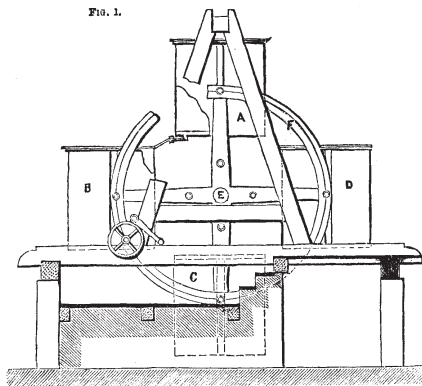


EXTRACTION OF POTASH FROM WOOL IN THE GREASE.

THE apparatus represented in the subjoined cut is the invention of Mr. H. Fischer, engineer, of Hanover, and it is claimed for it that it gives as concentrated a lye as possible, and requires little labor.

Four vats, A, B, C, D, are suspended between two rings, F, which are movable on the axis E, and oscillate freely on the axis to which they are suspended. One of the rings, F, is fitted with a toothed corona, or crown wheel, with which is connected a small crank, which is so arranged that a single laborer can set the whole apparatus in motion. In Fig. 1, it will be seen that the reservoir, A, has a false bottom, and is fitted with a cock and tube, by means of which the lye is run off into the vat B. Figs. 3, 4, 5, and 6 show the working of the apparatus. The figures placed by the side of the numerals I, II, etc., which represent water, show how many

FIG. 1.



times that same water has served to wash the wool in its passage through the apparatus; in the same manner the letters *o*, *p*, *q*, which refer to the wool, are accompanied by figures indicating how many times each portion has been already washed by the water; *o*, representing raw wool; *o*₁, wool once washed, and so on. In Fig. 6, in A, is wool already washed four times.

The operation is as follows:

1. Fill A with pure water, I₀; then, at the end of a certain time—
2. The water I₁ is turned into the vat B, and the apparatus moved till B occupies the place of A.
3. Empty A, and fill it with raw wool *o*₀; turn into vat C the water I₂, and the pure water, II₀, into B.
4. Run off the water, I₃, from C into D, and II₁ from B to C; then turn the apparatus one quarter round (Fig. 5).

5. Direct the water, I₄, from D to A on the raw wool, *o*₁, and II₂ from C to D, and turn the pure water III₀ into C; empty the vat B, and fill it with raw wool, *p*, *o*.
 6. Let off the water, I₅, from A into a reservoir; II₃ from D to A; and III₁ from C to D; then turn the apparatus for the third time (Fig. 4).
 7. The water II₄ is turned from A to B, III₂ from D to A, and D is filled with fresh water, IV₀. Discharge the exhausted wool from C, and fill it with fresh wool *q*, *o*.
 8. The water II₅ passes from B to the reservoir III₃ from A to B, and IV₁ from D to A; then the apparatus is turned for the fourth time.
 9. The water III₄ is directed from B to C on to the raw wool *q*, *o*. IV₂ from A to B, to wash the wool *p*, *o* for the third time, and, as before (see 1), pure water is turned into A on the wool *o*; D is then filled with raw wool *r*, *o*, and so on.
- The water I is thus successively in contact with the wool in the vats A, B, C, D, and A and II in B, C, D, A, B, etc., so

that the operation is repeated five times. Except for the transport of the wool, one man suffices for the work.

According to Maumné, a fleece weighing four kilogrammes contains 600 grammes of grease, in which is 198 grs. of pure carbonate of potash; and, according to data published since, 1000 kilogrammes of wool yield 140 to 180 kilos. of dry salt, or 70 to 90 kilos. of potash. Fuchs only gives 300 grammes of grease per fleece. At the wool-washing works of Döhren, near Hanover, they only get 152 kilos. of raw potash out of 5 tons of wool, and it contains 80 per cent of carbonate. In

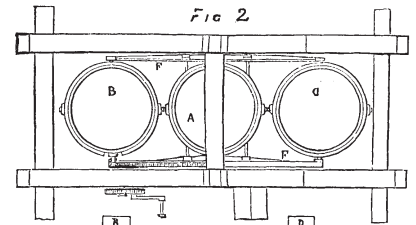
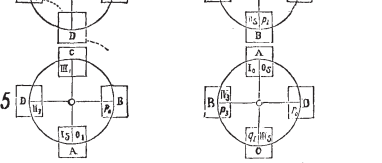


FIG 3



FIG 5



1867, Maumné & Rogeltet produced at their works at Rheims and Elbœuf 150 tons of pure potash from grease, and there are similar works at Roubaix, Antwerp, Verviers, Liège, Bruges, Hanover, Döhren and Brême.—*Textile Manufacturer.*