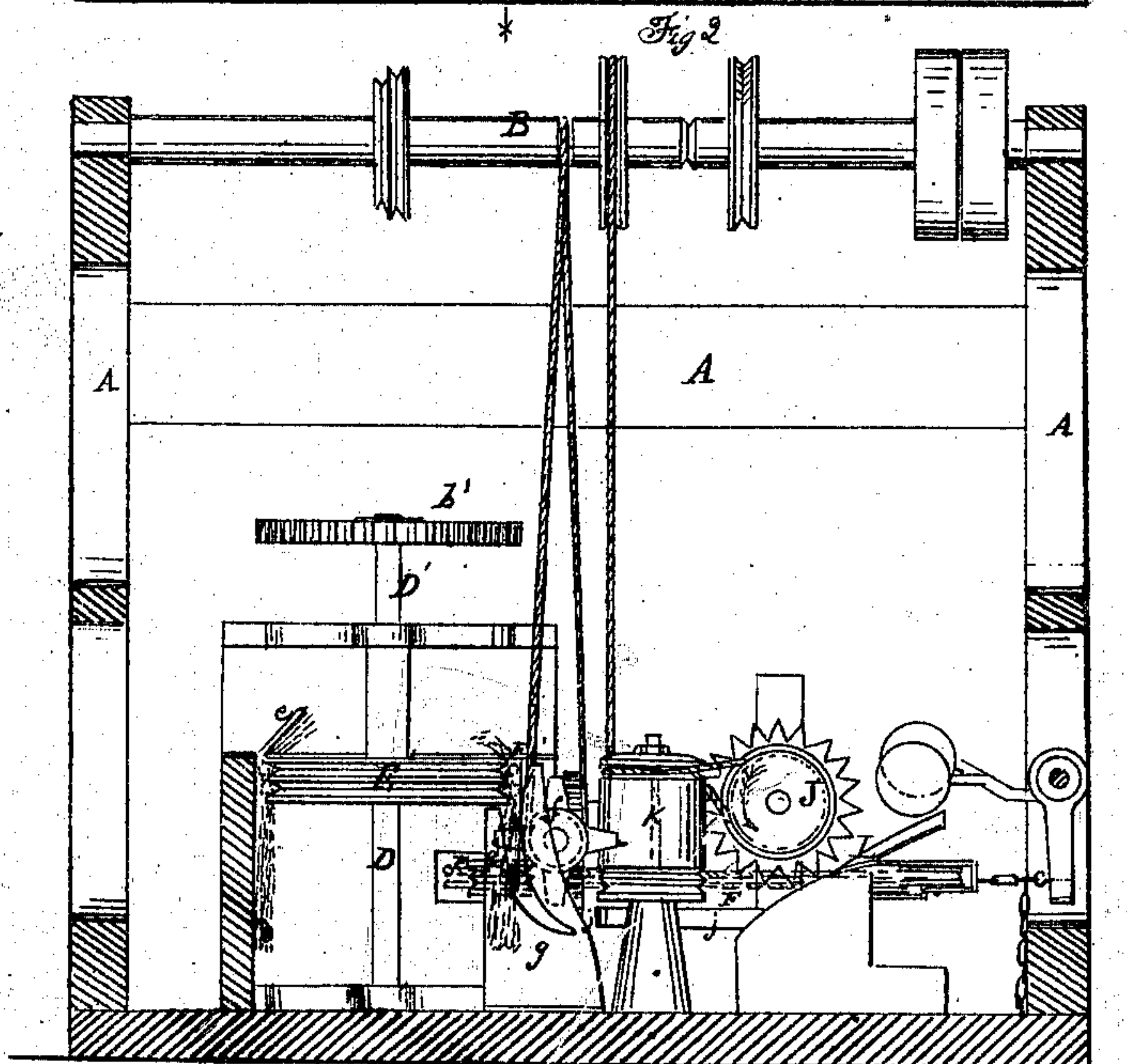
