(No Model.) 2 Sheets—Sheet 1.

W. S. CULLEN.

RACK FOR WASHING AND DRYING PHOTOGRAPHIC PLATES.

No. 404,605. Patented June 4, 1889.

Fig. 1.

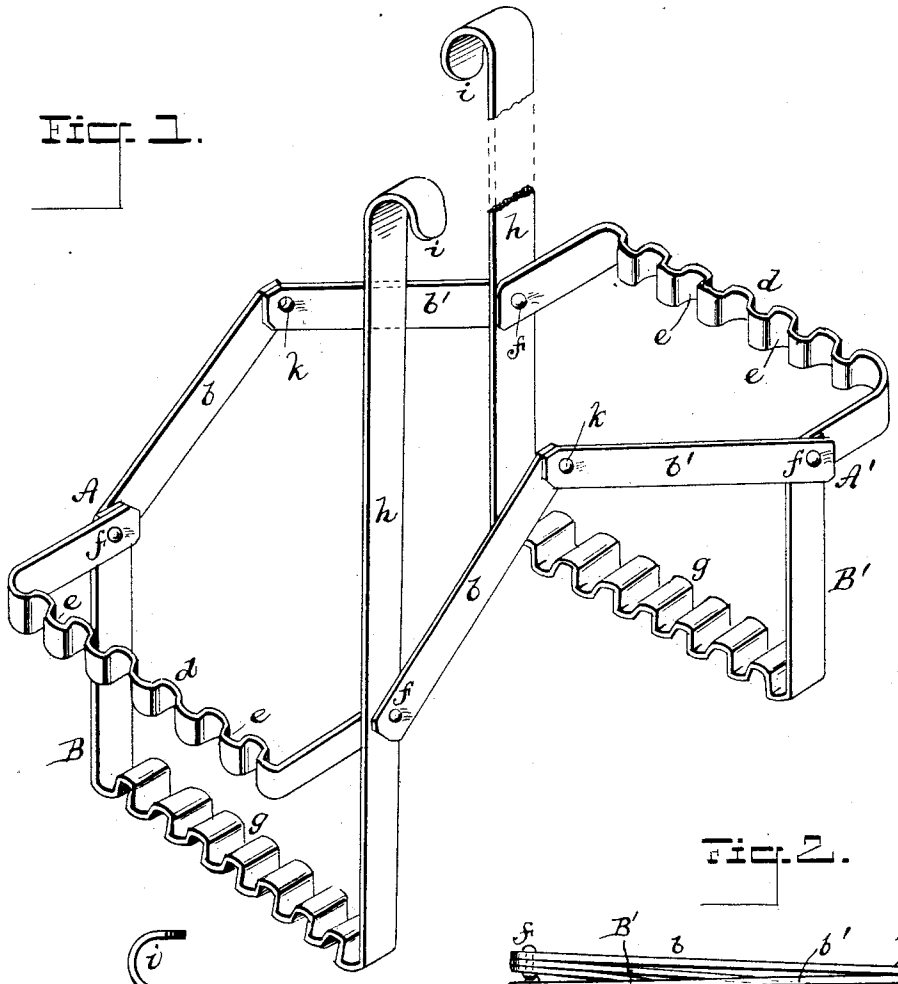
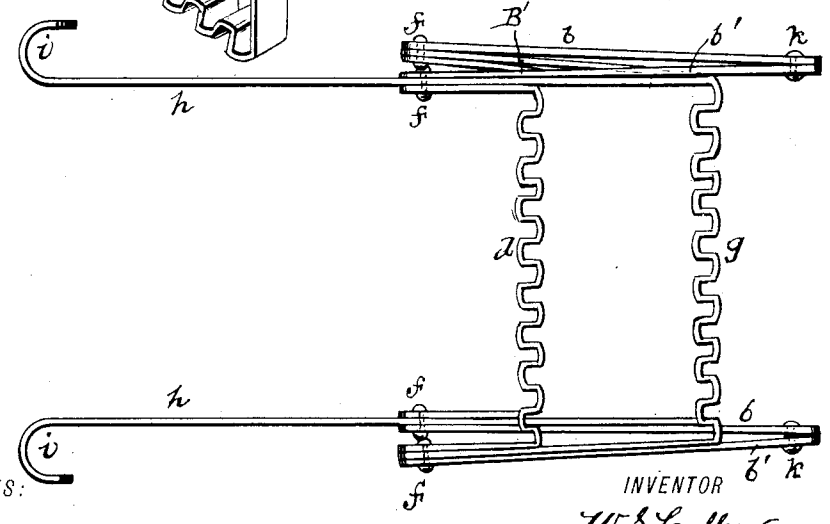


