

W. NEWELL.
Coffee Cleaner.

No. 95,827.

Patented Oct. 12, 1869.

Fig. 1.

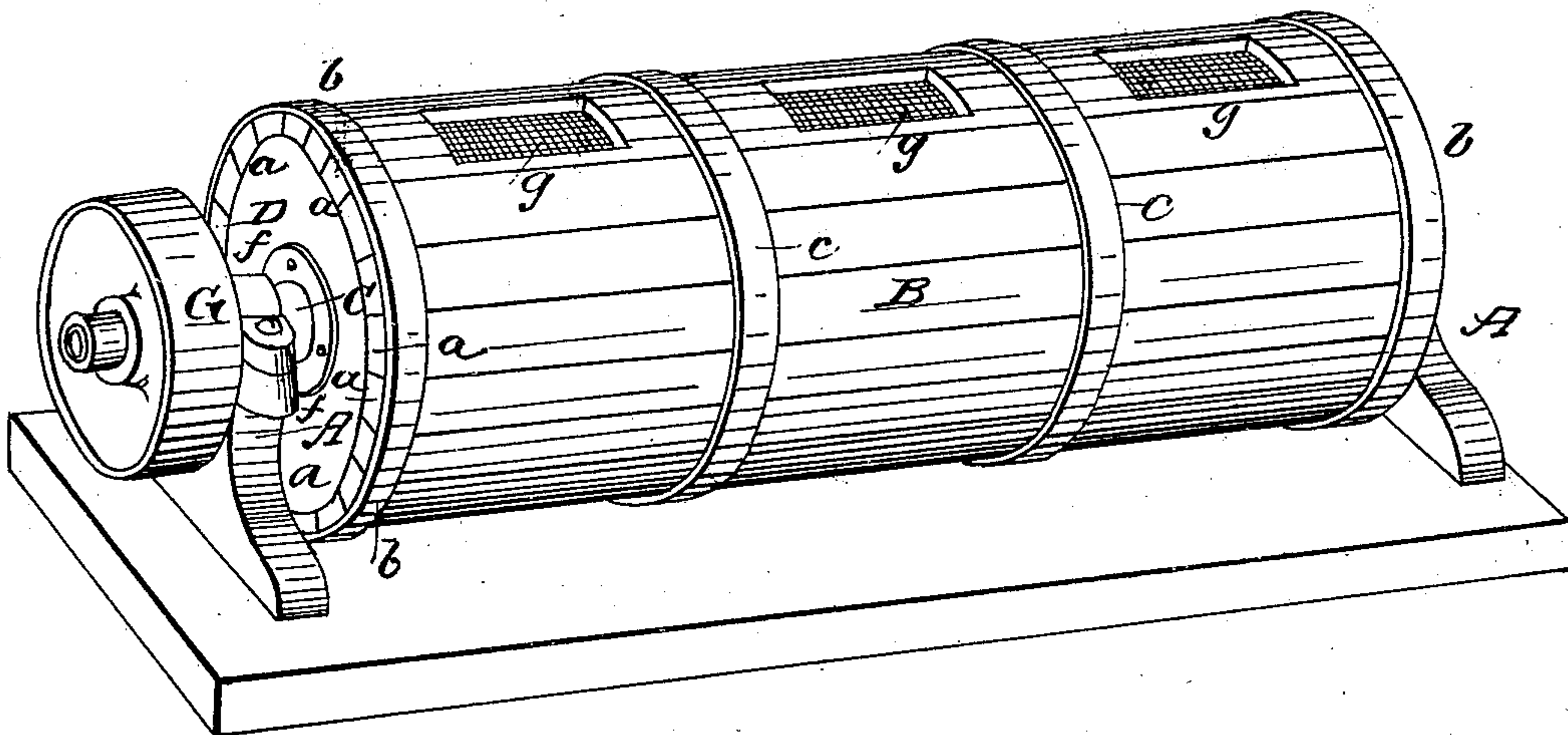


Fig. 2.

