(No Model.)

2 Sheets—Sheet 1.

A. H. MORTON.

CONVEYER FOR TREATING COTTON STAPLE OR OTHER FIBER.

No. 572,492. Patented Dec. 1, 1896.

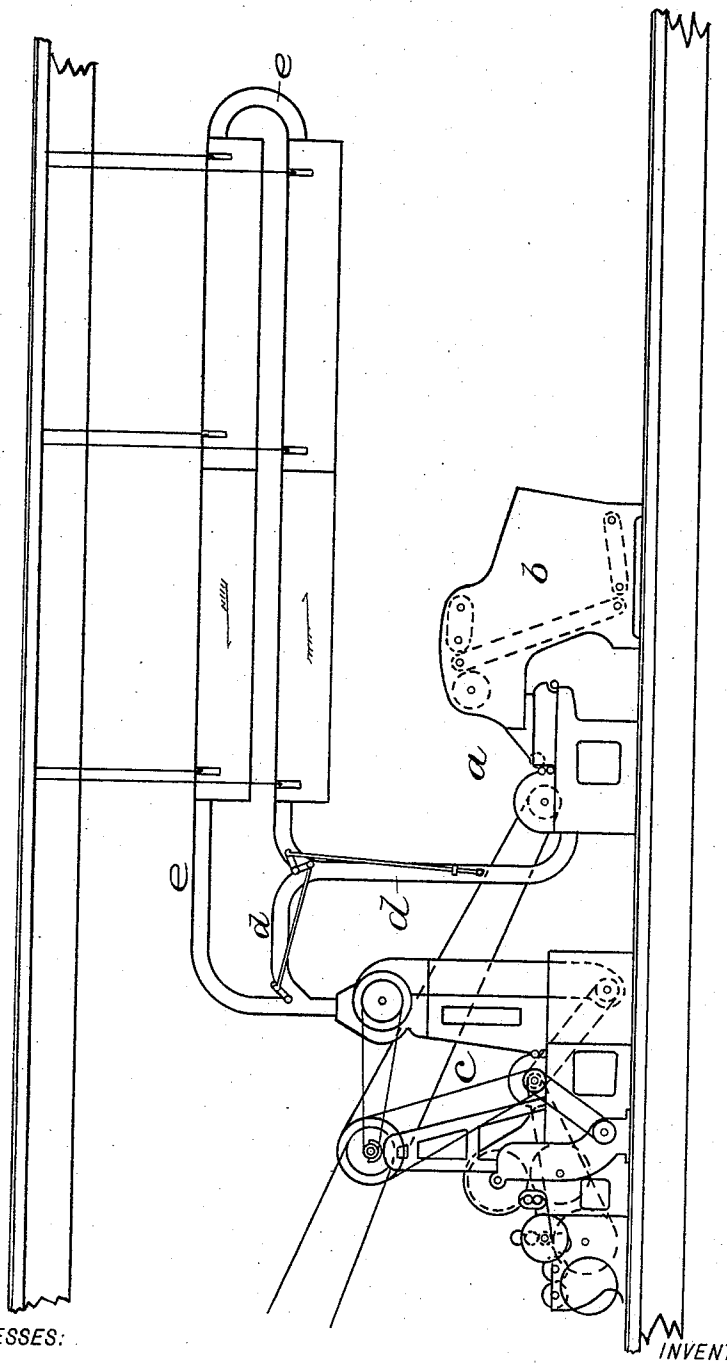

Fig. 1.

WITNESSES:

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M. B. Wells

INVENTOR

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ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.)

