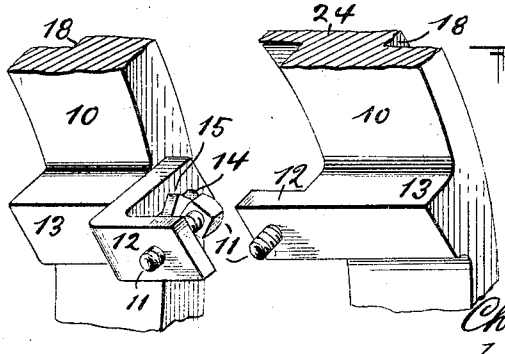

Fig. 5.

Witnesses

Chas. Wheelwright

Arthur J. Kline

Inventor

Charles E. Blechschmidt

by C. Spengel atty.

No. 789,710. Patented May 16, 1905.

UNITED STATES PATENT OFFICE.

CHARLES E. BLECHSCHMIDT, OF BELLEVUE, KENTUCKY, ASSIGNOR TO VICTOR SAFE & LOCK CO., OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

FOUNDRY DEVICE.

SPECIFICATION forming part of Letters Patent No. 789,710, dated May 16, 1905.

Application filed October 24, 1904. Serial No. 229,746.

To all whom it may concern:

Be it known that I, CHARLES E. BLECHSCHMIDT, a citizen of the United States, residing in Bellevue, Campbell county, State of Kentucky, have invented a certain new and useful Foundry Device; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawings, with the reference characters marked thereon, which form also a part of this specification.

This invention relates to means and devices for cleaning the interior of hollow castings and for removing roughness which remains after the castings have been taken from the mold and adhering sand which forms part of these latter.

The invention is more particularly intended for heavy castings—as, for instance, safes—where the bodies thereof are cast in one piece.

The operation for the intended purpose is performed by supporting a safe in a suitable manner and rotating the supporting means with the safe while so holding the same, so that scouring means suitable for this purpose, like pieces of corundum, irregular chunks of metal which tumble about and grind and rub against the interior surface of the safe while contained therein, effect the desired results.

The invention consists of the apparatus and its construction for carrying out this operation and as the same, together with its parts and manner of use, is hereinafter described and claimed and as illustrated in the accompanying drawings, in which—

Figure 1 shows the body of a safe in side view supported by the apparatus concerned in the invention, parts of it being broken away and shown in section. Fig. 2 is an end view of Fig. 1, showing the left side thereof. Fig. 3 is a vertical section of Fig. 1 between the ends thereof, showing the device in operation. Figs. 4 and 5 show enlarged detail views of the means whereby the safe-body is held to the apparatus.

This latter consists, substantially, of circular rotary holders 10, two being most suitable as to number. They are comparable in their function to a lathe-chuck and may therefore be appropriately called "chuck-rings." They are provided with means permitting detachable connection to the safe-body, and they are supported on roller-bearings in a cradle and in a manner to permit their rotation together with the connected safe-body. As to size diametrically with reference to the safe-body these rings are arranged so that no part of the safe-body or the attaching means projects beyond the outer periphery of these rings so as to prevent interference with their rotation.

The attaching means consist of set-screws 11, carried in lugs 12, projecting edgewise—that is, laterally and inwardly—from the rings, so as to leave the heads of these screws free for access. As to number these screws and lugs are arranged to suit the shape, size, and weight of the castings to be handled. The shape in this case being substantially cubical, they are arranged and distributed correspondingly and so that two screws are available to a side of the safe on each ring. In order to cause the screws to bear properly against the safe, the lugs are arranged and set accordingly—that is, not radial, but at right angles to the sides of the safe, as best shown in Figs. 2 and 3. The rings not presenting sufficient thickness for the formation of these lugs, and which thickness would, furthermore, be unnecessary and superfluous as to the ring, shapes result in form of internal projections 13, as best shown in the detail views of Figs. 4 and 5. To provide for a larger range of adjustment beyond that which the set-screws permit, these lugs may also be adjustable, as shown in the modified arrangement in Fig. 4, where they are provided with a slot 14 and held to the rings by screws 15. These chuck-rings are set or slipped on or partly over the safe-body while this latter is supported, preferably, by suspension in a manner to leave two opposite sides or ends free for this purpose, the arrangement and position of parts at such time being then substantially as shown in Fig. 1. In placing the rings due regard is had as to the distance between them that they properly meet two sets of roller-bearings 16, mounted in a cradle 17, and

which roller-bearings are arranged so as to effect contact with a part of the outer circumference of each ring sufficient to provide a proper support for the rings with the safe supported by them. A shoulder 18 on each ring confines the position and prevents lateral displacement on these roller-bearings. In addition I provide tie-rods 19 for such purpose, which, together with braces 21 between the rings, prevents these latter from slipping on the safe or become laterally displaced thereon. These tie-rods engage braces 22, resting against the outer edges of rings 10 or against projections 13. While they hold the rings toward each other, braces 21 between them keep them properly spaced apart. It is clear now that while so connected and supported the safe-body may be readily rotated or tumbled about by rotation of the chuck-rings on their roller-bearings.

Since the parts are rigidly connected, operative connection to one ring for the purpose of rotation is sufficient. Such rotation is most suitably obtained by means of a belt 23, driven from a suitable shaft. A driving-face 24 is provided for such purpose on one of the rings, the width of which, if not sufficient, is increased to suit the belt. The grinding and scouring media 25, to which water may be added, are introduced through the door-opening 26 in the safe, which opening may be temporarily closed by means of a suitable cover 27, held in place by braces 28, which are passed under braces 22. A small opening 29 in this cover permits observation of the operation.

Having described my invention, I claim as new—

1. In a device for the purpose described, the combination of chuck-rings provided with set-screws permitting connection to a casting, supports for these rings and means to rotate them with the casting connected thereto.

2. In a device for the purpose described, the combination of chuck-rings provided with projecting lugs, set-screws seated in these latter to permit attachment to a casting, supports for these rings and means to rotate them with the casting connected thereto.

3. In a device for the purpose described, the combination of two chuck-rings adapted to be detachably connected to a casting, means to hold them to each other, supports for them and means to rotate the connected casting and rings as a unit.

4. In a device for the purpose described, the combination of two chuck-rings adapted to be detachably connected to a casting, means to hold them longitudinally at fixed distance apart, supports for them and means to rotate the connected rings and casting together.

In testimony whereof I hereunto set my signature in the presence of two witnesses.

CHARLES E. BLECHSCHMIDT.

Witnesses:
C. SPENGEL,
ARTHUR KLINE.