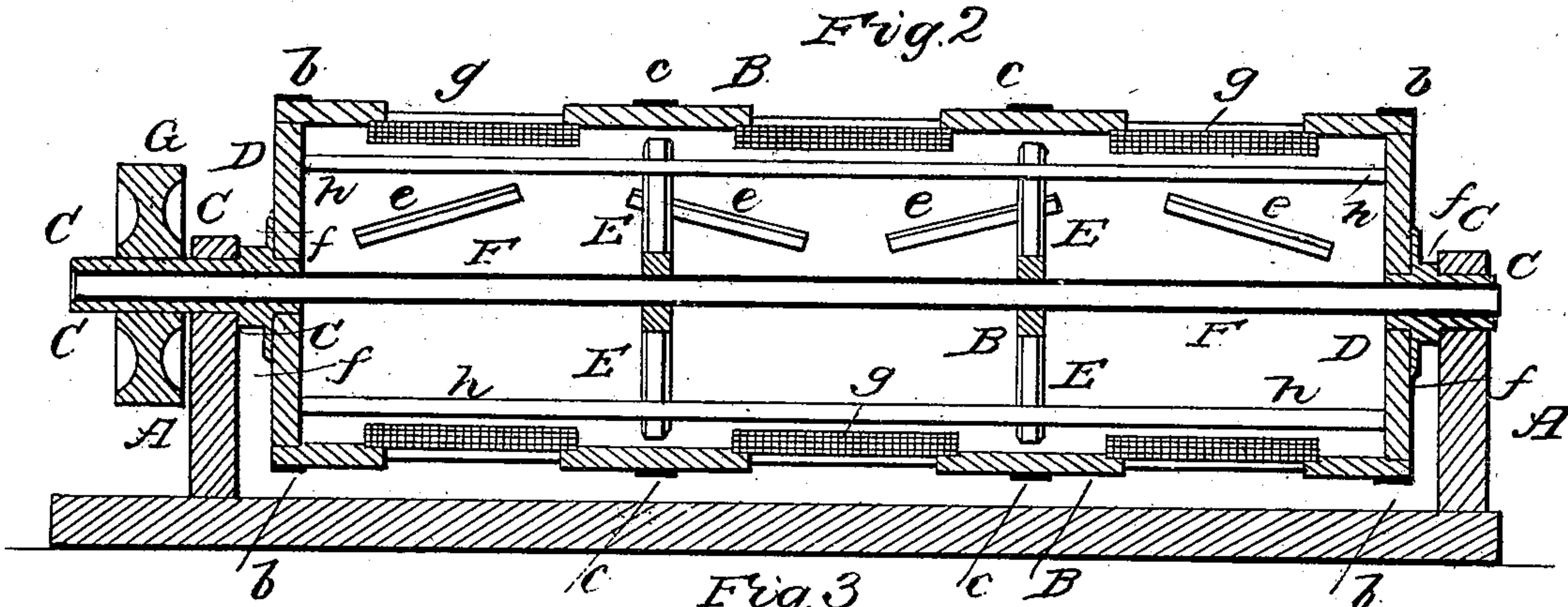
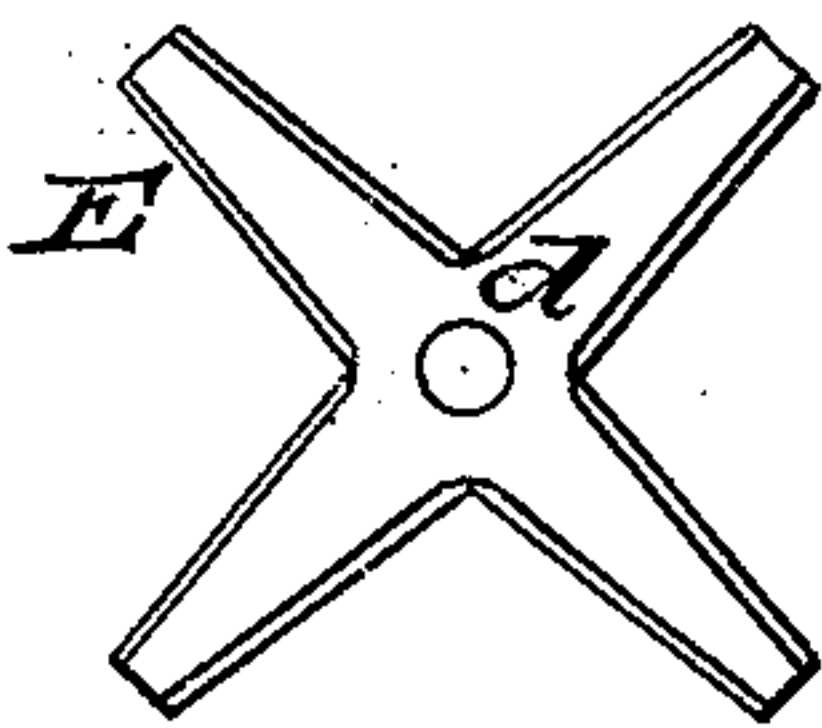


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE

WILLIAM NEWELL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR POLISHING AND CLEANING COFFEE.

