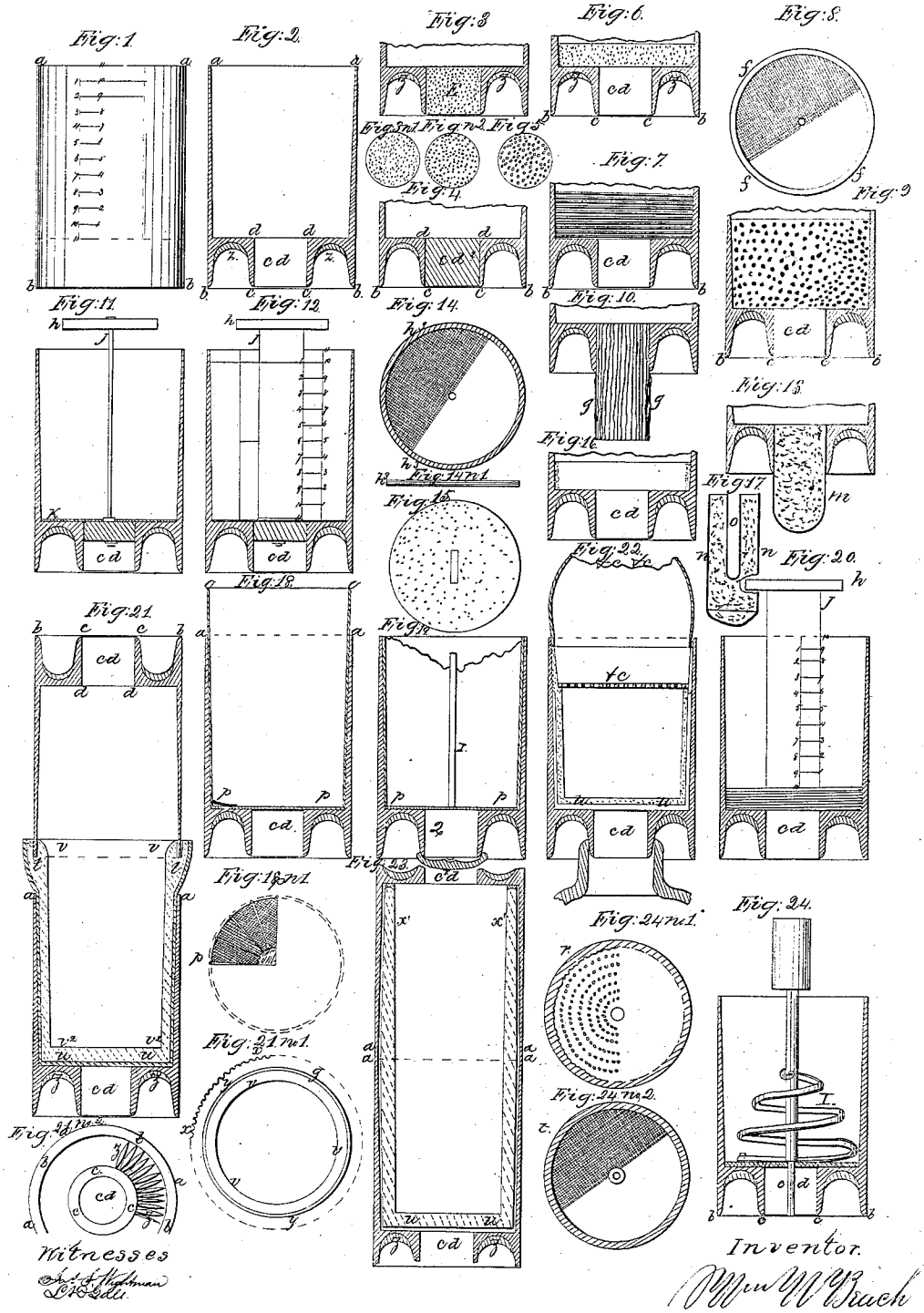
Sheet 1 - 2 Sheets.

W. W. Beach,

Tumbler Washer,

No. 57,278, Patented Aug. 21, 1866.



Witnesses

A. J. Hightman

L. P. Bell

Inventor.

Wm. W. Beach

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Sheet 2-2 Sheets.