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

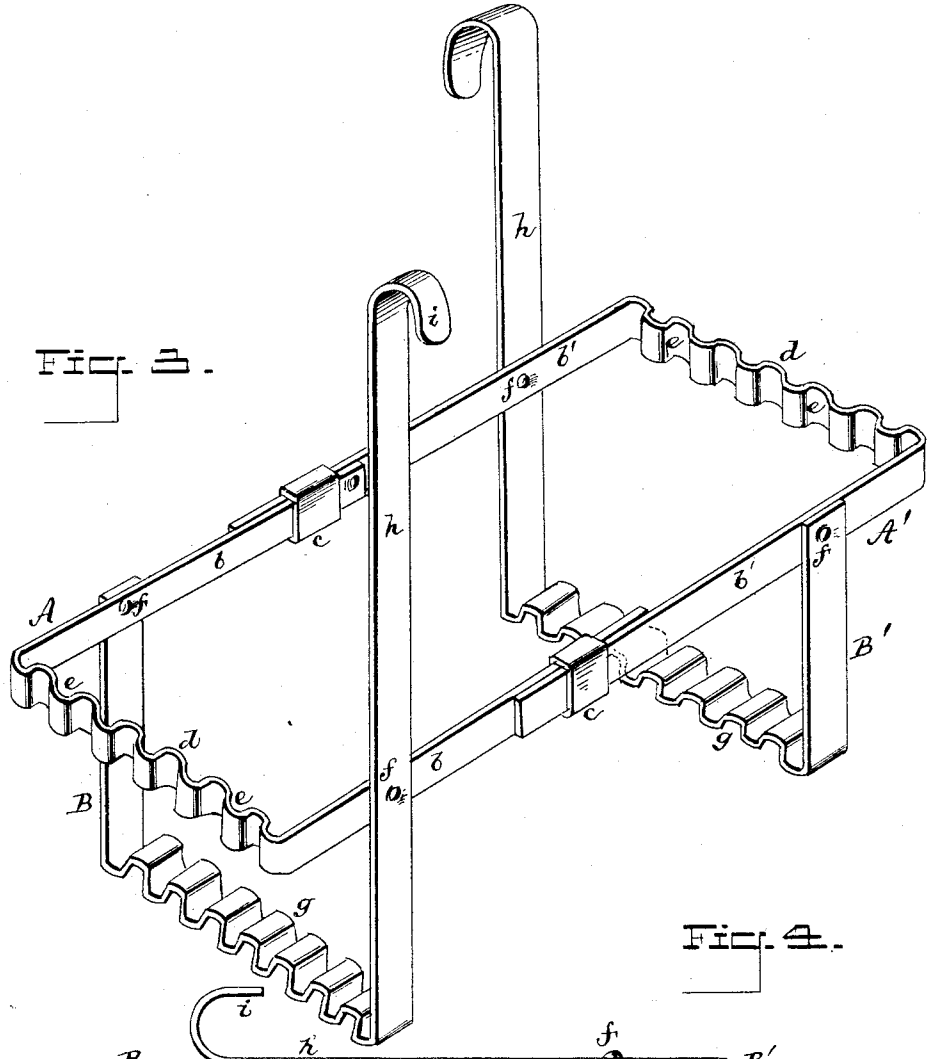
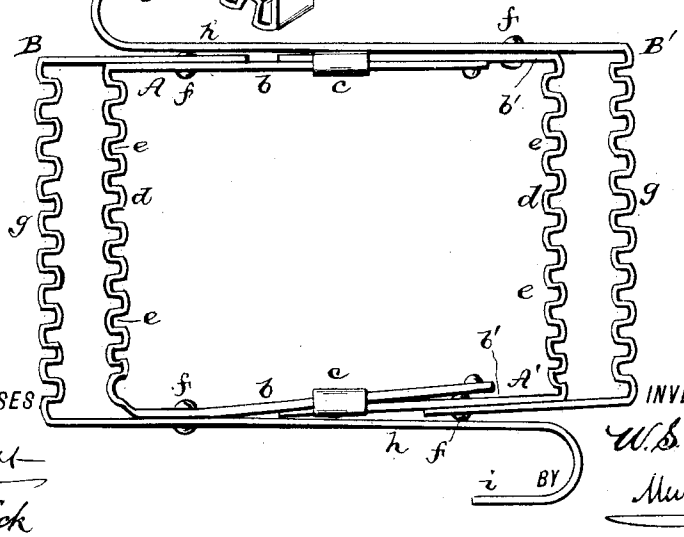


