S. E. CROCKER.

PULP-STRAINER.

No. 170,471. Patented Nov. 30, 1875.

Fig. 1.

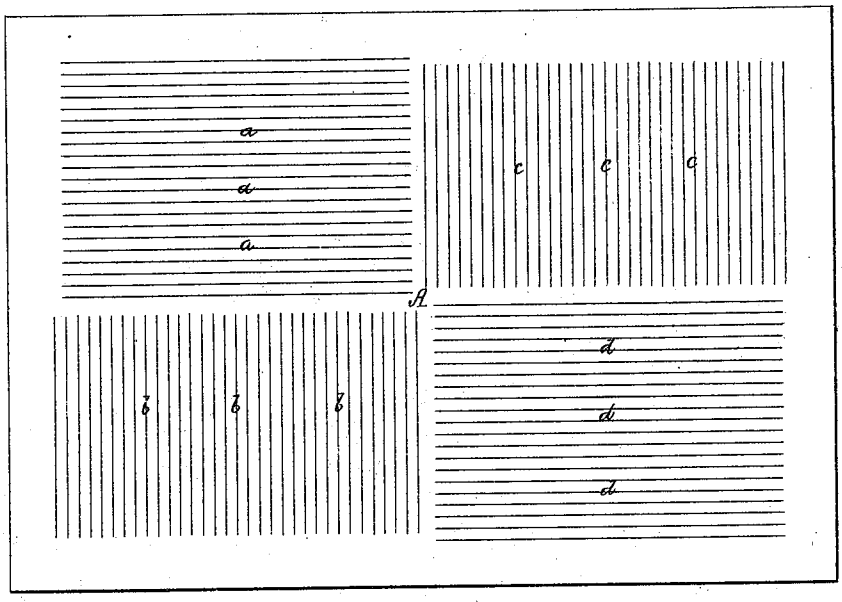


Fig. 2.

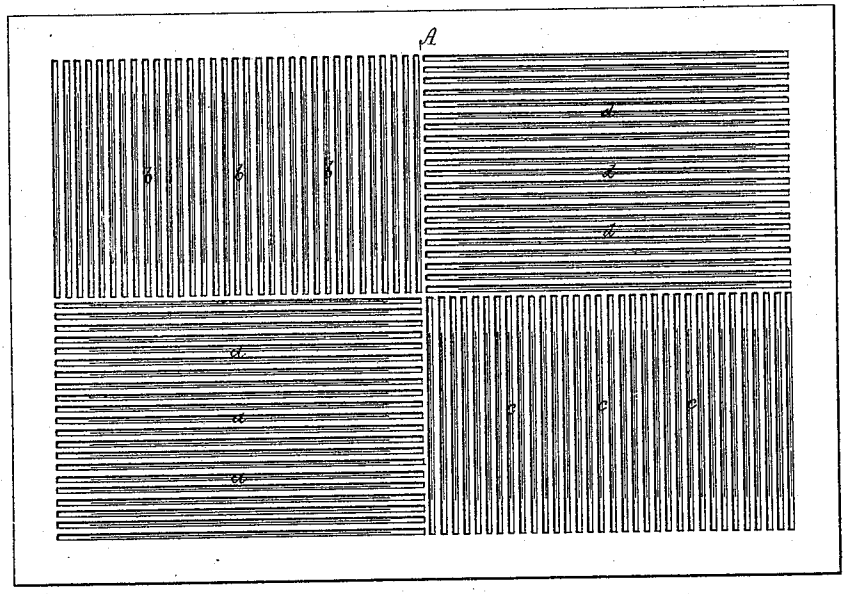
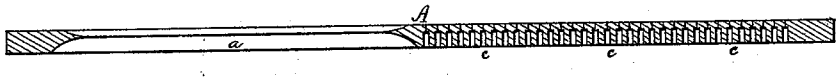


Fig. 3.



Witnesses.
S. W. Pipes.
L. M. Möller

Samuel E. Crocker
by his attorney.
R. H. Eddy

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL E. CROCKER, OF FITCHBURG, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND SHERBURNE S. DOW, OF SAME PLACE.

IMPROVEMENT IN PULP-STRAINERS.

Specification forming part of Letters Patent No. **170,471**, dated November 30, 1875; application filed September 21, 1875.

To all whom it may concern:

Be it known that I, SAMUEL E. CROCKER, of Fitchburg, of the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Paper-Pulp Screens; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a bottom view, and Fig. 3 a transverse section, of one of my improved screens.

In the said screen the slits of each series of slits range at a right angle with those of each next adjacent series, as represented. The object of the slits is, in case a fiber of the pulp may extend across a slit, so as not to pass through it, such fiber, in passing off the slit and upon the next range, will meet with a slit thereof extending lengthwise of it—the said fiber—and thus be able to pass through such slit.

Heretofore, in making non-rotary pulp-screens, all the slits have ranged in one direction; but in carrying out my invention some range in one and others in one or more different directions, I preferring the disposition of them as represented in the drawings, in which, in the screen A, *a a a*, &c., denote one series of slits, *b b b*, &c., another, *c c c*, &c., another, and *d d d*, &c., a fourth, each series ranging at a right angle to each of the two next to it.

My arrangement not only causes the screen to be stronger, but enables it generally to be constructed with many more slits than one with slits all running one way.

With my screen there is not the danger of cracking or breaking down while in use that exists in the other screen.

I am aware that circular tub-screens to revolve have had their bottoms composed of straight or curved bars, arranged about a common center, with spaces between them, and supported on radial arms projecting from a hub, all being as shown in the British Patent No. 6,095 for 1831. I make no claim to such a screen, which, when revolving, does not operate like my screen, for, by centrifugal force, it throws the pulp radially and transversely across the slits, in which respect it operates like an ordinary non-rotative screen. Furthermore, by supporting the bars on the radial arms, with the spaces between the bars extending across such arms, the arms serve to cause the spaces to become clogged with the pulp.

My improved screen has no such arms, it being formed of a plate with slits through it, and with each series standing at right angles to two next adjacent and bounding series. Such screen is not to rotate, but simply to vibrate up and down while in use, and while the pulp is flowing over it in the direction of two sets of its slits.

Therefore I claim—

As an improved manufacture, the described single-plate pulp-screen, having each series of its slits to stand at a right angle with each of the including or bounding sets without opening into such, whereby fibers of pulp, that, by extending across a slit or slits of one series, may be prevented from being screened, may, after passing upon the next series of slits, so range therewith as to readily be screened thereby, all being substantially as represented.

SAMUEL EMMONS CROCKER.

Witnesses:

R. H. EDDY,

J. R. SNOW.