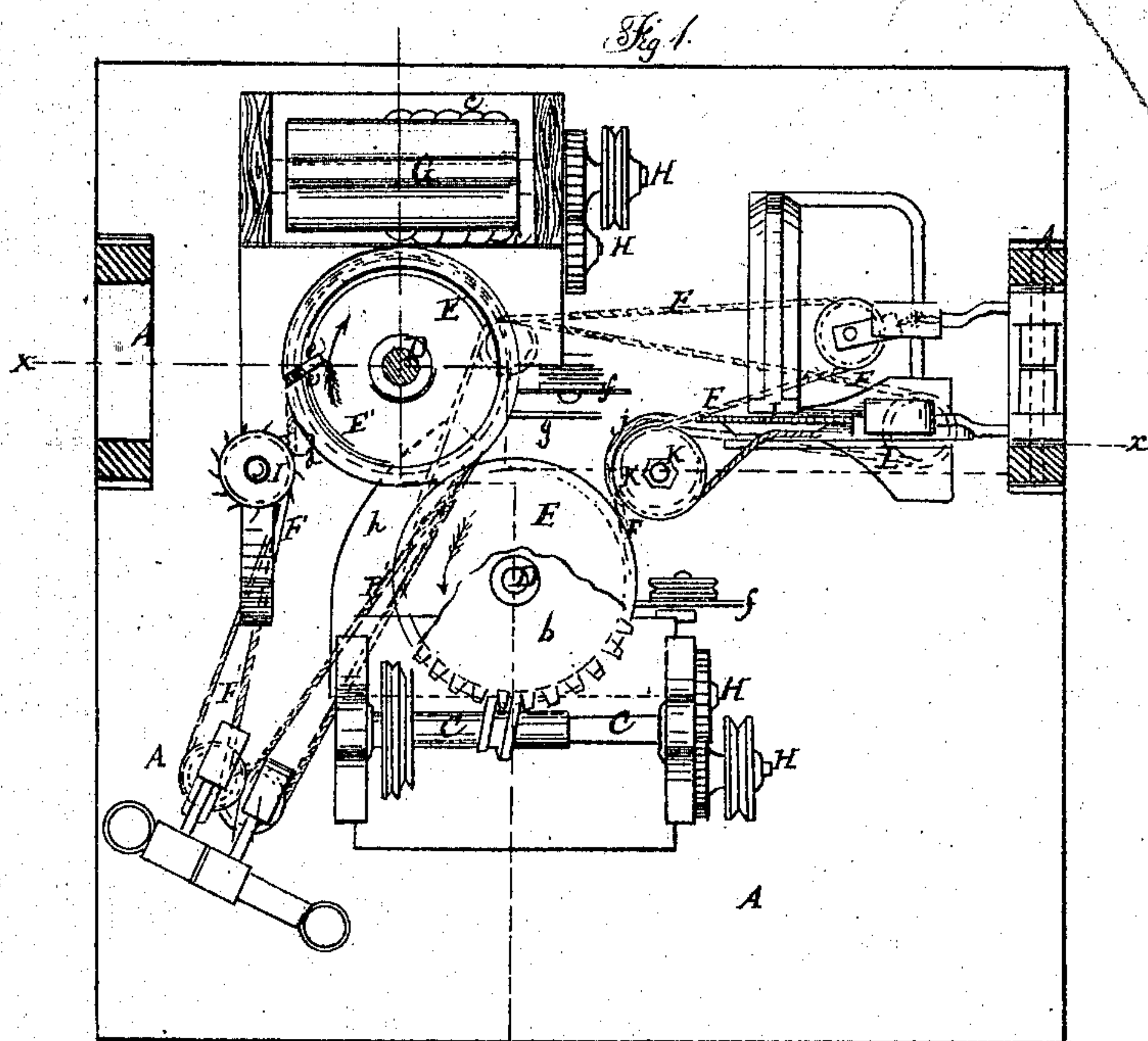


