

R. KITSON.

Screen for Cotton Picking Machines.

No. 80,975.

Patented Aug. 11, 1868.

Fig. 1

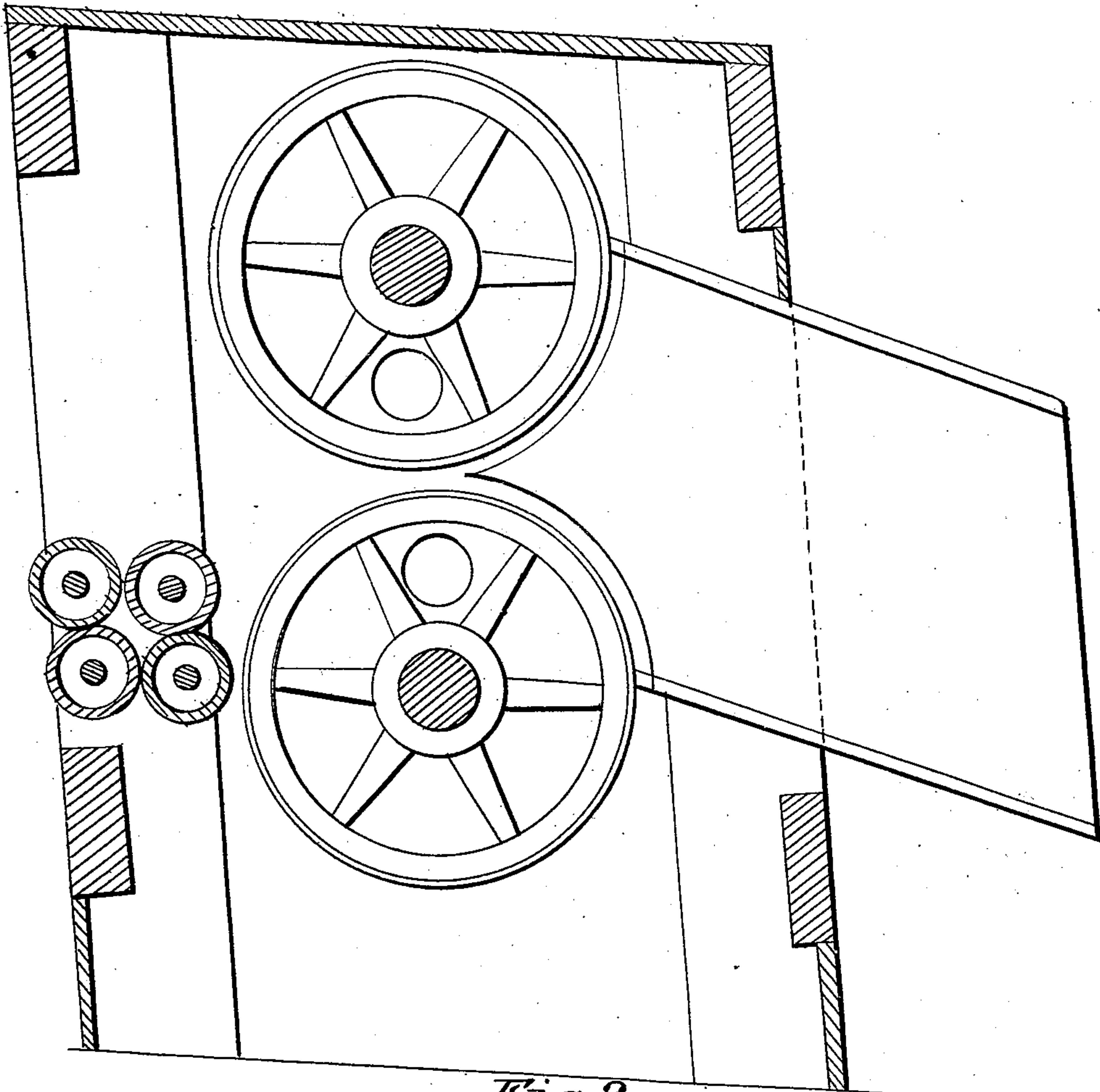
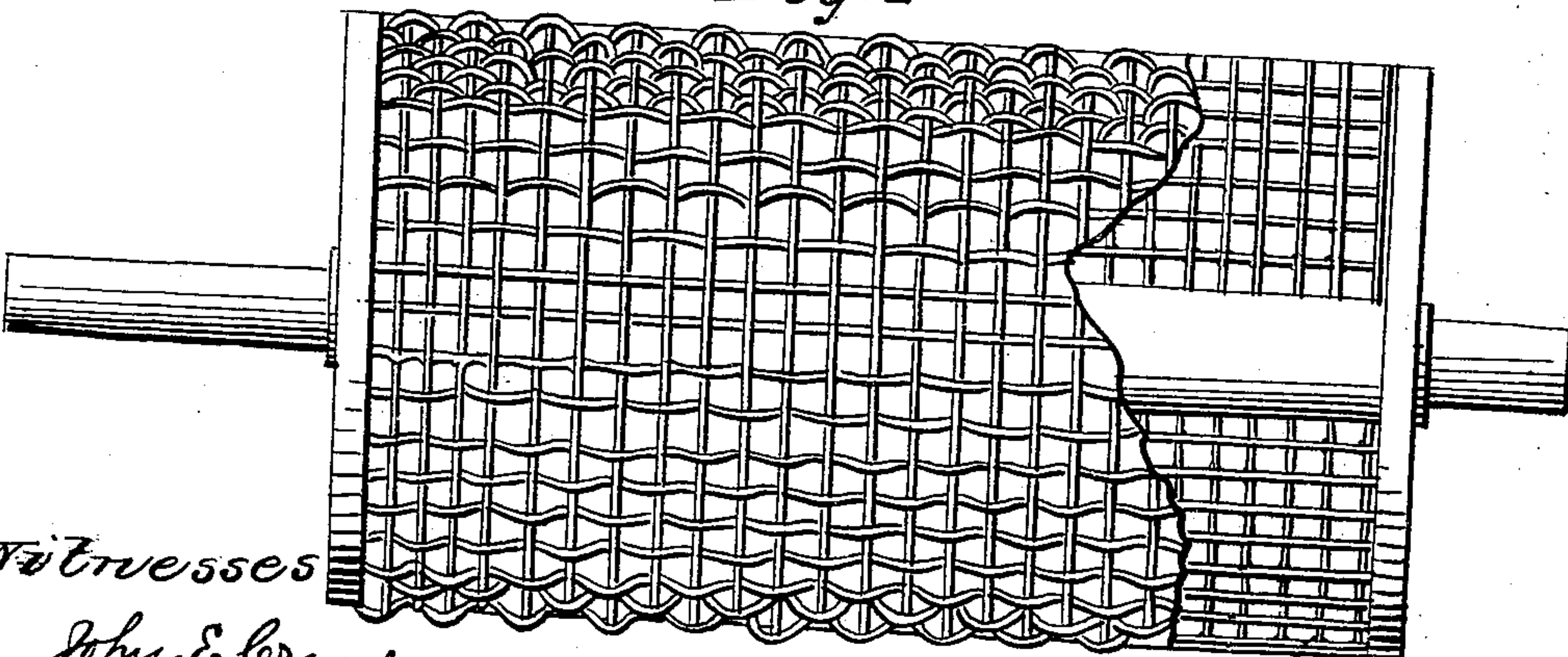


