

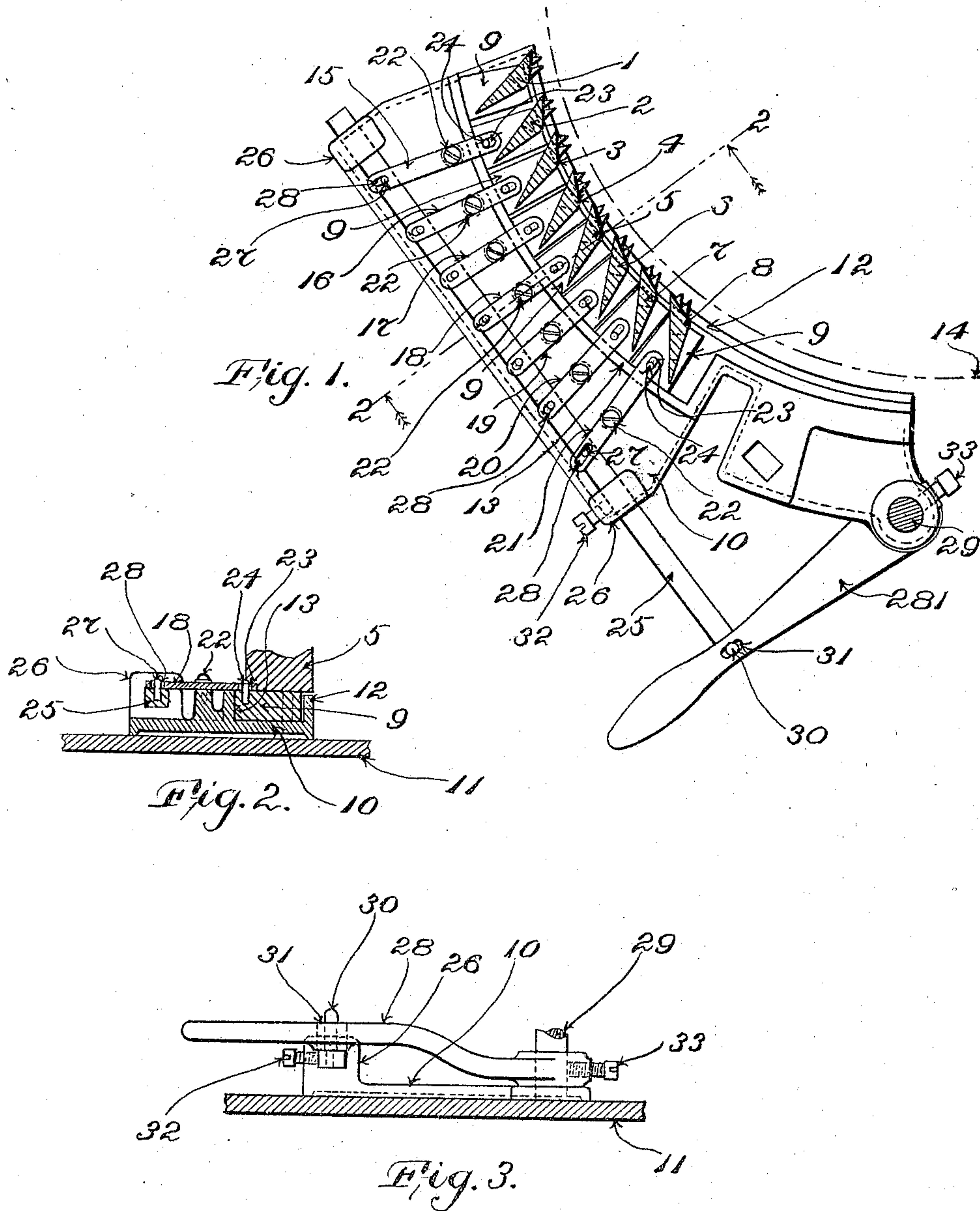
No. 641,060.

