

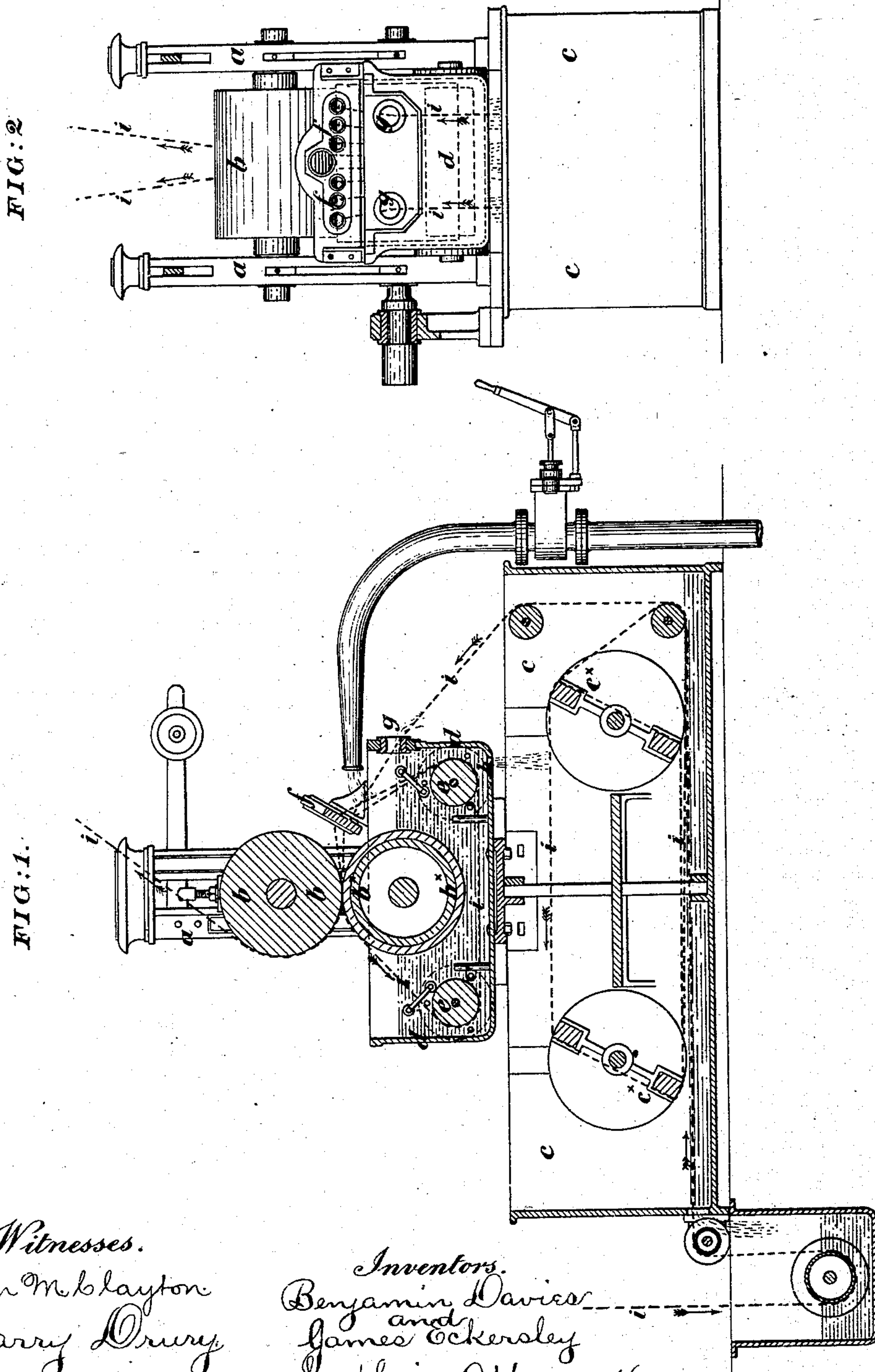
(No Model.)

B. DAVIES & J. ECKERSLEY.

APPARATUS FOR WASHING PIECE GOODS.

