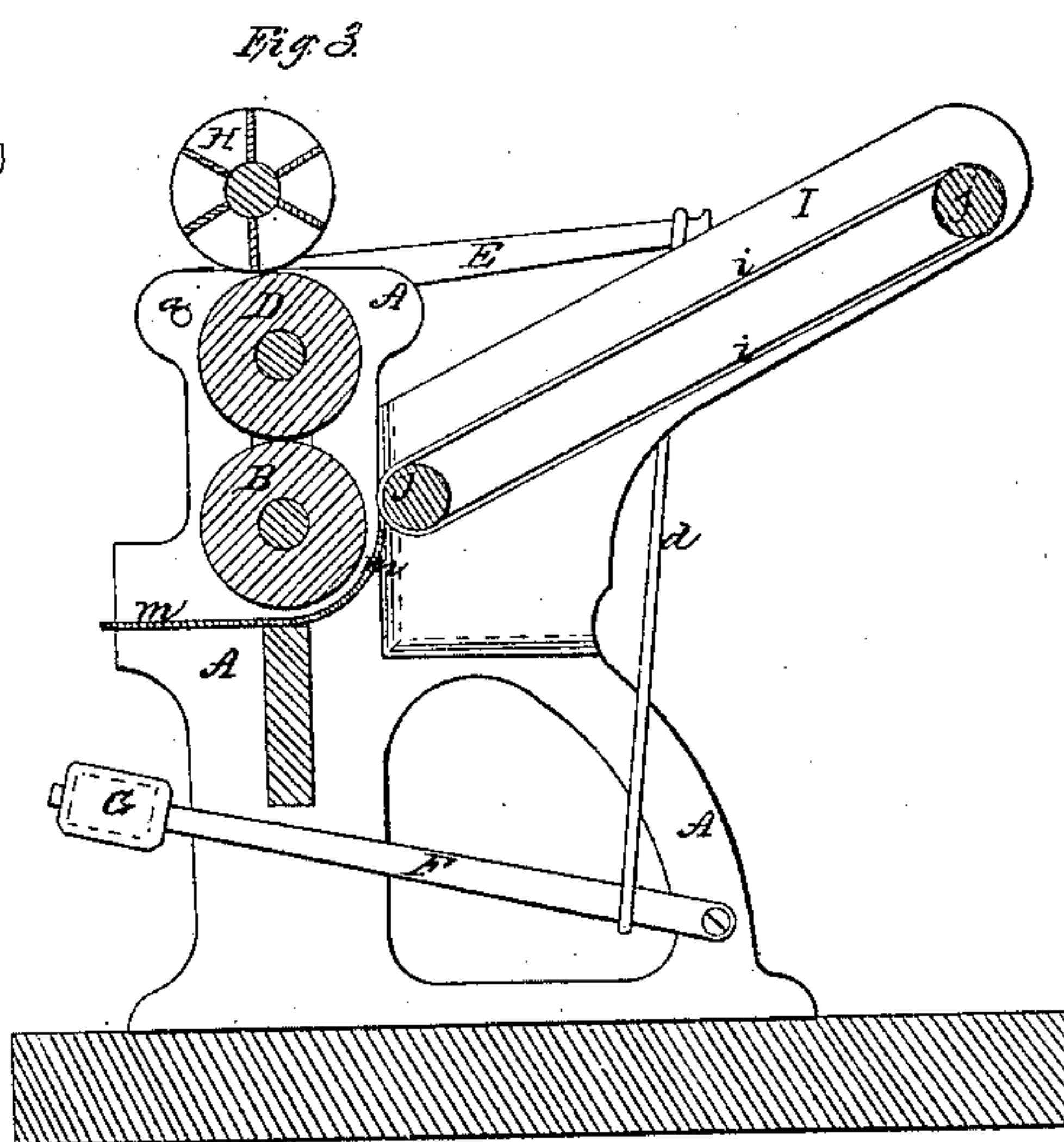