Patented Jan. 9, 1900.

F. A. WILDE.  
GRID FOR COTTON OPENERS.

(Application filed June 23, 1899.)

(No Model.)



Witnesses:

Roy K. Hill.

Oscar F. Hill

Inventor:

Fred A. Wilde

by Shaleos Calver & Randall

his Attorneys.



# UNITED STATES PATENT OFFICE.

FRED A. WILDE, OF PROVIDENCE, RHODE ISLAND.

## GRID FOR COTTON-OPENERS.

SPECIFICATION forming part of Letters Patent No. 641,060, dated January 9, 1900.

Application filed June 23, 1899. Serial No. 721,580. (No model.)

*To all whom it may concern:*

Be it known that I, FRED A. WILDE, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Grids for Cotton-Openers and Like Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

As is well known, in a cotton-opener a grid is employed in connection with the beater thereof, the said grid being located below the feed-rolls and the cotton being carried past the same by the action of the beater, while the dirt, leaves, sticks, and other foreign substances or impurities which are separated from the cotton by the action of the beater pass out through the spaces between the grid-bars.

In practice adjustment of the grid-bars relatively to one another to vary the widths of the respective spaces or openings between them becomes necessary from time to time in order to meet the requirements in working different grades or kinds of cotton.

The object of my invention is to provide means for enabling the spacing of the entire series of grid-bars employed in a cotton-opener or the like machine to be adjusted simultaneously to suit the particular grade or condition of cotton which is required to be handled.

In the practical embodiment of the invention I employ, in connection with the grid-bars of the series pertaining to a cotton-opener or the like machine, levers which are connected with the respective grid-bars; also, means whereby the said levers conveniently may be moved in effecting the adjustment of the spacing of the grid-bars and means of holding the parts in place after the adjustment. The levers aforesaid are proportioned according to the positions which are occupied in the grid by the particular grid-bars with which the levers respectively are connected. Thereby when the levers are operated by the actuating devices which are provided therefor the distance which each grid-bar is moved will be proportionate in extent to the position of such grid-bar in the grid, whereby the required relative spacing of the grid-bars will be maintained throughout the series.

In the accompanying drawings I have shown the invention as embodied in the best form thereof which I have yet contrived.

In the said drawings, Figure 1 is a partly-sectional view illustrating a series of grid-bars, the support at one end of the said series, and the said embodiment of the invention. Fig. 2 is a view in section on the plane of the dotted line 2 2 in Fig. 1 looking in the direction that is indicated by the arrows near the ends of the said line. Fig. 3 is a view of certain details looking from the right-hand side in Fig. 1.

The series of grid-bars constituting a grid suitable for use in a cotton-opener or the like machine is numbered from 1 to 8, consecutively, in the drawings. Each grid-bar is formed or provided at each end thereof with an end block 9. At each end of the grid a quadrant-shaped support 10 is provided, it being made fast to the side of the machine-frame. Portions of the said side are represented in section at 11 11 in Figs. 2 and 3. Each support 10 is furnished with laterally-projecting flanges 12 and 13, which are concentric, or substantially so, with the axis of revolution of the beater. (Not shown.) A portion of the path of the beater-blades is indicated by the dotted arc 14 in Fig. 1. The end blocks at each end of the grid fit between the flanges 12 and 13 of the support 10 at such end, the said flanges restraining the grid-bars from radial movement and the flange 13 affording the principal support for the grid-bars.

The foregoing construction and arrangement of parts is preferred in practice, but is not indispensable in all embodiments of the invention.

The levers, which constitute one of the chief essentials of the present embodiment of the invention, are designated 15 to 21, consecutively. The said levers are suitably mounted or supported in practice. Herein, for example, each of such levers is pivoted to a projection from quadrant 10, as at 22. (See Fig. 2.) Each lever also is in operative connection with an end block 9 of one of the grid-bars, as by means of a longitudinal slot 23 in the lever, receiving a pin 24, projecting from the end block.