Specification forming part of Letters Patent No. 95,827, dated October 12, 1869.

To all whom it may concern:

Be it known that I, WILLIAM NEWELL, of the city of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Machines for Cleaning and Polishing Coffee; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents the exterior of the machine in perspective and as it appears when in working order. Fig. 2 represents a longitudinal vertical section taken centrally through the machine. Fig. 3 represents one of the cross-heads from the interior of the cylinder.

Similar letters of reference, where they occur in the separate figures, denote like parts of the apparatus in all of the drawings.

After much experience in the cleaning and polishing of coffee, and many years' experiment in various machines for the purpose and of various materials used therein, I found that wood was preferable to metal for making the cylinder of, so far as the material used for the coffee to roll against or move in contact with was concerned; but to make the operation of cleaning and polishing coffee by attrition profitable and economical, it must be done in bulk or great quantity—say about one ton of coffee in motion at one and the same time.

To carry such a weight in a wooden cylinder, particularly when the cylinder and its contents had to be rotated and kept in motion for a considerable period of time, required much time and consideration to get it of the requisite strength, so as to resist the strain as well as the shrinking, swelling, or warping of the wood, that would detract from the easy operation of the machine. All this I have accomplished; and my invention consists in a wooden cylinder, constructed as will be hereafter more fully explained, with doors commanding its interior, and openings covered with wire gauze or screens, and interior flanges for the coffee to strike against and be guided by and revolved upon, or with a shaft or journals secured to the heads thereof for the purpose of cleaning and polishing coffee, as will be explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

In proper bearings A on a substantial frame is supported a cylinder, B, made of wood, by means of hollow journals C C, secured to the heads D of said cylinder. Through the journals C and through the cylinder B is passed a steam-pipe, F, by means of which the contents of the cylinder may, when found necessary, be gently or sufficiently heated.

The cylinder is made of staves *a a a*, of wood, and heads D, of wood, are securely fastened therein, and as the cylinder is designed for containing, say, one ton of weight under motion, it must be very strongly built. The end bands *b b* are put on tightly and hold the rim to the heads.

Within the cylinder, and opposite to where the intermediate hoops or bands *c c* are placed, there are cross-heads E, which have openings *d* through them for the steam-pipe to pass through.

In the perimeter of the cylinder there are openings covered with screens *g*, through which dust and any light material smaller than the grains of coffee may pass out, and these openings or others may be commanded by doors, through which the cylinder may be charged and discharged.

On the interior of the jacket or shell of the cylinder are placed ribs or ledges *e e*, against which the coffee strikes as the cylinder charged with the grains revolves.

A cock may be connected with the steam-pipe, so as to let on steam and allow it to pass through the pipe and so heat it when the coffee to be cleaned and polished is damp or may require such heat; and when the coffee is in such condition as not to require artificial heat the steam may be shut off.

The attrition between the grains and between the bulk of them and the cylinder will create some heat by friction, and this may at times be sufficient for the purpose, and then the steam may be shut off.

The hollow journals C have heads or flanges *f f* cast upon them, by which they are secured to the cylinder-heads; and upon one of said hollow journals, extended or lengthened for that purpose, there is fastened a pulley, G, over which a belt passes to revolve the cylinder.

Reaching from head to head of the cylinder, and about midway between the central steam-pipe F and the perimeter of the cylinder, there

is a series of tie rods or bars, *h h*, for holding said heads from being forced out, or rather for drawing them toward the cylinder; and as these rods are in a position where the coffee is thrown back and forth by the ribs *e*, together with the motion of the cylinder, and are hence subjected to much frictional contact and wear, and must be of iron, which is not so genial to the polishing process as wood, I prefer to cover these bars or rods with thick canvas or wind them with rope, which serves a double purpose of preventing undue wearing away and presenting a better polishing-surface to the coffee.

Ordinarily two thousand pounds of coffee can be cleaned and polished in about forty minutes. Considerable speed may be given to the cylinder, for the ribs *e e*, which are deflectors, prevent the coffee from remaining in quiet by any centrifugal force or action.

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

A cylinder composed of wood for cleaning and polishing coffee by the friction and attrition of the grains among themselves and the bulk of coffee with the wood of the cylinder, when said cylinder is strengthened as described, furnished with openings covered by screens and internal ribs, and is revolved upon journals secured to the wooden heads, as and for the purpose herein described and represented.

WILLIAM NEWELL.

Witnesses:

A. B. STOUGHTON,
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