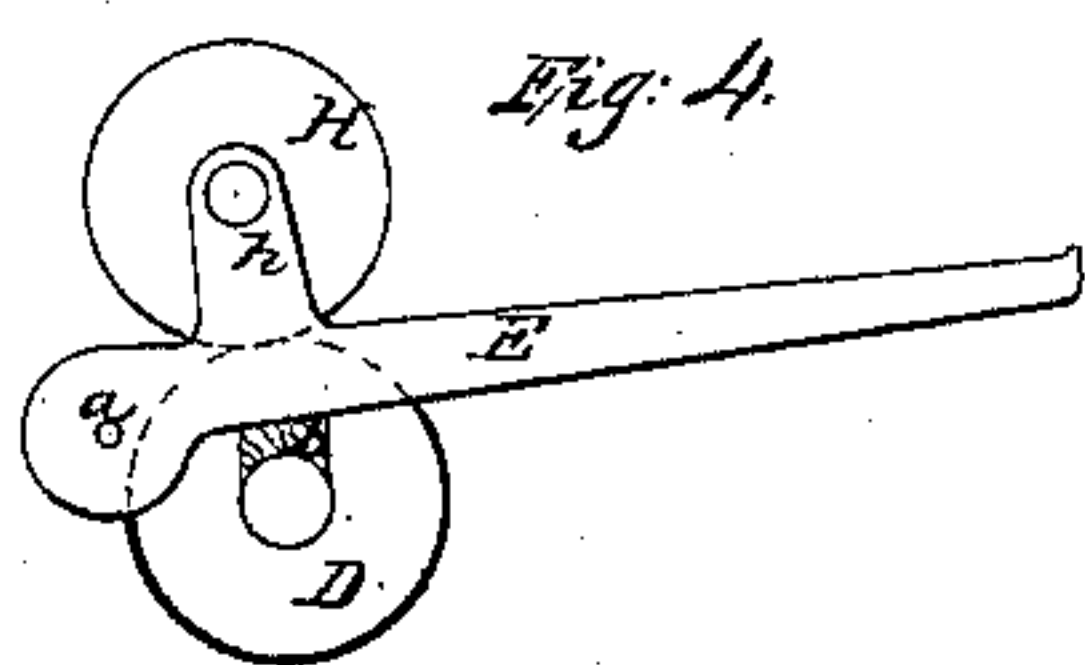
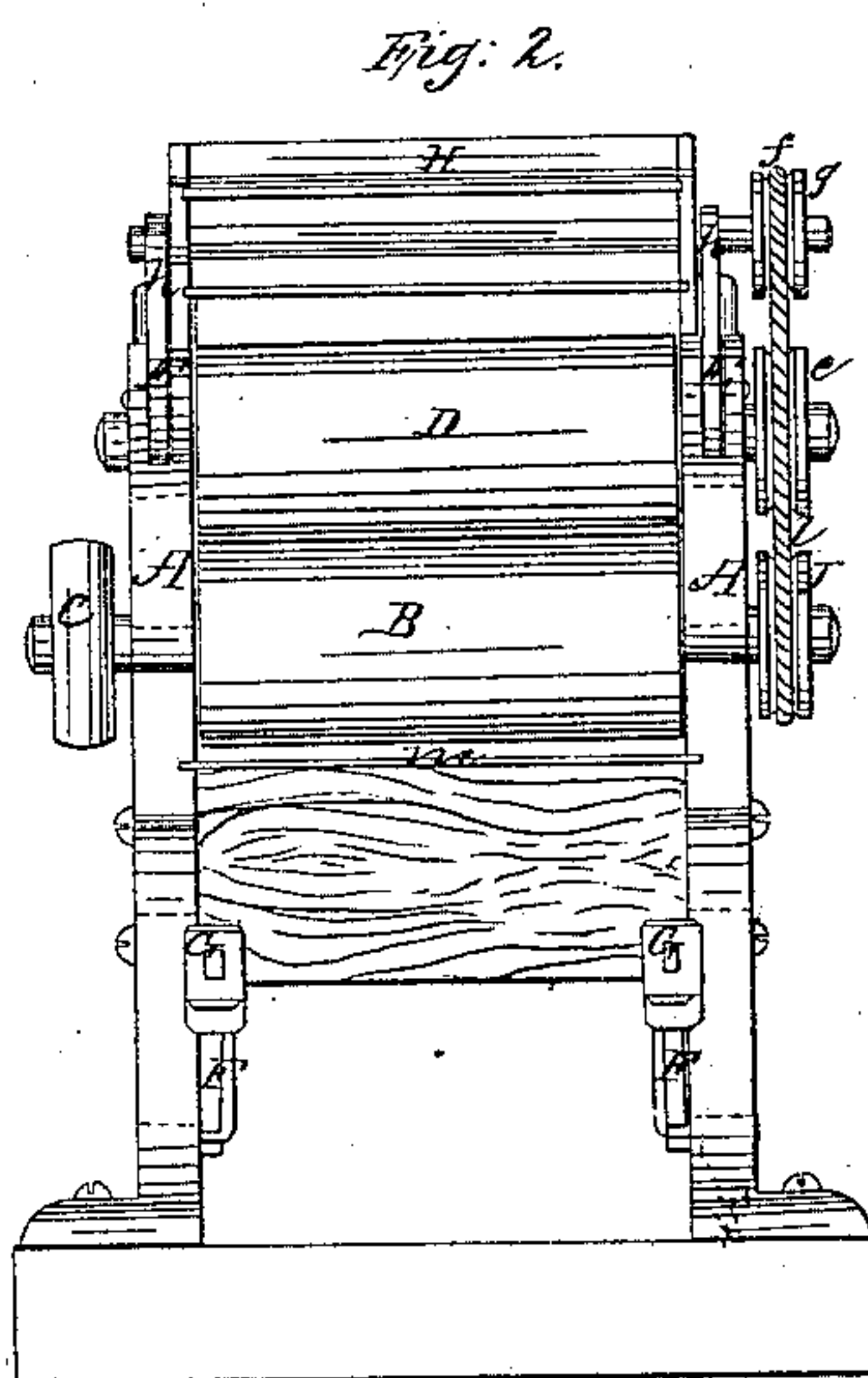
