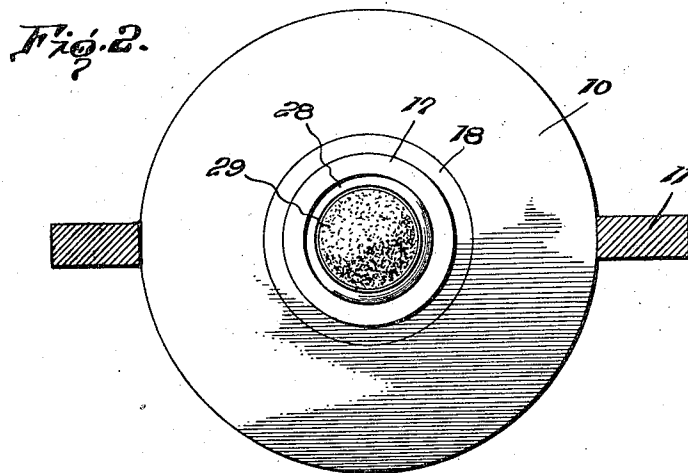
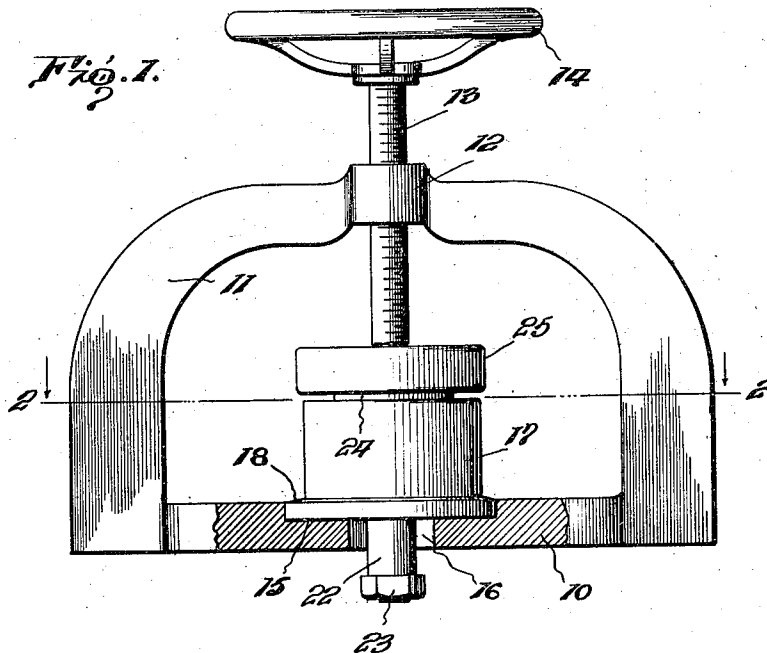


W. G. KENDALL.
POWDER PRESS.
APPLICATION FILED MAY 31, 1916.

1,244,096.

Patented Oct. 23, 1917.
2 SHEETS—SHEET 1.



Inventor
W. G. Kendall.

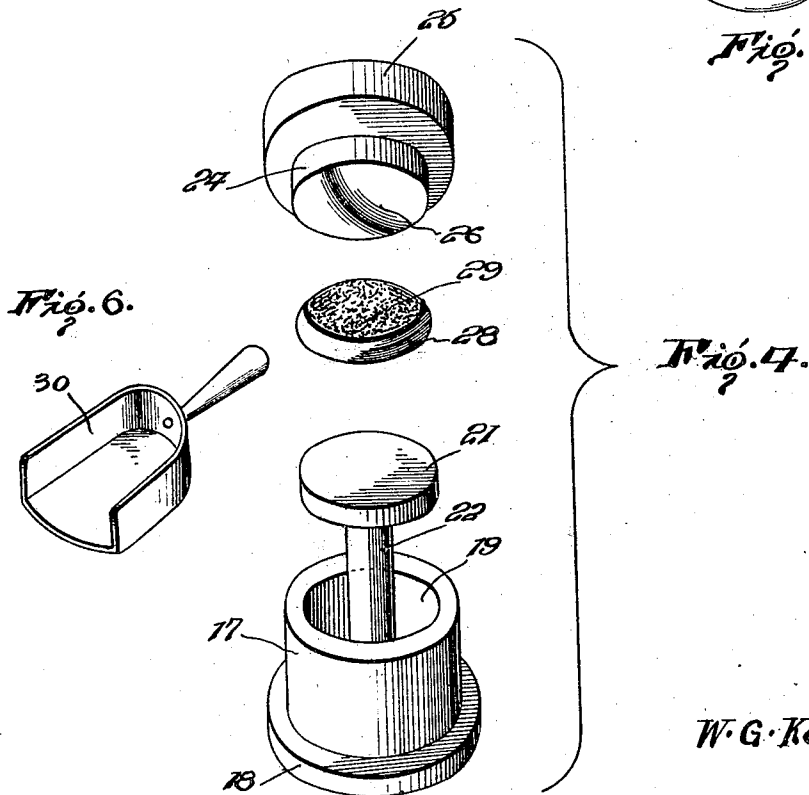
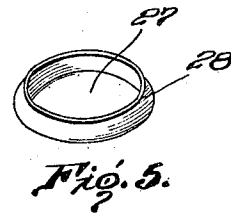
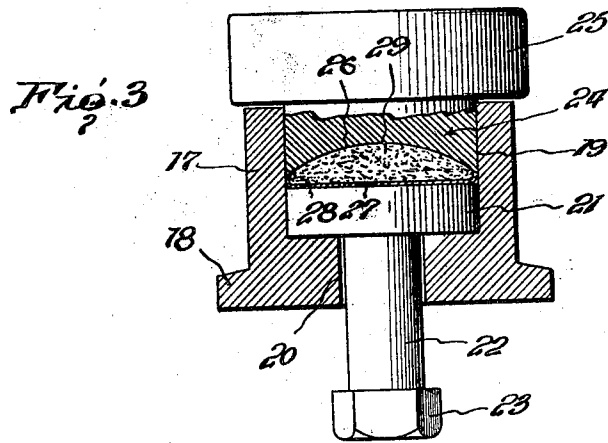
By