No. 315,252.

Patented Apr. 7, 1885.



Witnesses.
John M. Clayton
Harry Drury

Inventors.
Benjamin Davies
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by their Attorneys
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UNITED STATES PATENT OFFICE.

BENJAMIN DAVIES, OF ADLINGTON, AND JAMES ECKERSLEY, OF BLACK-
ROD, COUNTY OF LANCASTER, ENGLAND.

APPARATUS FOR WASHING PIECE-GOODS.

SPECIFICATION forming part of Letters Patent No. 315,252, dated April 7, 1885.

Application filed November 20, 1884. (No model.) Patented in England July 26, 1882, No. 3,542.

To all whom it may concern:

Be it known that we, BENJAMIN DAVIES and JAMES ECKERSLEY, subjects of the Queen of Great Britain and Ireland, and residing, respectively, at Adlington and Blackrod, both in the county of Lancaster, England, have invented Improvements in the Construction of Machines for Washing and Rinsing Fabrics, (for which we have obtained a patent in Great Britain, No. 3,542, dated July 26, 1882,) of which the following is a specification.

This invention relates to the construction of the class of washing and rinsing machines used in bleach-works, and especially to that particular form thereof known as "Bridson's washing-machine," for which Letters Patent for Great Britain, bearing date October 1, 1852, No. 96, were granted to Henry Bridson, of Bolton-le-Moors, in the county of Lancaster.

The object of the present invention is to enable a machine to perform at one operation what has hitherto required two, and to thoroughly wash and rinse the fabric with little or no more expenditure of power or water than heretofore.

Figure 1 in the annexed drawings, which form part of this specification, is a longitudinal section, and Fig. 2 an end elevation, of our improved machine.

a a is the framing of the machine, *b b*^x the squeezing-rollers, and *c c* the cistern; and *c*^x the revolving "winces."

The improvements consist, principally, in placing beneath the bottom squeezing-roller, *b*^x, an additional box or auxiliary cistern, *d d*, fitted with two small rollers, *e e*, at or near the bottom, and a guide, *f f*, above having several openings or eyes made of or lined with glazed earthenware or brass. The box or cistern *d d* above named incloses all but the upper part of the lower squeezing-roller, and opposite to the axis of the latter there is an opening or eye, *g g*, (also lined with earthenware or brass,) in one end of the box *d d*, through which the cloth passes. There is also an opening, *h*, in the bottom of the box *d d* to allow

the water to flow through it into the main box or cistern *c c* containing the winces *c*^x *c*^x, so that the clean water flows first into this additional box or cistern *d d*. The small rollers *e e* are kept wholly immersed, and the lower squeezing-rollers, *b*^x, about half immersed.

The cloth or fabric under operation (as shown by the dotted lines *i i*) after passing through the usual operation of the winces *c*^x *c*^x in the main box or cistern *c c*, instead of passing at once through the squeezers *b*^x *b*^x, (as usual,) enters the additional box or auxiliary cistern *d d* through the opening or eye *g* above named, then passes through one of the eyes of the guide *f f* and through the nip of the squeezing-rollers *b b*^x, next down through the clean water round the two small rollers *e e* beneath the squeezers. The fabric then passes through another eye of the guide *f f*, again through the nip of the squeezing-rollers *b b*^x, and round the small rollers *e e* through the clear water in the auxiliary cistern, and so on several times before passing finally out of the machine. By these means the cloth becomes so thoroughly washed and rinsed as only to need once passing through the washer. As the water used for rinsing in the auxiliary cistern is used over again for washing in the main cistern, there is no greater expenditure of water than heretofore.

We claim as our invention—

The combination, in a washing-machine of the class hereinbefore mentioned, of the additional box or cistern *d d*, with its rollers *e e*, and with the multiple guide *f f*, (or its equivalent,) whereby we are enabled to pass the fabric several times through the machine and thus thoroughly wash and rinse the fabric at one operation.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

BENJAMIN DAVIES.
JAMES ECKERSLEY.

Witnesses:

GEORGE DAVIES,
CHARLES DAVIES.