

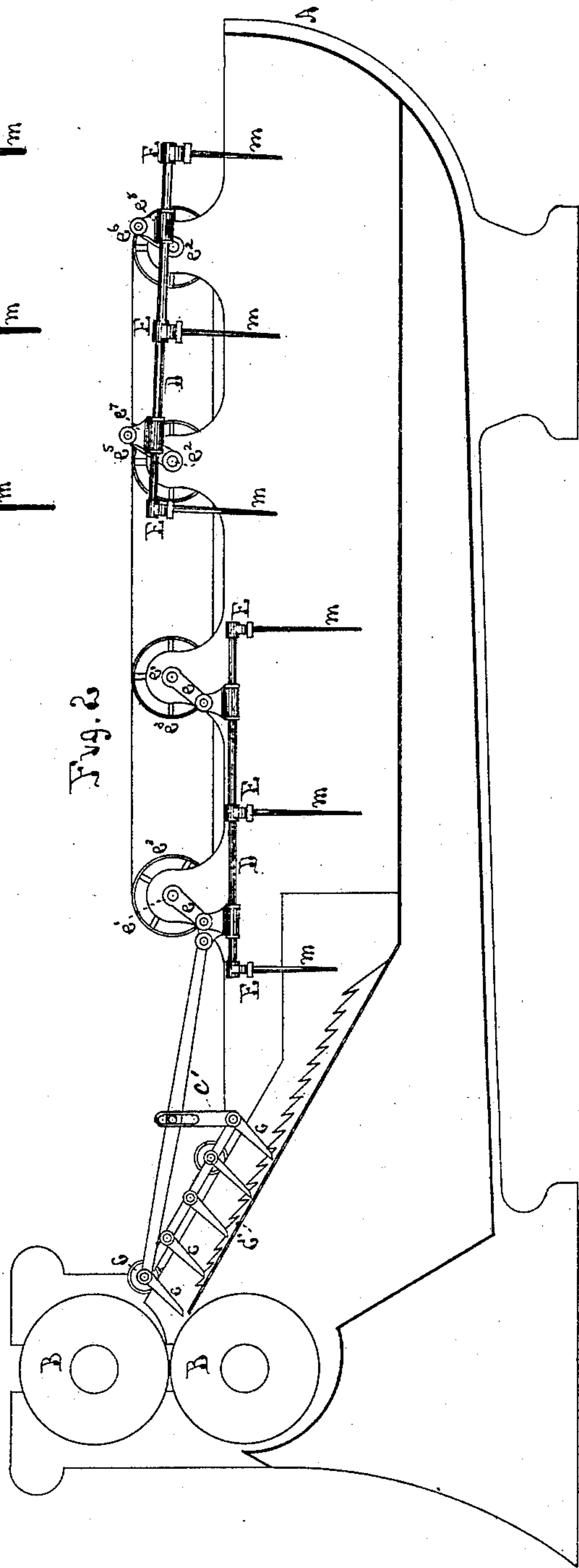
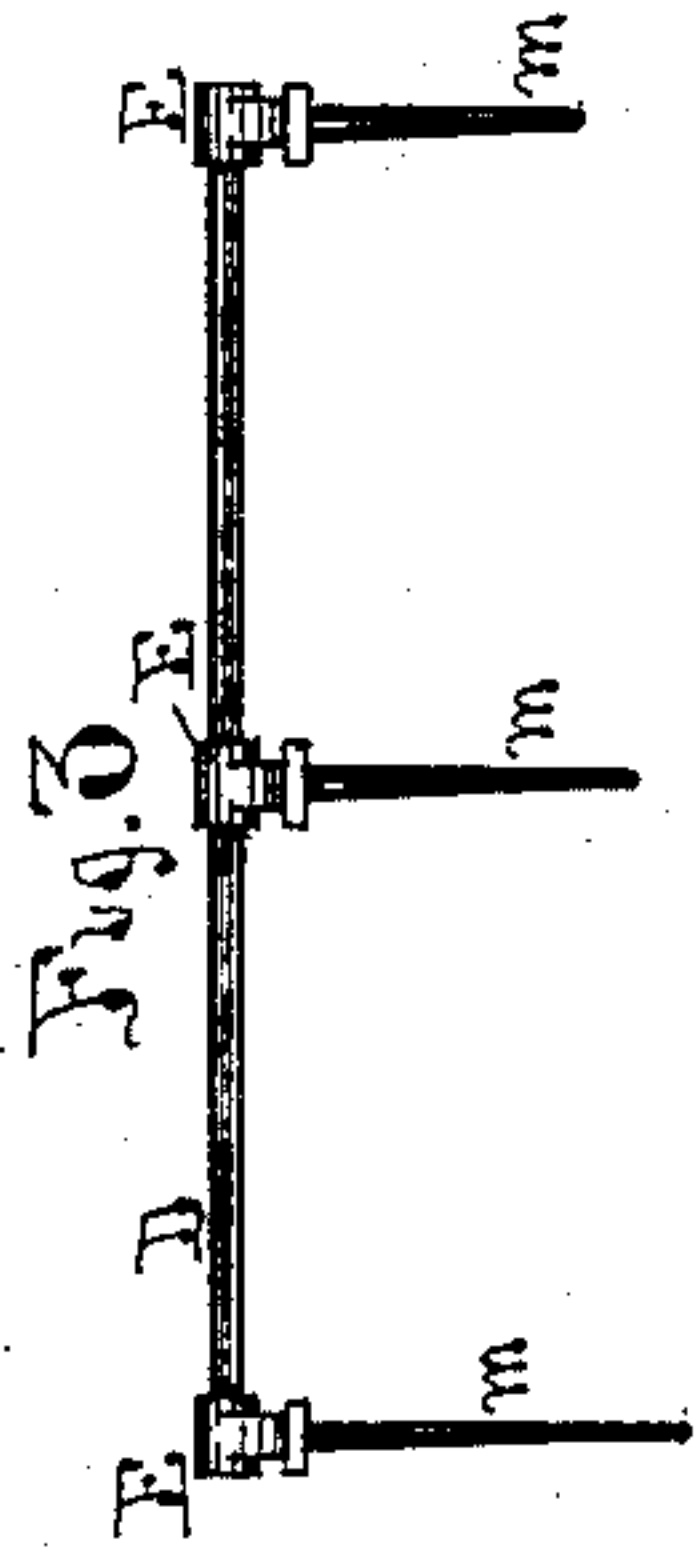
