

(No Model.)

J. P. DAVIS & G. B. HARWELL.
COMBINED BIN AND SIFTER.

No. 465,356.

Patented Dec. 15, 1891.

FIG. 1

FIG. 2

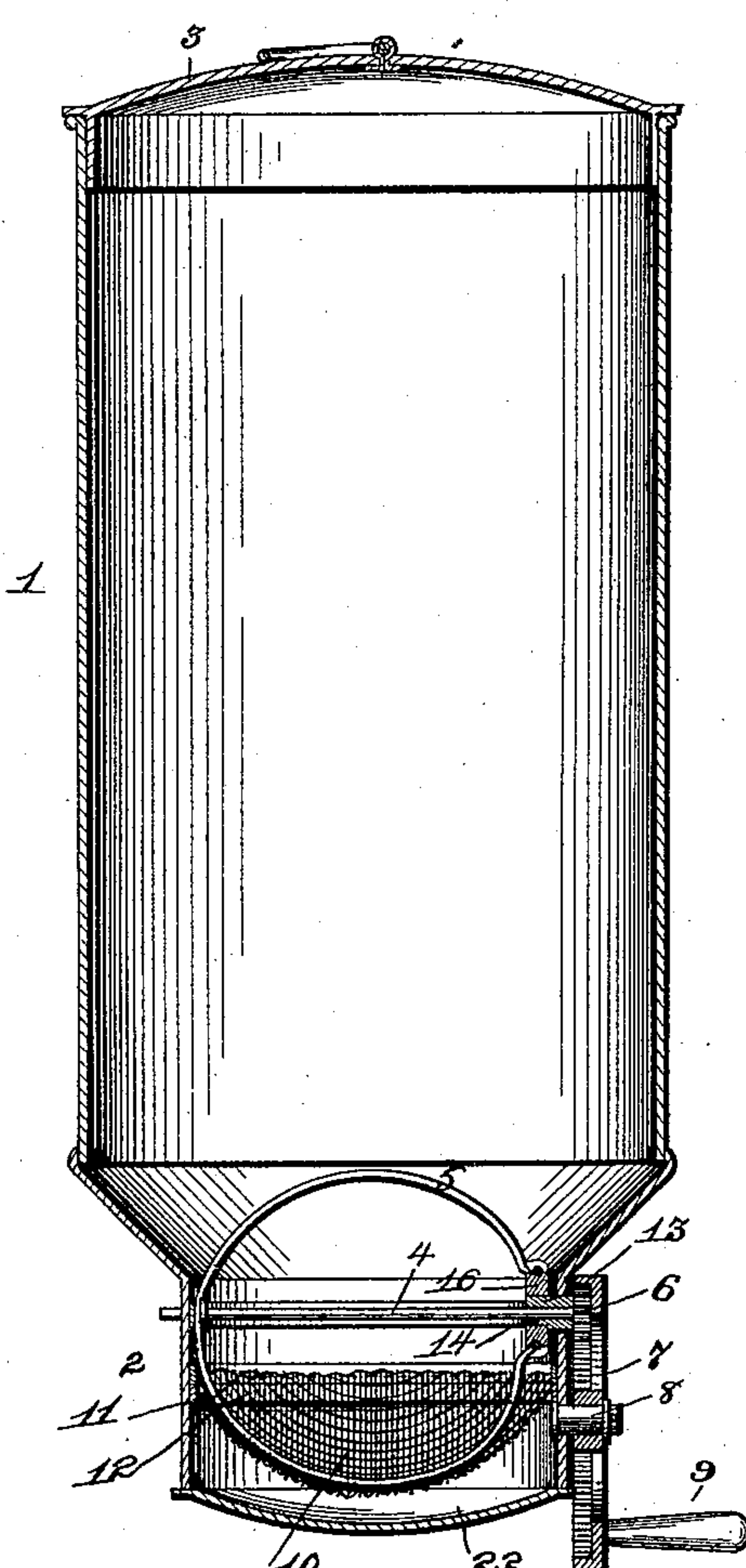
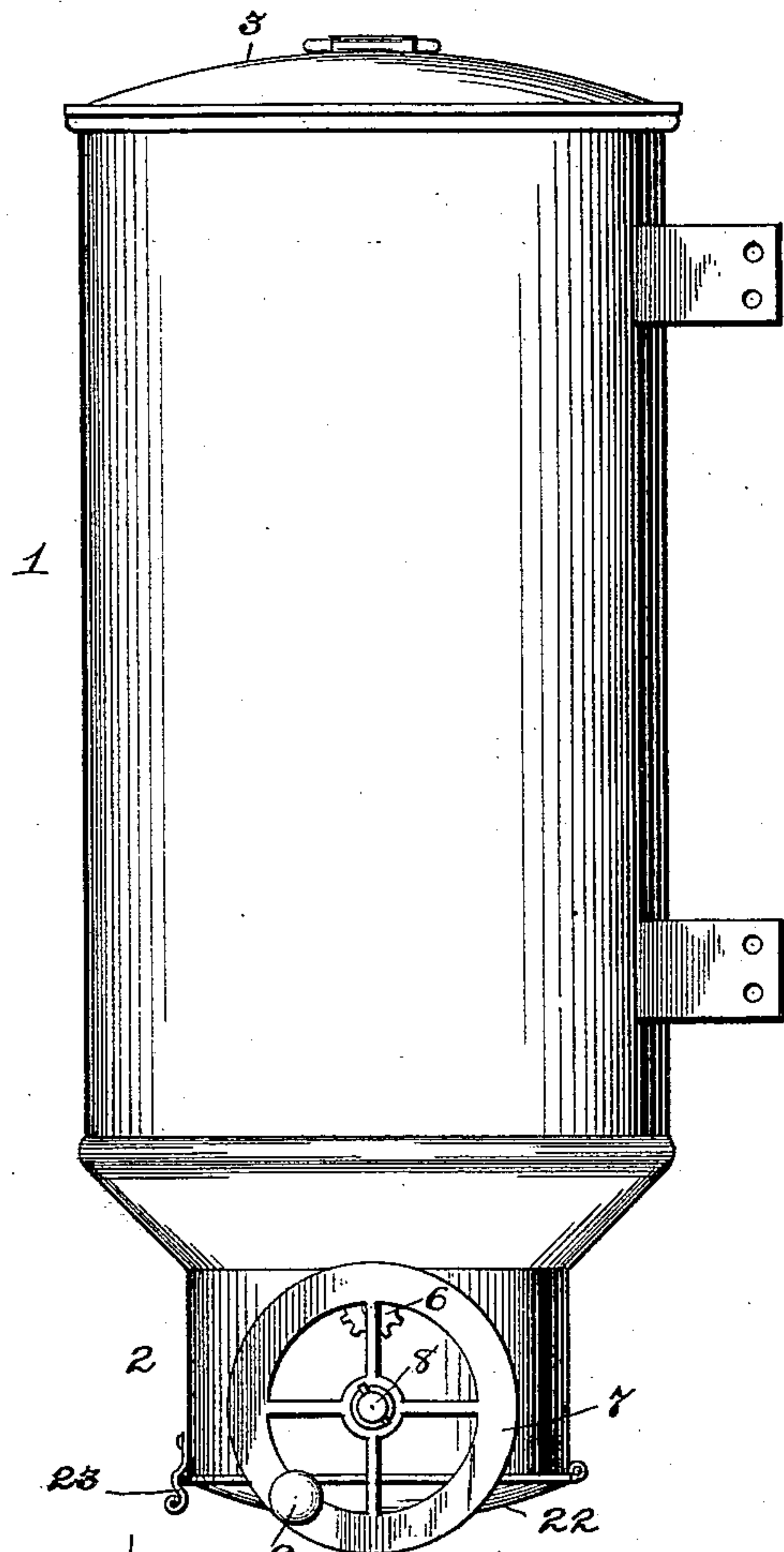