Fig. 2



Witnesses

John E. Crague
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RICHARD KITSON, OF LOWELL, MASSACHUSETTS.

Letters Patent No. 80,975, dated August 11, 1868.

IMPROVEMENT IN SCREENS FOR MACHINES FOR TREATING COTTON.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, RICHARD KITSON, of Lowell, in the county of Middlesex, and State of Massachusetts, have invented certain new and useful Improvements in Cylinder-Screens, or Wire-Screen Cylinders for Cotton-Lappers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a vertical longitudinal section of that portion of a cotton-lapper which contains the screen-cylinders, with two of said cylinders applied thereto.

Figure 2, a side elevation of one of my improved screen-cylinders, after a portion of the screen has been removed, showing a portion of the interior and the central shaft.

My invention and improvements in wire-screen cylinders consist in fastening or securing with solder the wires at their crossings, the abutting ends of the screen, and the cylindrical ends thereof, to the heads or ends of the cylinder, or to the hoops or bands which cover them.

The objects of this invention are to prevent the wires from spreading apart, from wearing or cutting into or through each other, more perfectly uniting the abutting ends of the screen, and more permanent connection of the cylindrical ends thereof to the cylindrical heads.

By means of this invention I am enabled to produce a permanent cylinder-surface with uniform openings, which will insure the equal and regular action of the blast of air which forces the cotton against the screen, and of the suction of air which draws the dust and dirt from the interior of the cylinder.

I am also enabled to produce a more perfect and durable screen-cylinder than any I have ever seen, and one that will clean the cotton in a superior manner, and save nearly all the fibres of any value.

In the ordinary wire-screen cylinders for cotton-lappers, the screens are simply woven and cut off in suitable lengths, and drawn around the cylinder-heads and ribs, and the abutting ends secured together with wire. In order to apply this ordinary wire screen to form a screen-cylinder, it is necessary that the cylindrical framework around which the wire screen is drawn should be thoroughly and substantially made, and with numerous longitudinal ribs, notched into the cylinder-heads, to support the ordinary wire screen.

A screen-cylinder thus made, is not only a very expensive device in the beginning, but the whole screen-surface has to be frequently removed, by reason of the loose wires wearing or cutting into or through each other where they cross or intersect; besides, the loose wires forming such ordinary cylinder are sure to spread apart at different places on the framework, and form large openings, through which considerable cotton is blown by the blast of air which forces such cotton against the imperfect and changeable cylinder-surfaces, and drawn off by the suction through the dust-boxes or pipes, with the refuse matter, where it can only be recovered by a tedious and troublesome process.

In the use of my improved screen-cylinder for cotton-lappers, all the above named difficulties and objections are overcome. The wires are firmly fastened together at their crossings, the abutting ends of the screen are smoothly and permanently connected, and the cylindrical ends secured to the heads or ends of the cylinder, a permanent cylinder-surface of wires is produced, and uniformity of openings maintained between the wires. The firmly-fastened wires cannot spread apart to waste the cotton, as in ordinary wire-screen cylinders, or wear or cut into or through each other, to spoil the screen; equal and uniform action of the blast of air and the suction, can be relied upon to clean or free the cotton from dust, dirt, and refuse matter, and save the fibre much more effectually than with the use of any perforated metal screen-cylinders, the cost of which far exceeds the cost of the screen-cylinder made according to my improvements.

Soldering or fastening the wires together, as before described, is not only important for the purposes hereinbefore stated, but such a soldered screen, when applied to a rotating cylinder, against the surface of which cotton, sand, and dirt are forcibly blown, and through the opening of which the sand and refuse matter are forced or drawn, to separate them from the perfect fibre, will endure more than twice as long as the ordinary loose wire-cylinder screen, and produce results superior to the results produced by such ordinary wire-screen

cylinder, or by a perforated metal screen, as the screen which has the wires fastened together presents a greater proportion of openings for the free passage of dirt which is blown or drawn through the uniform openings, and less resisting surface for such dirt than the perforated metal screen, and there is no liability of the wires spreading apart, to allow loss of fibre, or of the wires wearing or cutting each other, to prematurely spoil the screen, and no liability of the abutting ends getting separated or loosened, or of the screen getting loose on the heads of the cylinder.

What I claim, and desire to secure by Letters Patent, is—

A wire-screen cylinder, constructed as described, with wires soldered together at their crossings and at their abutting ends, and the ends of the screen soldered to the heads or ends of the cylinder.

RICHARD KITSON.

Witnesses:

JOHN E. CRANE,

J. S. WHITNEY.