No. 817,930. PATENTED APR. 17, 1906.

C. NELSON.

OIL PRESS.

APPLICATION FILED OCT. 17, 1905.

Fig. 1.

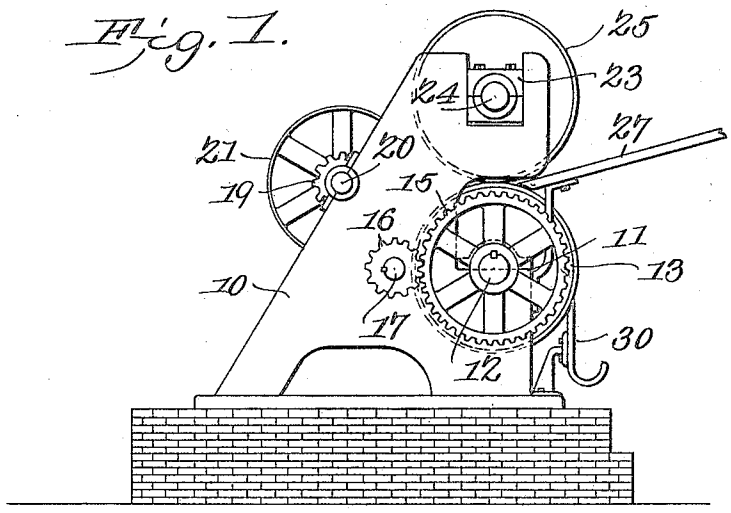



Fig. 3.

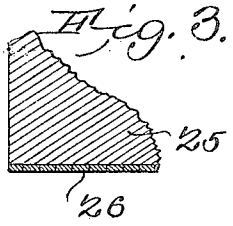
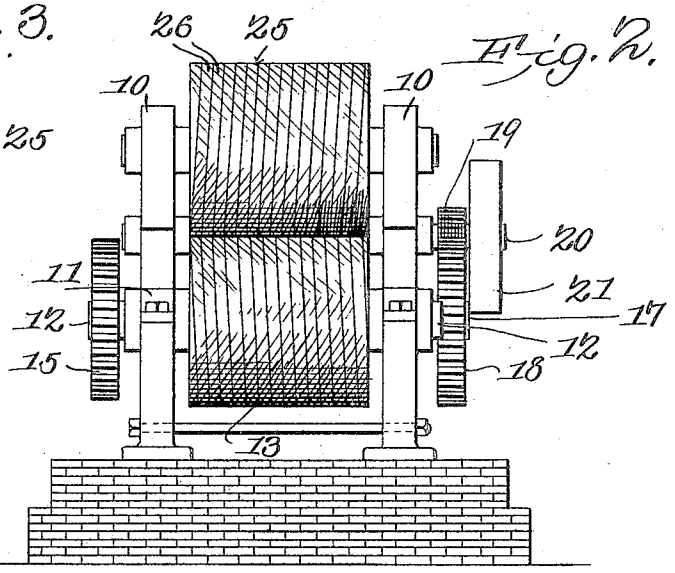



Fig. 2.




Witnesses

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# UNITED STATES PATENT OFFICE.

CHRIS NELSON, OF MEMPHIS, TENNESSEE.

## OIL-PRESS.

No. 817,930. Specification of Letters Patent. Patented April 17, 1906.

Application filed October 17, 1905. Serial No. 283,148.

*To all whom it may concern:*

Be it known that I, CHRIS NELSON, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Oil-Press, of which the following is a specification.

This invention relates to apparatus for expressing oil from cotton-seed, meat, and other material, and has for its principal object to provide a roller-press of simple construction, the meat being directed through the rolls, while the oil expressed is retained on the feeding side and runs to a collecting trough or reservoir.

A further object of the invention is to provide an improved means for expressing oil in which the meat or other material is passed between ponderous rolls, the weight of the upper roll resting directly on the material and being free to move vertically in case the feed is uneven or irregular.

A still further object of the invention is to provide a roller-press in which one or both of the rolls are covered by a suitable fibrous material to insure proper feeding of the meat.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a side elevation of a roller-press constructed in accordance with the invention. Fig. 2 is a front elevation of the rollers. Fig. 3 is a detail sectional view of one of the rolls, showing the cloth or fibrous covering therefor.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In carrying out the invention the frame or housings 10 are arranged on a suitable foundation or base and are provided with pillow-blocks 11 for the support of a shaft 12, carrying a lower roller 13, and at one end of this roller is a large gear 15, intermeshing with a pinion 16 on a counter-shaft 17. The shaft 17 carries a gear 18, that intermeshes with a pinion 19 on a main driving-shaft 20, the latter shaft also carrying a belt or gear-wheel 21, to which motion may be transmitted from any suitable source of power.

The upper portions of the housings overhang the pillow-blocks 11 and are provided with guiding-recesses for the reception of vertically-movable bearing-blocks 23, that support the shaft 24 of the upper roll 25, the latter roll being of sufficient weight to express the oil from the cotton-seed, meat, or other material without the necessity of employing screws or the like for holding it down in place. The upper roll is free to move toward and from the lower roll in accordance with the rate at which the material is fed between the rolls, and as the weight is constant the pressure will be uniform without regard to the thickness of the layer or stream of material being fed between the rolls.

The rolls, or in some instances only one of them, have a covering 26, that preferably is formed of a spirally-wound strip of cloth or fibrous material of such nature as to insure the positive feeding of the material between the rolls, and at the same time the cloth is subjected to pressure at the point of contact, so that any oil with which it may become saturated will be expressed and will not pass between the rolls with the meat.

In feeding the material an inclined table 27 is employed, the end of the table being adjacent to the point of contact with the rolls, as shown in Fig. 1, and while the meat or other material will pass between the rolls the oil or liquid expressed will be retained in front of the rolls and will flow down over the lower roll to a collecting trough or tank 30.

It is found that by the employment of the cloth, fiber, or other material with which the rolls are clothed the cloth surface advancing toward the point of contact with the rolls will at all times be saturated with the fluid, and will thus form a feeding-surface that is effective, while at the point of contact of the rolls all the oil or other liquid which cannot pass outward by reason of the meat will be forced down through the cloth and collected into the trough 30.

With a device constructed in accordance with this invention practically all of the oil may be expressed at very small cost, the oil being collected in advance of the rolls, while the dry meat passes through and beyond said rolls.

Having thus described the invention, what is claimed is—

1. In an oil-press, a pair of rolls, and means for feeding material between them, the lowermost roll having a covering of cloth or fibrous material through which the oil expressed may be forced, said cloth forming a feeding-surface for engaging the material and directing the same between the rolls.

2. In an oil-press, a frame, a pair of rolls having coverings of cloth wound helically from end to end of the rolls, the cloth serving when saturated to form a feeding-surface for engaging the material and directing the same between the rolls.

3. In an oil-press, a frame, a lower roll journaled therein, brackets carried by the frame and overhanging the lower bearings, said brackets being provided with vertically disposed guiding-recesses, bearing-boxes arranged in said guiding-recesses, an upper roll journaled in said bearing-boxes, both of the rolls having coverings of cloth or fibrous material, gearing for imparting movement to the lower roll, a feed-chute for directing the meat or other material between the rolls, and a collecting-trough arranged adjacent to the feed side of the lower roll.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHRIS NELSON.

Witnesses:
W. A. HARDWICK,
R. ED. COLLINS.