Fig. 4.



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UNITED STATES PATENT OFFICE.

WALTER S. CULLEN, OF KEARNEY, NEW JERSEY.

RACK FOR WASHING AND DRYING PHOTOGRAPHIC PLATES.

SPECIFICATION forming part of Letters Patent No. 404,605, dated June 4, 1889.

Application filed January 5, 1889. Serial No. 295,493. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. CULLEN, of Kearney, Hudson county, State of New Jersey, have invented a new and useful Improvement in Racks for Washing and Drying Photographic Plates, of which the following is a full, clear, and exact description.

This invention consists in an adjustable rack for washing and drying photographic negatives, also positive plates, substantially as hereinafter described, and pointed out in the claims, whereby the plates are not only securely held in position, but the rack is readily adjustable to different-sized plates, and may be folded for transportation as an article of merchandise and for use by photographers in moving from place to place.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a view in perspective of a photographic-plate washing and drying rack embodying my invention, the view showing said rack as open or unfolded ready for use; and Fig. 2 is a plan view of the same when closed or folded. Fig. 3 represents a view in perspective of said rack under a modified construction of certain of its parts, and Fig. 4 a plan view of the same when closed or folded.

Referring in the first instance or more particularly to Figs. 1 and 2 of the drawings, the rack, which may be of sheet metal or any other suitable material, is made up in part of what may be termed a main or body frame A A′, which is composed of opposite side bars *b b′*, pivoted together at their inner ends, as at *k k*—that is, on opposite sides of the structure—and pivoted at their outer ends, as at *f f*, to side arms of other frames B B′. The frame A A′ is also composed of opposite end strips *d d*, which are grooved or corrugated, as shown at *e e*, to receive the ends of a series of negative or positive plates down within them, so as to hold them in position and free from contact with one another when exposing the plates to washing or drying. These end strips *d d* are also attached to the side arms of the frames B B′ and to the outer ends of the main or body frame A A by the pivots *f f*, so as to be capable of independent adjustment.

The frames B B′ are each formed of opposite side arms and what may be termed a "bottom connecting-strip" *g*, which is grooved or corrugated to correspond with the grooved end strips *d d* of the main frame. The one side arm of each of these frames B B′, on opposite sides of the main frame A A, is extended beyond its pivot *f* to form handles *h h*, which may be crooked at their outer ends, as at *i i*, and which not only serve to manipulate the rack by when washing the plates, but also as means for suspending it when drying the photographic plates.