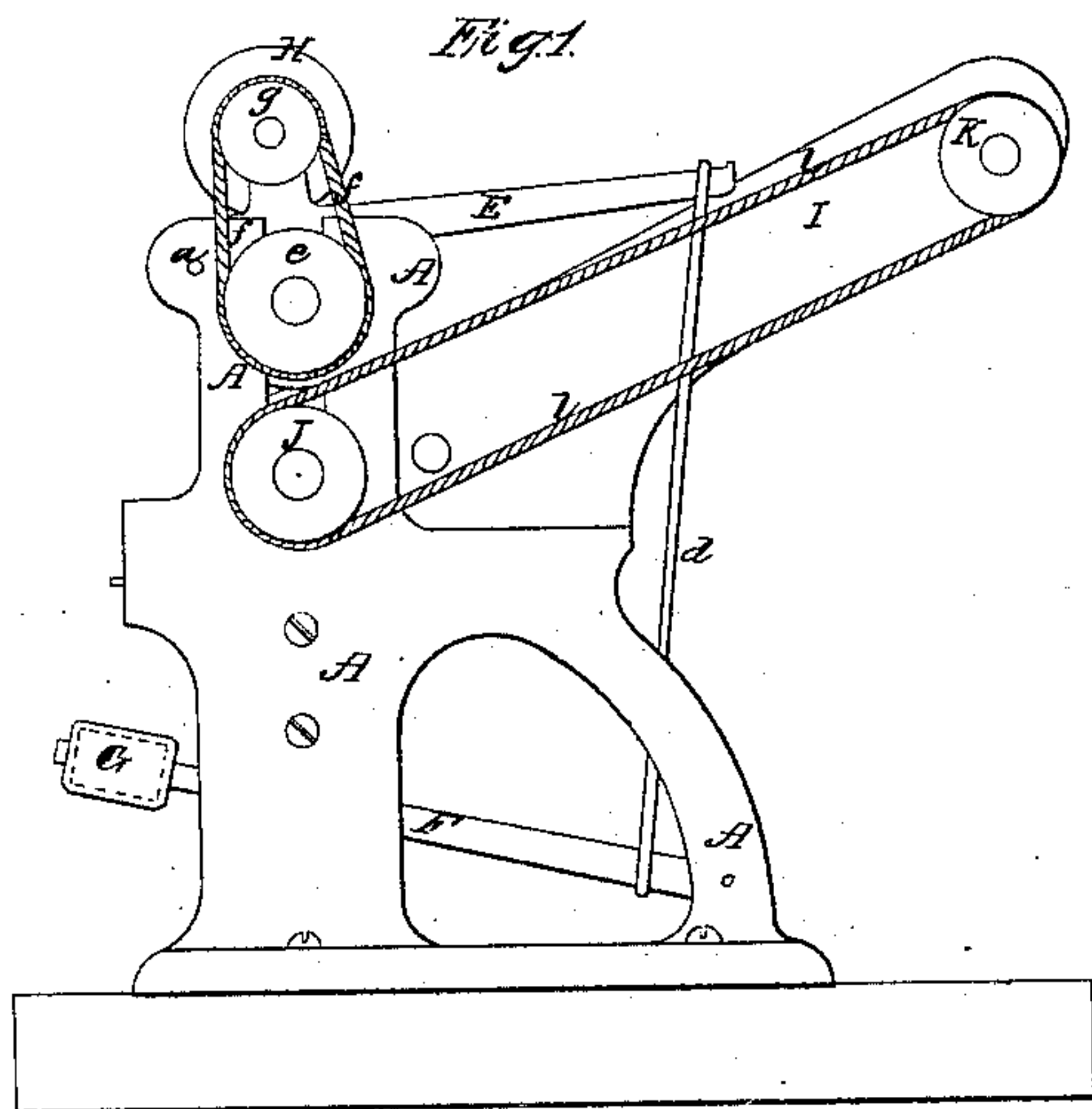