FIG. 3

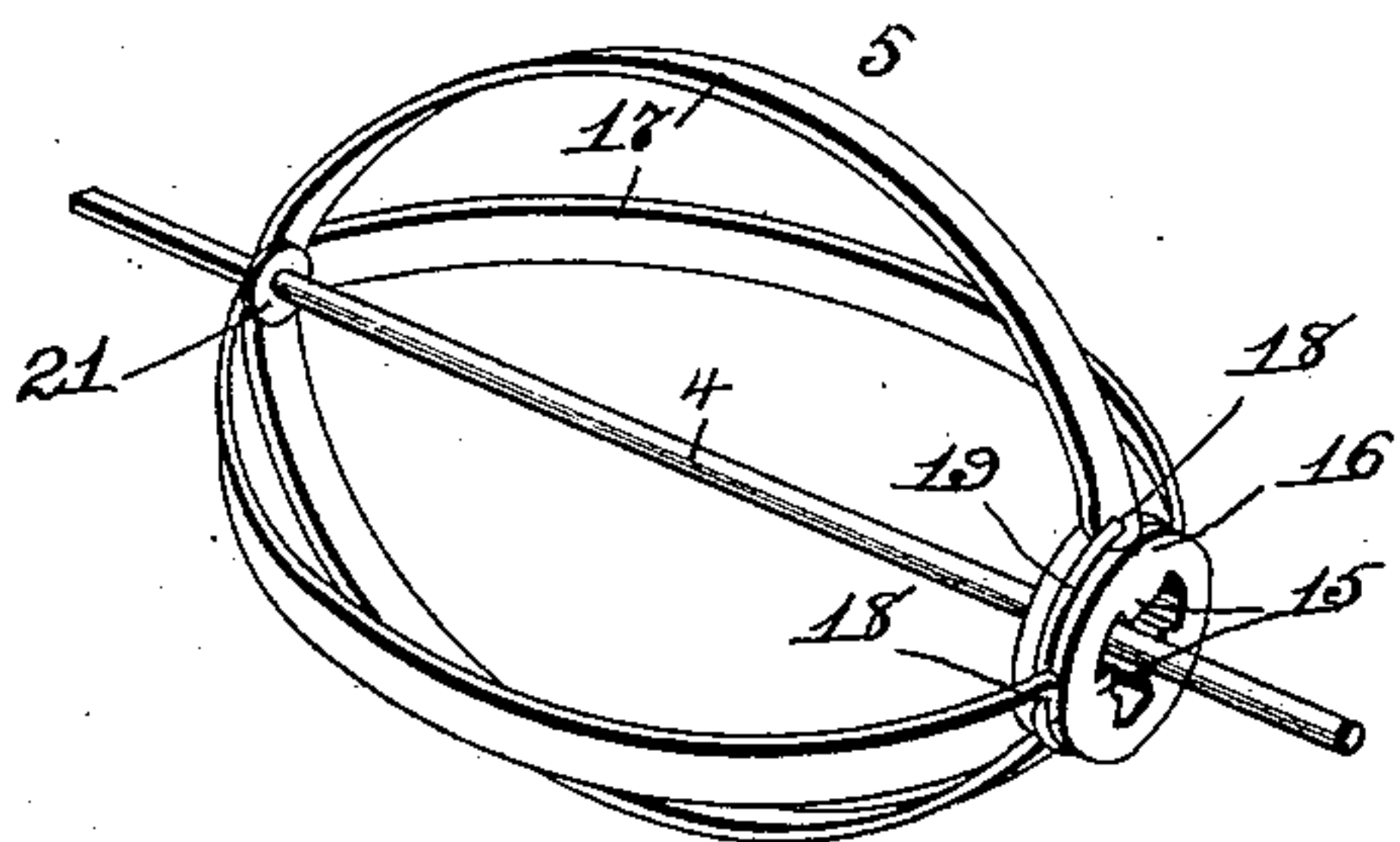
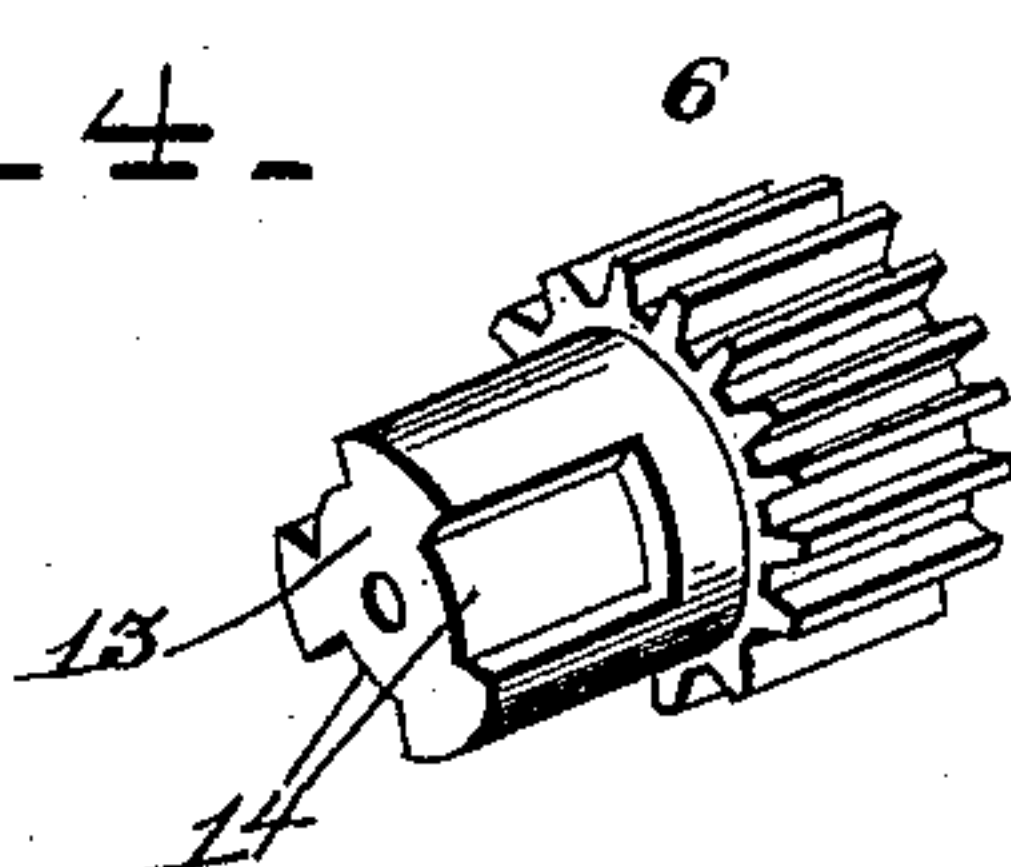