2 Sheets—Sheet 2.

A. H. MORTON.

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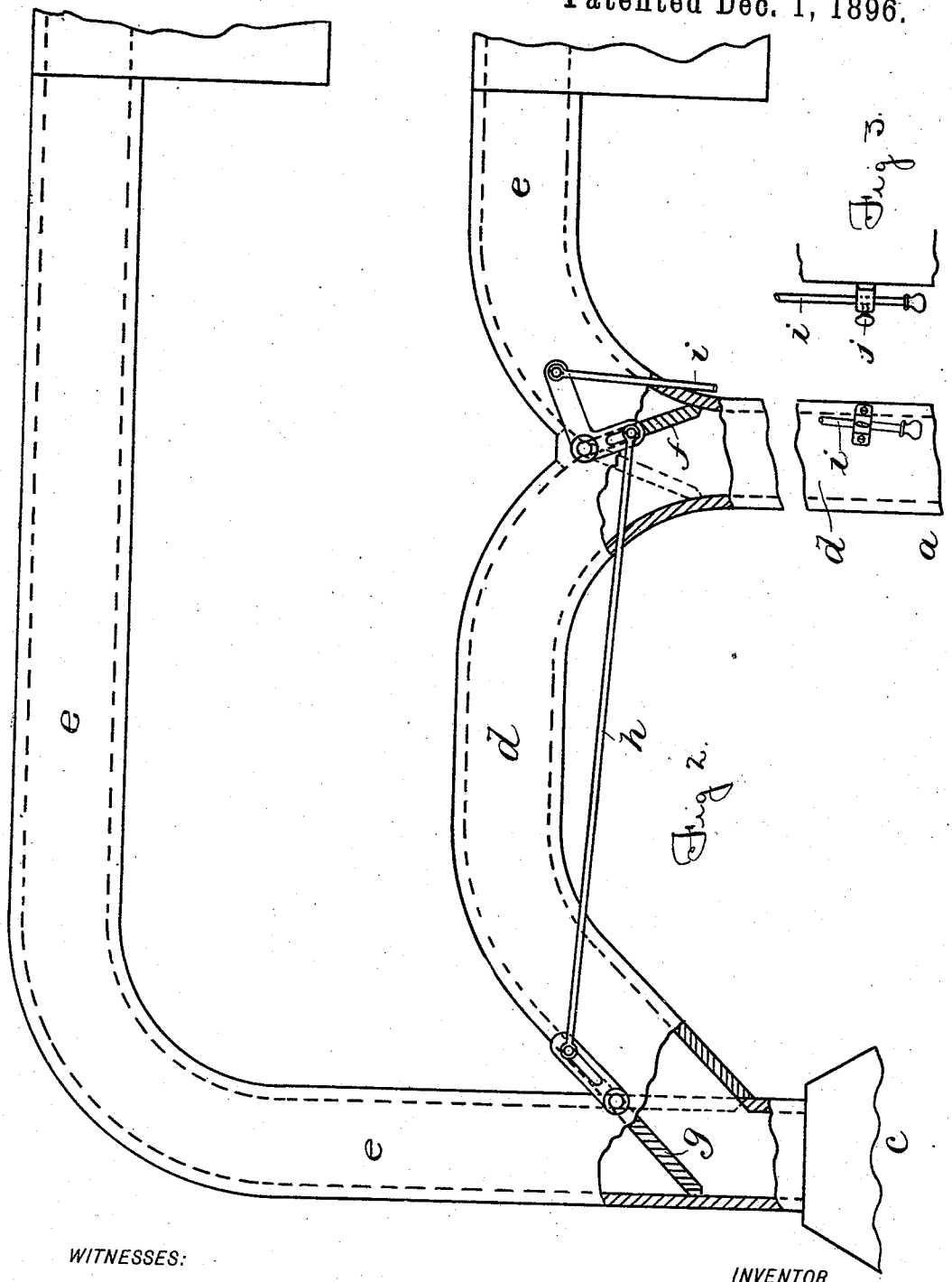

Fig 2.

Fig 3.

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UNITED STATES PATENT OFFICE.

ALBERT H. MORTON, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THE KITSON MACHINE COMPANY, OF SAME PLACE.

CONVEYER FOR TREATING COTTON STAPLE OR OTHER FIBER.

SPECIFICATION forming part of Letters Patent No. 572,492, dated December 1, 1896.

Application filed July 20, 1896. Serial No. 599,960. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. MORTON, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Conveyers for Treating Cotton Staple or other Fiber, of which the following is a specification.

My invention has relation to cotton openers and lappers, and particularly to that class of machines of the kind mentioned in which the cotton is treated in one machine and then passed to another for another operation.

It is the object of my invention to provide an improved conductor between an opener and a breaker-lapper, or between like machines, which shall act in accordance with what it is desired to effect upon the stock, the character and condition of the latter determining what that operation shall be.