C. G. Sargent,

Wool-Washing Machine,

Patented Nov. 14, 1865.

N^o 50,961.



Witnesses

J. D. Patton
W. W. Wilson

Inventor.

Charles S. Sargent.
By atty A. B. Stoughton.

UNITED STATES PATENT OFFICE.

CHARLES G. SARGENT, OF GRANITEVILLE, MASSACHUSETTS.

IMPROVEMENT IN WOOL-WASHING MACHINES.

Specification forming part of Letters Patent No. 50,961, dated November 14, 1865.

To all whom it may concern:

Be it known that I, CHARLES G. SARGENT, of Graniteville, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful improvement in squeeze-rolls and beater to be used in connection with machines for washing wool and for other similar purposes; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a side view of the machine in which my invention is embraced. Fig. 2 represents an end view thereof. Fig. 3 represents a vertical section taken longitudinally through the machine; and Fig. 4 represents the pivoted and weighted lever in which the beater is hung, and which also holds down the upper squeeze-roll and allows it and the beater to rise and fall together as the varying thicknesses of material passing through between the rolls may require.

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

After wool has been washed it is usual to pass it through between squeeze-rollers to divest it of the water. In this squeezing process the wool often clings to the top roll, and, if allowed to remain or accumulate, interrupts the operation by raising up the top roll, and thus allowing much of the material to pass through without being squeezed or divested of the water which it takes up from the washing-tank. A beater has been used to work upon the material that passes between the rolls but this is not what I propose to use. My object is to clear the top of a pair of squeeze-rolls of all clinging matter by a beater that runs in close contact therewith and that rises and falls with it.