When the rack is open or unfolded, as shown in Fig. 1, then the grooved strips *g* of the frames B B′ occupy a lower position and form a bottom for the rack, within which the lower edges of the plates may rest, and so that they will be steadied in position by the grooves in said strips, as well as steadied on their end edges by the grooves in the end strips *d d*, whereby they are effectually restrained from coming in contact with each other during the manipulation of the rack, and are much more readily slipped to their places than if dependent upon contracted grooves at the ends of the rack only. Furthermore, by constructing the rack with a strip-like bottom, not only are the sides and ends open, but the bottom of the rack also is open to allow of the stream of water freely acting upon the plates when the rack having the plates within it is lowered by its handles *h h* into the water used for washing the plates.

Said rack may be adjusted to hold within its grooved ends *d d* and the grooved bottom strips *g g* plates or negatives of different sizes by simply more or less flexing or angling the pivoted side bars *b b′* to adjust the ends of the rack, including the pivoted end strips *d d* and the frames B B′, nearer to or farther from each other, and suitably flexing or angling the pivoted end strips *d d* to bring their grooves *e e* in an upright position.

After the negatives or plates have been washed the rack carrying them may be suspended by its handles *h h* on any suitable carrying devices to dry the plates.

When the rack is not required to be used,

as in carrying it empty from place to place and when being transported as an article of merchandise, it may be variously folded or closed—as, for instance, shown in Fig. 2 of the drawings, so as to make a flat package of it and economize space by flexing the pivoted strips *d d*, so as to come within the side arms of their adjacent end frames B B′, closing the jointed and pivoted side bars *b b′* on each side, one over or against the other, and closing the end strips *d d* and frames B B′ approximately into line with said side bars; or the rack may be otherwise folded and made a reduced flat package readily capable of transportation or of storing away in a small space for use, as required.

If the expansible and contractible rack be constructed of sheet metal, including the pivoted end strips *d d* and pivoted frames B B′, then the plate-holding grooves in said parts may be readily made by simply corrugating the pieces which have said grooves in them, as shown.

The rack, it should be observed, is not only applicable to washing and drying negative or positive photographic plates, but also photographic films mounted on or attached to plates.

Figs. 3 and 4 show a modified construction of the rack or certain parts of it; but the principle and general working of the invention is the same. Thus the main or body frame is composed of independent sections A A′, the side bars *b b′* of which, instead of being jointed together at their inner ends, are fitted to slide one against or over the other, as through guides *c*, attached to one of said sections, and the grooved end strips *d d* are not separately pivoted to the side arms of the frames B B′, but are integral with the side arms *b b′*. This construction similarly provides for expanding or contracting the rack endwise by the sliding of the bars *b b′* in or out upon each other, causing the grooved end strips to move with them, to adapt the rack to different-sized plates, and when the rack is not required to be used it may be closed or folded to occupy a reduced flat space, as shown in Fig. 4, by sliding the side bars *b b′* of the frame-sections A A′ over or along each other and by turning down the pivoted handles *h h*, so that they and the sides of the frames B B′ will lie parallel to or in like planes with the side bars *b b′*.

It will be observed in the drawings that the rack is open below to allow of the stream of water freely acting upon the plates, and that the grooved bottom plate support or supports B B′ are of a U or stirrup shaped construction, and are pivoted to the main frame so as to close when not in use approximately in line with it.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a rack for washing and drying photographic plates, the combination of an expansible and contractible main or body frame provided with opposite end strips having a series of plate-holding grooves in them and an open bottom support for the plates of U or stirrup shape construction pivoted to the main frame of the rack and capable of being closed into line therewith, essentially as specified.

2. In a rack for washing and drying photographic plates, the combination of the jointed or pivoted folding and angling side bars *b b′*, the lower frame-plate supports B B′, having side arms, to which said side bars are pivoted at their outer ends, and the opposite pivoted end strips *d d*, having a series of plate-holding grooves in them, substantially as shown and described.

WALTER S. CULLEN.

Witnesses:
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EDGAR TATE.