To these ends my invention consists of the combination, with a cotton-opener or analogous machine and a breaker-lapper or analogous machine, of a conductor between the two machines, which conductor may be so controlled by a gate or gates or cut-off as to carry the stock operated upon by the first machine directly to the second machine or carry it through a long course over a series of grids or screens from the first to the second machine for freeing the stock from foreign substances, as occasion may require, all as I will now proceed to describe and claim.

Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a side elevation of my invention. Fig. 2 is a similar view of part thereof, a portion being shown in section. Fig. 3 is a detail view hereinafter more fully referred to.

In the drawings, *a* designates what may be considered an "opener," which is of usual construction and which may be fed or supplied by a feeder *b*, also of common construction.

c designates what may be termed a "breaker-lapper," which is also of common form, arrangement, and operation, so as not to need detailed description herein. Between the opener *a* and the breaker-lapper *c* there is a conductor so contrived that the stock may be conveyed from one machine to another, as is common in the treatment of cotton.

In the treatment of staple which has considerable dirt or foreign substance mixed therewith, such as leaf, dust, &c., it is desirable that before being introduced to the breaker-lapper or second machine it should be screened and cleaned from such foreign refuse. In operating upon other staple which is comparatively free from dirt or foreign substance it is expedient that it should go directly from one machine to the other and not be carried through a long conductor. It is the purpose of my invention to provide for these two wants and to do the same in a perfect manner. To these ends I have provided a conductor *d*, which extends directly from the opener *a* to the breaker-lapper *c*, so that comparatively clean staple or fiber which does not need to be particularly screened may be carried directly from one machine to the other. I have also provided a conductor *e*, which extends from the opener *a* to and fro to the breaker-lapper *c* over grids or screens of common form in order to free it from dirt and other foreign substances which may be contained therein.

To insure the proper conveyance of the fiber through the conductor *d* or *e*, I provide the said conductors with gates *f* and *g*, so as to close the openings from the conductor *e* and permit of the staple being carried only through the conductor *d*, or vice versa. In order to operate the said gates *f* and *g*, I have the same pivoted upon rods which are operated by bell-crank levers connected by a pitman *h*, the bell-crank levers being actuated by a rod *i*, which moves vertically in proper bearings and is adapted to be set in any position to which it may be moved by the set-screw *j*, as is particularly shown in Fig. 3. It is obvious, however, that the gate *g* may be dispensed with and the course of the fiber, whether through the conductor *d* or *e*, from one machine to the other be determined entirely by the gate *f*.

In operation, supposing that comparatively clean cotton is being operated upon by the opener *a*, the rod *i* would be moved upwardly,

moving the gate or gates so as to close the opening through the conductor *e*, but so as to provide a free opening through the conductor *d*, as is clearly shown by full lines in Fig. 2. Supposing now that cotton foul with dirt or foreign substances should be operated by the opener *a*, I draw down the rod *i*, setting it in place by a thumb nut or screw *j* and operating the gate or gates so as to close the opening through the conductor *d* and opening that through the conductor *e* and carry the fiber in the direction of the arrows, through the latter conductor, over grids or screens, as may be desired, to the breaker-lapper. In this way I am enabled to provide for the proper treatment of cotton of varying conditions as to the amount of foreign matter contained therein.

It will, of course, be understood that instead of employing an opener or breaker-lapper machines of different character or name may be used without departing from the nature or spirit of the invention.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. In a conveyer between fiber-treating machines, the combination with a conduit or conveyer provided with screens or grids for screening or cleaning the fiber, of a supplemental conduit or conveyer between the two machines, and connected with the said conduit or conveyer, so that the fiber may be transferred through either of said conduits or conveyers, and gates or doors for shutting either of said conduits or conveyers to the passage of fiber therethrough, whereby the fiber may be transferred and cleaned, or be transferred without being cleaned.

2. In a conveyer between fiber-treating machines, the combination with a conduit or conveyer provided with screens or grids for screening or cleaning the fiber, of a supplemental conduit or conveyer between the two machines, and connected with the said conduit or conveyer, so that the fiber may be transferred through either of said conduits or conveyers, gates or doors for shutting either of said conduits or conveyers to the passage of fiber therethrough, whereby the fiber may be transferred and cleaned, or be transferred without being cleaned, and a single device for controlling said gates or doors simultaneously, and in unison.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 5th day of May, A. D. 1896.

ALBERT H. MORTON.

Witnesses:
ARTHUR W. CROSSLEY,
C. C. STECHER.