W. G. Kendall, Attorneys.

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UNITED STATES PATENT OFFICE.

WILLIAM G. KENDALL, OF NEWARK, NEW JERSEY.

POWDER-PRESS.

1,244,096.

Specification of Letters Patent.

Patented Oct. 23, 1917.

Application filed May 31, 1916. Serial No. 100,899.

To all whom it may concern:

Be it known that I, WILLIAM G. KENDALL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Powder-Presses, of which the following is a specification.

My invention relates to new and useful improvements in powder presses and more particularly to presses for use in packaging rouge and other powders. In a copending application filed by me June 14, 1915, and bearing the Serial No. 34,303, I have disclosed a rouge pad which may be formed of porcelain, glass or metal and which is provided with a marginal retaining flange so that powdered rouge pressed against its upper face and within the flange will be retained without the use of any adhesives. The primary object of this invention consists in providing a powder press capable of forming the rouge cake upon a rouge pad of this character.

A further object of my invention consists in providing a powder press including a frame capable of receiving any one of a number of die centering members of different sizes so that rouge pads of different sizes may be filled by the selective use of the proper size of die centering member and dies.

A further object of my invention consists in providing a press having an ejector die and a forming die which coöperate with the die centering member in the filling of a rouge pad and which are both removable from the press in order that they may be interchanged with dies of other sizes.

Another object which I have in view is the shaping of the forming die in such a manner that after it has been pressed downward to form the cake of powder, further pressure exerted against it will force in the edge of the pad or receiver for the powder to securely anchor the powder in place. This engagement of the forming die against the receiver also checks the movement of the forming die and insures uniform compression of the powder or rouge.

With these and other objects in view, my invention will be more fully described, illustrated in the accompanying drawings, and then specifically pointed out in the claims which are attached to and form a part of this application.

In the drawings:

Figure 1 is a front elevation, partially in section, of my improved powder press;

Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1, looking in the direction of the arrows, the forming die being removed;

Fig. 3 is a central vertical sectional view through the die centering member and dies, showing a filled rouge pad between the dies;

Fig. 4 is an unassembled perspective view of the elements shown in Fig. 3;

Fig. 5 is a perspective view of an empty rouge pad;

Fig. 6 is a view of one type of measure which may be employed in supplying the rouge powder to the press.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

My improved powder press includes a base 10, preferably formed of metal and provided with an upstanding press yoke 11, the intermediate portion of which is formed with an internally threaded feed sleeve 12 spaced above the center of the base 10 and receiving the press screw 13 having a rounded lower end and provided at its upper end with a hand wheel 14 or equivalent means by which it may be turned. The upper face of the base 10 is formed in vertical alinement below the sleeve 12 with a circular recess or seat 15 and the base is further formed with an opening 16 concentric with the seat 15.

Coöperating with the above structure is a die centering member 17 in the form of a cylinder provided at its lower end with a laterally directed peripheral flange 18 forming a base adapted to seat in the recess 15 of the base 10. This die centering member is provided in its upper portion with a cylindrical chamber 19 forming the die chamber and opening through the upper end of the centering member 17. The bottom of the centering member is formed with an opening 20 to aline with the opening 16 of the base. Obviously, die centering members having die chambers of different sizes, but bases of the same size, may be provided and may be interchangeably mounted upon the base 10. Furthermore, it will be obvious that the base portion of these die centering members may be made in any desired shape and the seat or recess 15 of the face of the

press made in a corresponding shape to snugly receive them.