With the levers I combine means whereby the same may be moved simultaneously, in order thereby to effect simultaneous adjustment of the spacing of the grid-bars. Thus herein  
 5 a slide-bar is provided at 25, the same being fitted to guides 26 26, which are provided on quadrant 10. The said slide-bar is furnished with pins 27, working in slots 28 28, extending longitudinally of the levers.

10 For convenience in operating the slide-bar the same is connected with a swinging arm 28', mounted on a shaft 29, extending cross-wise of the machine, the slide-bar being furnished with a pin 30, working in a longitudinal slot 31 in the said arm. The arm 28' is  
 15 worked by hand, and when it is moved it shifts the slide-bar 25 endwise in one direction or the other. The endwise shift of the slide-bar rocks the levers 15 to 21, and thereby moves  
 20 the grid-bars in the one direction or the other.

For the purpose of holding the parts in position after adjustment a suitable means of fixing the slide-bar is provided. Herein a clamping-screw 32, engaging therewith, is ap-  
 25 plied to one of the guides 26. (See Fig. 3.)

The adjusting devices thus far described pertain to one end of the machine. The said devices are duplicated at the other end of the machine in practice. Since it is necessary  
 30 that the parts should be adjusted to the same extent on both sides of the machine, it is contemplated that both of the arms 28' shall be made fast upon shaft 29, as by means of clamping-screws 33, so as to move together. This,  
 35 however, is merely for convenience and, if preferred, the parts at each side of the machine may be adjusted separately.

The levers 15 to 21 are proportioned to move the grid-bars to varying extents, according to  
 40 their position in the series constituting the grid. It will be obvious that the grid-bars will successively require to be moved to proportionately greater extents in proceeding from the front or upper edge of the grid to  
 45 the rear or lower edge thereof, even when it is desired that the successive spaces between adjacent grid-bars shall remain equal throughout the series. It will be perceived that the last lever 21 is arranged to communicate a  
 50 much greater extent of movement to the corresponding grid-bar 8 than is communicated to the second grid-bar 2 by the first lever 15. The first grid-bar 1 ordinarily does not require to be adjusted, the space between it and

grid-bar 2 being varied usually by shifting 55 the latter grid-bar.

The precise construction and arrangement herein shown and described is not essential to all embodiments of the broad principles of my invention and in some cases may be de- 60 parted from more or less.

I claim as my invention—

1. In combination, the series of grid-bars constituting the grid coöperating with the beater of a cotton-opener, or the like machine, 65 and means for simultaneously moving the respective grid-bars of the said series bodily through different distances in the required direction, to thereby simultaneously increase or diminish the widths of the series of inter- 70 vening spaces.

2. In combination, the series of grid-bars constituting the grid coöperating with the beater of a cotton-opener, or the like machine, a support on which the said grid-bars are 75 mounted with capacity to slide, and adjusting means operating to simultaneously slide the said grid-bars on the said support, to simultaneously increase or diminish the widths of the series of intervening spaces. 80

3. In combination, the series of grid-bars constituting the grid coöperating with the beater of a cotton-opener, or the like machine, a support on which the said grid-bars are 85 mounted with capacity to slide, proportional levers connected with the respective grid-bars, and means to effect simultaneous movement of the said levers, whereby to simultaneously increase or diminish the widths of the spaces intervening between the respective 90 grid-bars.

4. In combination, the series of grid-bars constituting the grid coöperating with the beater of a cotton-opener, or the like machine, a support on which the said grid-bars are 95 mounted with capacity to slide, proportional levers connected with the respective grid-bars, a slide-bar connected with the series of levers, the operating-arm for the said slide-bar, and means of locking the parts in ad- 100 justed position.

In testimony whereof I affix my signature in presence of two witnesses.

FRED A. WILDE.

Witnesses:

ALVIN B. MARTIN,  
 PERLEY LITTLEFIELD.