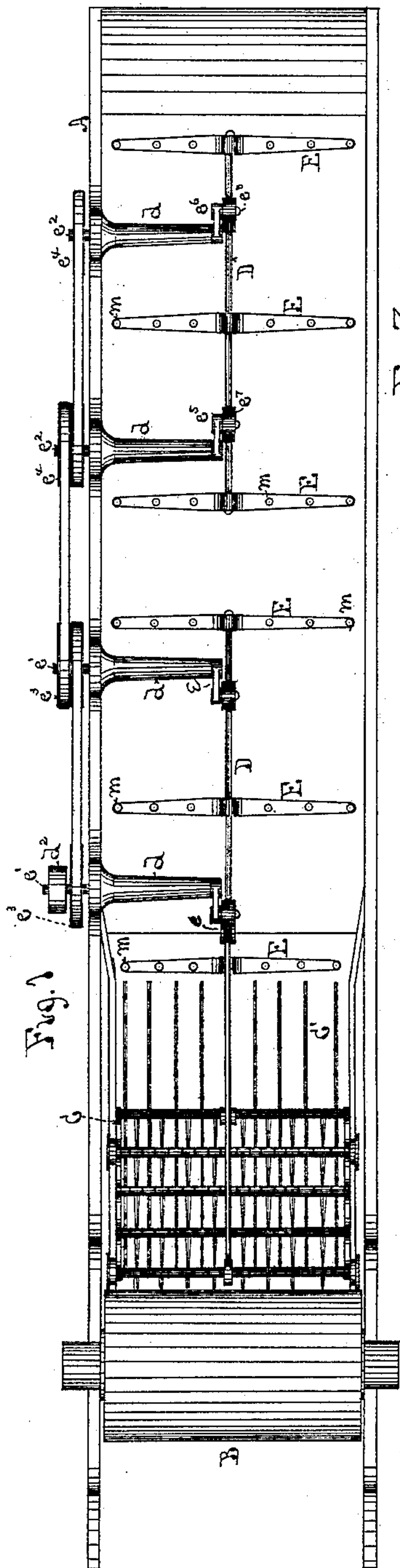
(No Model.)