My invention consists in hanging and using a beater in connection with the top roll of a pair of squeeze-rolls, so that said beater shall knock off any and all wool that may cling to it.

It further consists in hanging the beater in weighted levers, which press also upon followers (or their equivalents) that bear upon the journals of the upper squeeze-roll, so that as said squeeze-roll rises and falls to accommodate itself to the varied thickness of the material to be squeezed the beater shall rise and

fall in a corresponding degree, and thus always maintain the same relative working position with regard to the roll which it clears, whether that roll rises or falls regularly or irregularly; and my invention further consists in combining with the squeeze-rolls and beater, arranged as herein described, an upward-inclined apron for catching, carrying up, and throwing over the washed and partially-dried wool and delivering it onto the floor or other suitable place.

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 a frame, A, is hung a roll, B, which runs in permanent bearings, and which roll may be driven by a belt from any first-moving power passing over a pulley, C, on one of its journals. Above this roll B, and in the frame A, is placed a second roll, D, the two forming a pair of squeezing-rollers, as will be explained.

Levers E (better shown in Fig. 4) are pivoted to the frame A at the point *a*, and these levers bear upon blocks or followers *b*, that in turn bear or press upon the journals of the upper roll, D, and hold it down with a yielding pressure against the lower roll.

Underneath the machine are pivoted the weighted levers F, whose free ends are loaded, as at G, and the levers E are connected to these weighted levers F by the rods *d*, so that, though the roll D may rise to accommodate a thicker stratum or flake of wool or other material to pass between it and its fellow, it will rise under very great resistance, and thus, whether it is a thicker or thinner stratum, it is equally squeezed, and with uniform pressure, or nearly so, and the friction between the rolls, or between the rolls and the material passing through between them, is sufficient to turn the upper roll.

From a pulley, *e*, on one of the journals of the upper roller an endless belt, *f*, passes up and over a pulley, *g*, on the journal of a beater, H, hung vertically over the upper roll or over the pair of rolls. This beater is hung in an arm, *h*, of the levers E, respectively, and as more distinctly seen in Fig. 4, and the weighted levers F draw it down close to the upper roll, D, which it clears of all clinging matter, preventing it from winding on said upper roll, and preserving the proper working of the rolls. The beater H being controlled by the levers E,

and the levers E controlling the yielding roll D, the two run together and rise and fall together as the case may be, though the beater runs at a higher velocity than the roll.

I is the apron-frame in which an endless apron, *i*, runs over rollers *j j'*, one of said rollers, *j'*, being furnished with a pulley, *k*, from which an endless belt, *l*, extends to and around a pulley, J, on one of the journals of the under roll, B, and thus the whole apparatus is driven as above described.

The apron *i* is inclined upward from the rolls, so that the material is elevated in passing over it, and from thence may fall onto the floor or other receiver.

Underneath the lower roll, B, there is a shield, *m*, that curves upward behind the roll and forms a close connection with the lower end of the carrying-apron *i*. The object of this shield is to catch and carry off the water squeezed out of the washed material, and all drainings and drippings therefrom.

By shifting the rod *d* on the levers E F, or by shifting the weights G on the levers F, or

by both, the pressure upon the roll D can be varied at pleasure.

The beater prevents any wool from clinging to the roll D, its blades knocking it off whenever it adheres.

Having thus fully described my invention, what I claim in connection with the squeeze-rollers of wool-washing machines is—

1. In combination with the top roll of the pair, a revolving beater for knocking off any wool that may adhere thereto, substantially as described.

2. The combination and connection of the beater and top yielding roll with the frame, and with the weighted levers E, as and for the purpose substantially as herein described.

3. In combination with the squeeze-rolls and beater, arranged and operating substantially as herein described, the upward-inclining apron, as and for the purpose described.

CHAS. G. SARGENT.

Witnesses:

FREDERICK G. SARGENT,
LUTHER PRESCOTT.