FIG. 4



Witnesses

E. S. Dwyer
A. H. Riley

By their Attorneys,

Inventors
Jeptha P. Davis and
George B. Harwell.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JEPHTHA P. DAVIS AND GEORGE B. HARWELL, OF MANSFIELD, ARKANSAS.

COMBINED BIN AND SIFTER.

SPECIFICATION forming part of Letters Patent No. 465,356, dated December 15, 1891.

Application filed September 21, 1891. Serial No. 406,330. (No model.)

To all whom it may concern:

Be it known that we, JEPHTHA P. DAVIS and GEORGE B. HARWELL, citizens of the United States, residing at Mansfield, in the county of Sebastian and State of Arkansas, have invented a new and useful Combined Bin and Sifter, of which the following is a specification.

The invention relates to improvements in flour bins and sifters.

The object of the present invention is to simplify and improve the construction of flour bins and sifters, more especially the agitator and means for operating the same.

The invention consists in the construction and novel combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is a side elevation of a bin constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a detail perspective view of the agitator. Fig. 4 is a similar view of the pinion.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a cylindrical bin or receptacle adapted to contain flour or similar material and provided at its lower end with a contracted portion or neck 2, and having its upper end closed by a removable cover 3. The contracted portion or neck 2 has journaled within its sides a shaft 4, carrying an agitator 5 and having at one end a pinion 6, which meshes with a master-wheel 7, mounted on a stub-shaft 8 and provided with a crank-handle 9, by which the agitator is operated. A removable sieve 10 is arranged subjacent to the agitator and is adapted to have flour forced through its meshes by the said agitator. The sieve is provided at its edge with a ring 11, which rests upon a circumferential rib 12 of the narrow portion or neck 2, and preparatory to removing the sieve for cleaning or mending, or the like, the shaft 4 is removed, and to effect this the pinion is provided with a cylindrical portion 13, having

grooves 14 in its sides arranged to receive integral keys or splines 15 of a collar 16 of the agitator, whereby the agitator is rigidly secured to the shaft, and the shaft is enabled to be withdrawn to permit the removal of both the agitator and the sieve. The agitator consists of two strips 17, disposed at right angles to each other and bent into an approximately elliptical form and having their ends provided with perforations 18, and secured to the collar 16 by a wire tie 19, arranged in a peripheral groove of the collar. The strips are provided intermediate their ends with registering openings through which the shaft 4 passes, and the shaft 4 is provided with a flange 21, arranged adjacent to the inner strip.

The bin has its lower end or discharge-opening closed when not in use by a cap 22, hinged to one side of the neck 2 and engaged by a clasp 23 at the opposite side of the neck.

The master-wheel is an internal gear and is provided with teeth on the inner face of a circumferential flange, and the pinion is arranged within the wheel 7.

It will be seen that the bin is simple and inexpensive in construction, reliable in operation, and that the parts may be readily removed for cleaning or mending.

What we claim is—

1. In a flour-sifter, the combination of a bin, a sifter, a shaft removably journaled in the bin, a pinion mounted on the shaft and provided with an extension, an agitator carried by the shaft and detachably secured to the same and composed of a collar secured to the said extension and strips bent into an elliptical form and having their ends secured to the collar and provided intermediate of their ends with openings to receive the shaft, and a master-wheel mounted on the bin and meshing with the pinion, substantially as described.

2. In a flour-sifter, the combination of a bin, a sifter arranged within the same, a removable shaft journaled in the bin, a pinion mounted on the shaft and provided with an extension having grooves in its sides, a mas-

ter-wheel meshing with the pinion, and an agitator provided with a collar having feathers or splines arranged to engage the grooves of the said extension, whereby the agitator
5 is rigidly and detachably secured to the shaft, substantially as described.

In testimony that we claim the foregoing as

our own we have hereto affixed our signatures in the presence of two witnesses.

JEPHTHA P. DAVIS.

GEORGE B. HARWELL.

Witnesses:

H. C. SADLER,

J. T. SPRIGGS.