W. W. Beach,

Tumbler Washer,

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Fig: 25.

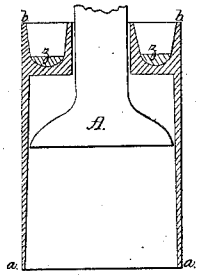


Fig: 26.

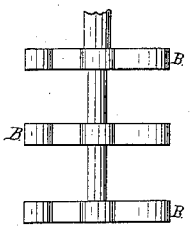


Fig: 27.

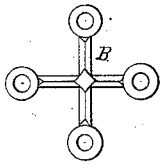


Fig: 28.

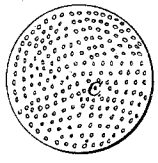


Fig: 29.

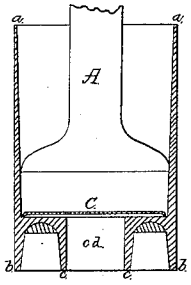


Fig: 30. Fig: 30 ½.

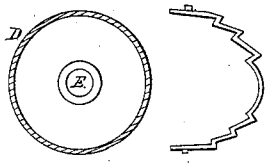


Fig: 31.

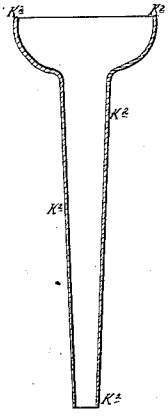


Fig: 32.

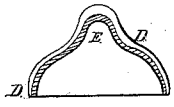
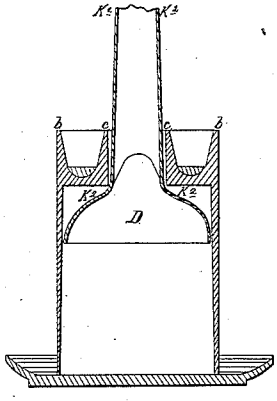


Fig: 33.



Witnesses

Inventor.

Wm W Beach

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. BEACH, M. D., OF NEW YORK, N. Y.

IMPROVED SKELETON-TUMBLER.

Specification forming part of Letters Patent No. **57,278**, dated August 21, 1866.

To all whom it may concern:

Be it known that I, W. W. BEACH, M. D., of the city, county, and State of New York, have invented a series of pieces, being new and useful devices for a group of domestic, tent, or traveling apparatus, the details of which are based on a so-called "Skeleton-Tumbler," the same being an ordinary tumbler with a hole through its bottom; and I hereby declare that the following is a full and sufficient description thereof, reference being had to the accompanying drawings, making part of this specification.

To enable those skilled in the art to make and use my invention, I will describe the mode of making the same in detail.

Figure 1 represents an elevation of the skeleton-tumbler.

Fig. 2 is a vertical section of the same. On its sides are marked measuring-scales, graduated for measuring definite quantities of butter or other substances, with space for various designs. This tumbler, by the adaptation of a stopper to the tubular and the variegated surface of its bottom and sides, is used as a butter-print, a measuring-vessel, a jelly-cup and print. *a* shows the thickness of the mouth; *d* the wider part of the orifice; *e*, the narrower part and depth of funnel-flange; *c d*, the inner wall of the orifice. *b* is the flange of tumbler-ring, while the archway between *b* and *c*, with groove *z*, forms the circumference of the butter-print. I make the print region and the outside by a matrix glass mold, and the inside by a plunger. The end *c* or *d*, Fig. 4, or at *d* of the funnel region, is ground off for the purpose.

Fig. 3 is the print funnel and vessel's bottom region, the funnel-orifice filled with a porous-ware funnel-stopper from the inside for filtering liquids. No. 1 shows a finer quality of porous-ware filter; No. 2, a coarser quality.

Fig. 4 represents the lower portion of the tumbler, filled by the stopper, to be used as a measure, if needed.

Fig. 5 is a top view of a perforate metal disk, or equivalent material, with a series of holes through it.

Fig. 6 represents a vertical section of devices seen in 3 and 4; the orifice *c d* being open, the inner tumbler-bottom filled with a corrugated tray and covered with a perforated plate. (See Figs. 8 and 14.)

Fig. 7 is a modification of Fig. 6, spun glass being the filtering material.