Seated in the lower end of the chamber 19 is the ejector die 21 in the form of a cylinder having a plane surfaced upper face disposed at a level considerably above the top of the die centering member when the ejector die is in lowered position. A plunger forming shank 22 is carried by this ejector die and extends through the opening in the bottom of the centering member and through the opening 16 of the base of the press and at its end is reduced and screw threaded to receive a stop nut 23 which will limit its upward movement. This plunger is so proportioned that when it is forced upwardly until its nut 23 engages the die centering member 17, the upper face of the ejector die will be at a level slightly above the level of the upper end of the die centering member 17.

Associated with the ejector die 21 is a forming die 24 including a cylindrical body corresponding to the body 21 of the ejector die and fitting snugly within the centering chamber 19 and an enlarged pressure head 25 adapted to engage the upper end of the centering member to limit inward movement of the forming die. The lower or active face of the forming die is concave, as shown at 26, to give the proper shape to the cake of rouge formed upon a rouge pad seated upon the ejector die 21.

In Fig. 5 of the drawings, I have illustrated a rouge pad which may be formed of sheet metal and which includes a circular base or body 27 surrounded by an upwardly and inwardly directed marginal retaining flange 28. Such a pad, with its cake of rouge, is clearly shown in Fig. 3, the rouge cake being indicated by the numeral 29.

In operation, a die centering member of the size proper for the size of rouge pads to be filled is positioned in the seat 15 of the press base and an ejector die of corresponding size is positioned within the centering member and the retaining nut of its plunger is applied. An empty rouge pad is then positioned upon the ejector die with its flange directed upwardly and the proper amount of rouge is emptied into the centering member and onto the pad. The forming die then has its concave end inserted into the die centering member and the press screw 13 is threaded down against it by turning of the hand wheel 14 until sufficient pressure has been exerted to force the powder into a compact cake, as shown in Fig. 3. Further movement of the forming die forces the edge of the receiver or pad against the compressed powder to securely anchor the cake of powder in the receiver. This engagement of the forming die with the receiver also limits the movement of the die and as a result causes uniform compression

of the powder. The rouge cake thus formed is of such firmness as to be held against the body of the rouge pad by the retaining flange 28 of the pad without the use of any adhesive or artificial fastening means. When the pad has been thus filled, the press screw is raised, the forming die removed and the filled pad raised to the level of the upper end of the centering member by means of the plunger 22 when the filled pad may readily be removed from the press and an empty pad substituted in its place. Preferably, any suitable type of measure, such as that shown at 30, in Fig. 6 of the drawings, may be provided in order that a definite predetermined quantity of rouge powder may be supplied to the press, it being understood that measures of different sizes corresponding to the different sizes of rouge pads to be filled are provided. The active faces of the dies and inner face of the die centering member should be smooth and polished both for the sake of cleanliness and also to insure perfect forming of the rouge pad.

Although I have illustrated and described my invention in all its details of construction, it will of course be understood that I do not wish to be limited to the specific details shown but reserve the right to make any changes, within the scope of the appended claims, without in the slightest degree departing from the spirit of my invention.

Having thus described the invention, what is claimed as new is:

1. In a powder press, a die centering member formed with a chamber, an ejector die positioned in the chamber and adapted to support a powder receiver, and a forming die insertible within the die centering member and having its lower face concaved to shape powder in the receiver and to provide a circumferential edge whereby initial movement of the forming die into the die centering member will compress powder in a receiver located upon the ejector die and subsequent movement of the forming die will force in the edge of the receiver against the compressed powder to securely anchor the cake of powder formed in the receiver.

2. A powder press including a base formed with a sunken seat and with an opening through the seat, a die centering member fitting within the seat and having a chamber open at its upper end and a smaller opening alining with the opening of the base, an ejector die mounted in the die centering member, a shank extending from the ejector die through the opening in the die centering member and the opening in the base, retaining means at the free end of the shank passable through the opening in the base but not through the opening in the die centering member whereby upward movement of the

ejector die with respect to the die centering member is limited although both are freely removable from the base, a forming die insertible in the chamber, and means for forcing the forming die toward the ejector die.

a point to bring the receiver above the centering member to facilitate its removal, and a forming die insertible within the die centering member and having its lower face concave to shape the powder in the receiver located upon the ejector die.

3. In a powder press, a die centering member formed with a chamber, an ejector die positioned in the chamber and adapted to support a powder receiver and movable to

In testimony whereof I affix my signature.

WILLIAM G. KENDALL. [L. s.]

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