2 Photo-sheds 1

W. C. McBride *Dressing Flax*

N^o 75559

Patented Mar. 17, 1868



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Dressing Flax.

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Fig. 3.

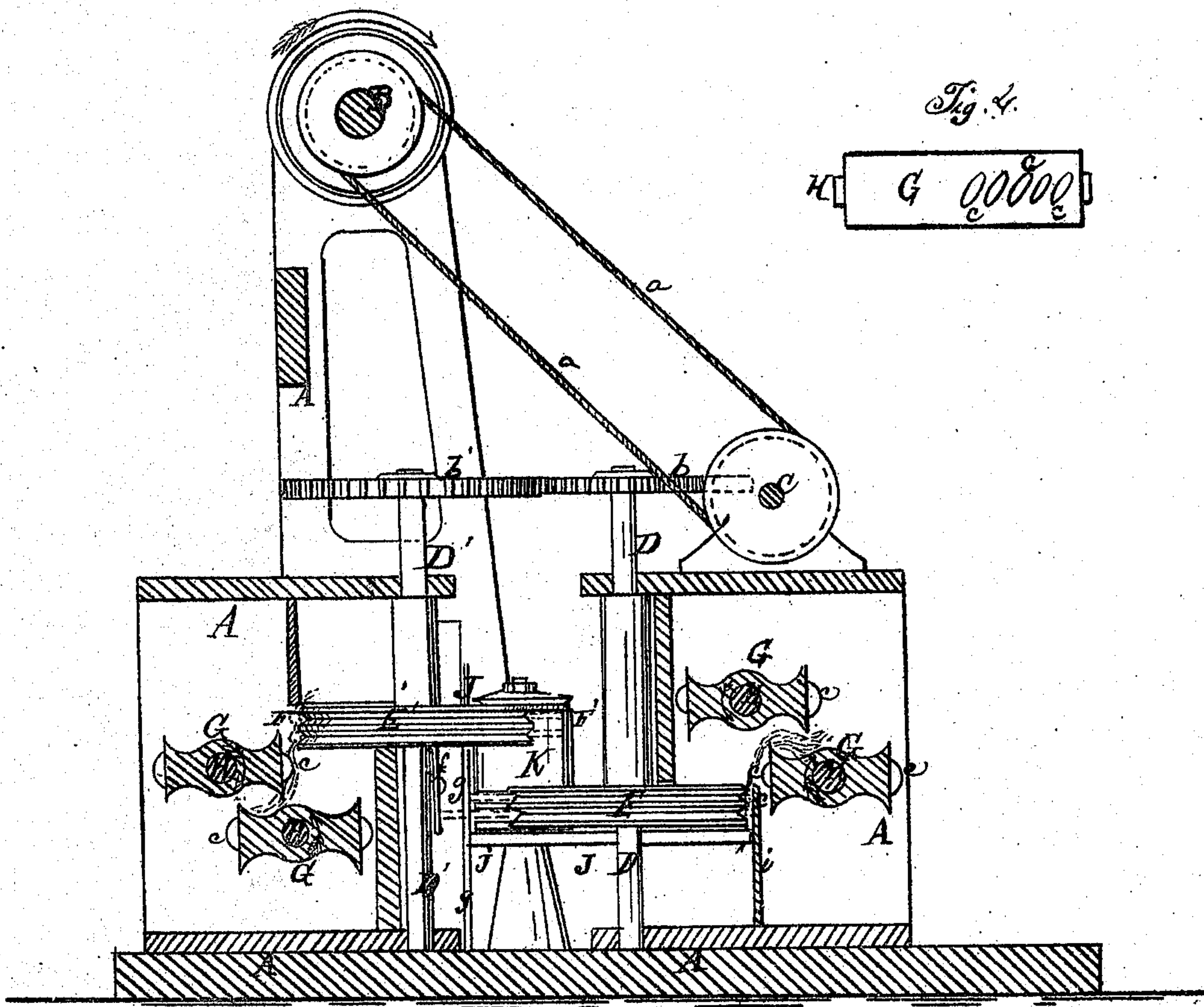


Fig. 4.



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WILLIAM C. McBRIDE, OF SOMERVILLE, NEW JERSEY.