Fig. 8 is a wire-cloth filtering-disk, arranged with a stem and handle for removing contents.

Fig. 9 represents a modified filtering-bottom, using powder coarser than that of Fig. 6.

Fig. 10 shows a filter of the pores of wood, as cane, corn-stalk, &c.

Fig. 11 represents the funnel-tumbler seen in Fig. 2, having rod I, handle *h*, and sieve *k*, (seen in Fig. 8,) and changeable stopper *l*, this device being for measuring contents and lifting them out by handle *h*.

Fig. 12 represents a modification of the tumbler where the graduated scale is attached to the filter-frame received within the same.

Fig. 13 is an elongated thimble with perforate walls.

Fig. 14 is a modified arrangement of the filtering-disks.

Fig. 15 is a top view of a fine porous-ware filter.

Fig. 16 represents a cross-section of wood, used as a filter, with a packing border.

Fig. 17 represents a modification of the elongated thimble of Fig. 13 where a distributing-tube, *o*, passes down through its axis, having perforate sides.

Fig. 18 is a wire-cloth basket within the tumbler, having ribs on its bottom for distributing radially the liquids, and can be adapted to modified uses by stopping or opening orifice of the tumbler. *o o* is the mouth, *p p* the bottom of the basket-tumbler, while *a* is the mouth, *c d* the ground stopper orifice of funnel. No. 1 shows a bottom view in wire-cloth and ribs.

Fig. 19 represents a modified form of filter indicated in Figs. 3, 11, and 18, in which I show the stem of handle p^2, the base of the basket *q*, the filter-stopper movable and changeable, and rubber stopper *r*.

Fig. 20 represents still another modification of the filter resting on disks *s*, of cloth, felt, or other material, with intervening pulverulent matter.

Fig. 21 represents a combined apparatus, consisting of a tumbler, a porous-ware vessel,

and a perforate metal plate and cover, for filtering, &c., capable of various uses, as indicated by the figure. No. 1 represents a top view of the porous-ware vessel; *t t u u y y*, its grooves; *x x*, fluted outer surface. 21 No. 2 represents another view of the porous-ware tumbler.

Fig. 22 represents a skeleton-tumbler containing porous-ware tumbler and cap for filtering.

Fig. 23 represents a section of a high porous-ware tumbler, held by two skeleton-tumblers, for filtering purposes.

Fig. 24 is a reciprocating rotary beater, the spiral I having a wire-cloth filtering-disk; No. 1, a top view of the disk when of perforate metal, and No. 2 when of wire-cloth.

Fig. 25 represents a view of the tumbler inverted with its solid pestle *a*.

Fig. 26 represents an egg-beater, B, to be operated within the tumbler.

Fig. 27 is a bottom view of one of the beaters B, with four arms and barrel ends with downward cutting-edges.

Fig. 28 is a metal perforate disk, filtering, &c.

Fig. 29 is an apparatus (shown in Fig. 25) to be used for expressing liquids from solids.

Fig. 30 is a concavo-convex butter or jelly print, concave outward. Its form suggests its uses. Its value as butter-print, &c., arises from the glass or earthenware or metal of which it is made not adhering to the butter as wooden prints do. No. 1 is an edge view of the meniscus form. The Fresnel-lens form is easily removed from the mass of butter or jelly.

Fig. 31 represents a metal spun funnel for small orifices, also adapted to hold the butter-print case seen in Figs. 32 and 33. This funnel is often replaced by a solid plunger or pestle.

Fig. 32 is a sectional elevation of case D, for receiving glass, &c., butter-print, generally made of spun metal, the face of the die or print being in its place and held by the elasticity of the metal. In some cases I make the bell-mouth of the funnel the case for holding the form or die to stamp with.

Fig. 33 represents the tumbler in the position shown in Fig. 25, inclosing the funnel and case D in position for stamping a roll of butter resting on a plate below.

Having described the nature of the invention and the several uses of the combined apparatus founded on the basis of the skeleton-tumbler made and used in the manner herein described, what I claim as my invention, and desire to secure by Letters Patent, is—

The construction of the skeleton-tumbler as the basis of a series of apparatus described and represented in the several figures of the drawings.

WM. W. BEACH.

Witnesses:

WM. H. RIBLET,

FREDK. A. GOODALL.