F. G. & A. C. SARGENT.

WOOL WASHER.

No. 354,245.

Patented Dec. 14, 1886.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK G. SARGENT AND ALLAN C. SARGENT, OF GRANITEVILLE,
MASSACHUSETTS.

WOOL-WASHER.

SPECIFICATION forming part of Letters Patent No. 354,245, dated December 14, 1886.

Application filed February 18, 1885. Serial No. 156,269. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK G. SARGENT and ALLAN C. SARGENT, of Graniteville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Wool-Washers, of which the following is a specification.

Our improvement relates to machines for washing wool and other fibrous substances; and it consists in certain new combinations of the several parts of said devices, substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a top plan view of a wool-washing machine containing our improvements. Fig. 2 is a vertical longitudinal section of Fig. 1 just below the center thereof. Fig. 3 is a side view of a modification of the forks detached.

A is the bowl of the machine. B B are the squeeze-rolls. C is the carrier moving up and down over the inclined bed C'. This carrier is provided with pivoted teeth *c c*, and is attached by the link *e'* to the fork-head crank *e* in the ordinary manner. Instead of attaching all of the fork-heads E to a single longitudinal bar and driving the whole of them together, we divide this bar into two parts, D D, and mount upon each part one-half of the fork-heads, and attach each bar D to two cranks, *e e e⁵ e⁶*, upon the shafts *e' e' e² e²*, passing through the pipe-sleeves *d d*, one of the parts D being thus driven by the shafts *e' e'* and the other by the shafts *e² e²*, as shown.

Upon the outer ends of the shafts *e' e'* are mounted pulleys *e³ e³*, and upon the ends of the shafts *e² e²* like pulleys, *e⁴ e⁴*. The cranks upon shafts *e' e'* are so turned that the supported bar D and fork-heads E will be down, and the cranks upon the shafts *e² e²* are turned so that their supported bar D and fork-heads E will be up, and the pulleys *e³ e³ e⁴ e⁴* are all belted together. The crank *e⁵* is made considerably longer than the crank *e⁶*, and these cranks are connected to rod D by sleeves *e⁷* and *e⁸*, the sleeve *e⁷* being fast to rod D and the sleeve *e⁸* loose, so as to allow the rod to slide through it, and this arrangement causes the series of forks upon the rod to feed the wool forward

more slowly at first and more rapidly afterward, because the fork nearest the feed-in end of the bowl has the least vertical movement in being thrust down into the wool, and each of the other forks has a progressively greater movement vertically toward the squeeze-rolls. The shafts are driven from any suitable counter-shaft belted onto one of them in the ordinary manner upon the pulley *d²*. The effect of belting or gearing together the two sets of fork-heads E in this manner is that the weight of one set balances the other and equalizes the strain upon the machine.

The fork-heads E are provided with teeth *m m*, projecting downward into the washing-liquid, and carrying the wool along as the shafts are revolved. The longer the teeth are made the greater the amount of wool beneath them carried forward toward the squeeze rolls in a given time.

As the wool when it first enters the bowl at the end opposite the squeeze-rolls is dirty, it requires to move slower at first through the bowl than afterward, so as to become thoroughly soaked, to free the dirt from it. This we accomplish by making the teeth of the fork-head E next the feed-in end of the bowl shortest downward from the fork-head, and those of the next longer, and those of the third fork-head toward the squeeze-roll still longer, as shown in Fig. 3. The wool is thus at first allowed to soak more and afterward a less time under the succeeding fork teeth as it progresses toward the squeeze-rolls, while all the fork-heads are attached to the same bar and move at the same speed.

Instead of the shafts *e' e'* and *e² e²* being connected together by belting, any well-known form of gearing may be used without departing from the spirit of our invention.

What we claim as new and of our invention is—

1. In combination with the bowl A, two sets of bars, D D, each provided with fork-heads E E and teeth *m m*, and mounted upon and carried entirely by two cranks, *e e e⁵ e⁶*, the shafts *e' e' e² e²* being adapted to be revolved by a common driving mechanism, the

cranks of the shafts $e' e'$ projecting in the opposite direction from the cranks of the shafts $e^2 e^2$, substantially as described.

2. In combination with the bar D, having
5 a series of two or more rake-heads, E E, mounted thereon and provided with teeth m , the longer crank, e^3 , and its sleeve e^7 , fixed to the end of the bar nearest the squeeze-roll end of the machine, and the shorter crank, e^6 ,

and its sleeve e^8 , fitting loosely upon said bar nearest the feed-in end of the machine, substantially as described.

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Witnesses:

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