Letters Patent No. 75,559, dated March 17, 1868.

IMPROVEMENT IN MACHINE FOR DRESSING FLAX.

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, WILLIAM C. McBRIDE, of Somerville, in the county of Somerset, and State of New Jersey, have invented a new and improved Machine for Dressing Flax; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, sheet 1, represents a plan or top view, partly in section, of my improved flax-dressing machine.

Figure 2, sheet 1, is a longitudinal vertical section of the same, the plane of section being indicated by the line *x x*, fig. 1.

Figure 3, sheet 2, is a vertical transverse section of the same, the plane of section being indicated by the line *y y*, fig. 1.

Figure 4 is a detail side view of a beater.

Similar letters of reference indicate corresponding parts.

This invention relates to certain improvements on the flax-dressing machine for which Letters Patent, No. 22,738, were granted me on the twenty-fifth day of January, 1859.

The invention consists in a novel arrangement and construction of the beaters, which are so made that they will thoroughly beat and dress that end of the flax completely which is exposed to their action.

The invention also consists in the arrangement of various devices for straightening the fibre and for holding it in proper position while it is fed to the beaters, and after it has been dressed; and in the device for taking the finished flax off the ropes, and for depositing it upon a table.

By these improvements, the machine is so perfected that a continuous supply of flax can be fed to it, and its consequent efficiency is thereby greatly increased.

A represents the framework of the machine, made of suitable material, of sufficient strength to support and hold the various shafts and other devices forming part of this machine. B represents the main driving-shaft, conveying motion by means of a belt, *a*, to a horizontal shaft, C, on which a screw-thread is formed, as shown in fig. 1. From the worm C, motion is transferred to a gear-wheel, *b*, on a vertical shaft, D, the gear-wheel *b* meshing into another gear-wheel, *b'*, on a vertical shaft, D', as shown. The shafts D and D' carry the grooved wheels E and E', respectively, the said wheels constituting, in combination with the cords or ropes F and F', the feeding-device of this machine. The feeding-mechanism has been fully described in the aforesaid Letters Patent, and does not form part of the present invention. Each wheel, E and E', is arranged with its scutching-chamber, in which the beaters are arranged.

These beaters, G G, are fully shown in figs. 1, 3, and 4. They are mounted on horizontal axles, H H, which are rotated by suitable apparatus. Two beaters are arranged in each scutching-chamber, and are revolved in opposite directions to each other, as indicated by arrows in fig. 3. Each beater has a cross-section of peculiar form, as shown in fig. 3. Two opposite sides of each beater are straight, or nearly so, as shown, and are connected by curved sides, which are convex in the middle and concave at the edges, as shown. Four projecting beating edges are thus formed, as shown, and the flax, which is held on the feed-wheel by means of the rope, is constantly acted upon between two of these beating edges. As the lower beater revolves, its straight side will form a table to support the end of the flax, while, when the latter rests in the concave portion of the lower beater, it will be exposed to the action of the upper beater. Thus the flax is constantly held between the beaters, as long as it is within reach of the same. Upon the straight face of each beater are arranged, upon that end of the same which does the last part of the work, a series of rounded teeth, *c c*, as shown in figs. 1, 3, and 4, said teeth being of semi-oval shape, and set in an inclined position, as shown in fig. 4. By means of these teeth the flax is still more thoroughly scutched without being torn or broken.

It will be seen that by means of this construction of beaters the necessity of using shields and stocks, as described in the aforesaid Letters Patent, is dispensed with.

The flax to be scutched is put into the machine by inserting it between the rope F' and the periphery of the wheel E', at *d* in fig. 1. The ropes F and F' are represented in the drawing by blue and brown lines respectively, so that they can be easily distinguished from each other. An attendant places the flax in bunches

of suitable size into the machine, so that it may be grasped near to the upper end of the bunch by the rope F' , to be suspended in the manner indicated in fig. 2.

I is a wheel, having projecting teeth or arms on its periphery, and being rotated by means of the rope F' , as shown in fig. 1. The wheel I is arranged for the purpose of holding one bunch of flax until the next is presented to the machine, and thus the attendant is enabled to feed the machine with a continuous supply. By the revolution of the holding-wheel E' , the flax is carried to the first scutching-chamber. The upper end of the bunches of flax would hang wildly, some on the disk E' , some over the rope F' , and would become entangled with the suspended portions of the flax, unless they are brought into a certain desired position. For this purpose an oblique arm, e , is arranged on the stationary framework, so as to stand inclined above the rope F' and the periphery of the wheel E' , as shown in fig. 2. The upper ends of the bunches will, by means of this guard, e , be turned over and brought upon the disk E' , as shown, where they will remain as long as they are held to the said wheel E' . The suspended end of the flax is now brought between the beaters $G G$ of the first scutching-chamber, which are revolved with equal velocity in opposite directions. Each of these beaters may be provided at the beating edges with scutching-blades, of which two would be used on each beater. The beaters are arranged far enough apart that they may overlap each other while revolving, each meshing between two edges of the other beater, of which one is a beating, the other a following edge. The flax will thus have a limited space to be acted upon, and will be struck alternately by the lower and by the upper beater, being thus scutched on both sides, and being continually held up to the blow. When the flax arrives at the centre of the scutching-chamber, it will come in contact with the teeth or combs c , which will gently tighten the flax, and thereby make the blows more effective; also, opening the fibres without injuring or tearing the material. When the flax comes out of the first scutching-chamber, the lower dressed end is submitted to the action of a revolving comb, f , which smooths the fibres, and enables them to pass easily through a slot in an upright plate, g , which is arranged in its passage, as shown in figs. 1 and 2. The upper undressed end of the flax does, at this place, still rest upon the disk E , until the cord F' leaves the grooves of the wheel, when the wheel looses the hold on the dressed end of the flax, which hangs over one side of the rope. In this position the scutched end is presented to the rope F and wheel E , by which it is being grasped, while the undressed end is deposited upon a transfer-table, h . By the wheel E and cord F the flax is brought to the second scutching-chamber, in which its undressed end is scutched between beaters in the same manner as above described.

The wheel E' is arranged higher than the wheel E , so that the flax may in one chamber be scutched downward, in the second chamber upward, as shown in fig. 3. Thus the whole length of the flax is presented to the action of the beaters. In the second scutching-chamber is arranged a partition, i , which keeps the two ends of the flax separated, as shown in fig. 3. From the second scutching-chamber the flax, after it has been combed by a revolving comb, f' , is carried off on the rope F , its two ends being suspended from the two sides of the rope, as the same leaves the wheel E . A curved plate, j , under the rope F , following the course of the same from the second scutching-chamber, acts as a guide and support of the flax, thus suspended, and to keep the ends apart. By a deflecting-roller, K , the course of the rope F is changed, and the flax is brought under a revolving toothed disk, J , which is arranged above the rope F on a horizontal shaft, and which takes the flax off the rope F and deposits it upon a table, L , whence it can be removed by the attendant. The cords $F F'$ pass around suspended tension-rollers in the same manner as has been described in my aforesaid Letters Patent.

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

1. The toothed wheels I , in combination with the revolving disk E' and feeding-rope F' , all constructed, arranged, and operating as herein shown and described.
2. The arrangement of the oblique finger above the carrying-disk E' and cord F' , for the purpose of depositing the upper end of the fibre upon the surface of the disk, substantially as set forth.
3. The beaters $G G$, constructed as described, having two opposite straight sides and two curved sides, convex in the centre and concave at the edges, all arranged and operating as described, for the purpose specified.
4. Providing the straight sides of the beaters $G G$ with oblique rounded teeth, $c c$, as herein described, for the purpose specified.
5. The revolving comb-wheels f and f' , arranged so as to straighten the fibres after they are discharged from the scutching-chamber, substantially as and for the purpose herein shown and described.
6. The toothed disk J , when arranged as described, for the purpose of taking the dressed flax from the rope F , and depositing the same upon the table L , as set forth.

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Witnesses:

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