

Cane Mill.

Patented June 14, 1859.



Inventor:
Thomas Crane.

UNITED STATES PATENT OFFICE.

THOMAS CRANE, OF FORT ATKINSON, WISCONSIN.

IMPROVED SUGAR-CANE PRESS.

Specification forming part of Letters Patent No. 24,376, dated June 14, 1859.

To all whom it may concern:

Be it known that I, THOMAS CRANE, of Fort Atkinson, in the county of Jefferson and State of Wisconsin, have invented a new and Improved Machine for Expressing the Juice from Sugar-Cane and other Vegetable Substances, and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a top view of the above-mentioned machine; Fig. 2, a side elevation of the same; Fig. 3, a section in the line *x x* of Fig. 1; and Fig. 4, a section in the line *yy* of Fig. 1.

Similar letters indicate like parts in each of the drawings.

The frame of my improved machine for expressing the juice from sugar-cane, &c., may be composed of the two long beams *D E*, the parallel transverse beams *J J'*, the jointed beam *F*, and the other minor parts which are combined with said beams in the manner represented in the drawings; or the said frame may be constructed in any other manner deemed preferable by the builder. Such a shape should be given to the aforesaid frame that it will rest safely upon three supports, viz., the large wheel *A*, the small wheel *I*, and pivot-post *K*. The machinery upon the said frame should be so located as to cause the greatest portion of its weight to rest upon the large wheel *A*. Two slotted uprights, *b b*, which are connected to each other by means of bed-pieces that rest upon the transverse beams *J J'*, carry the bearing-boxes for the journals of the two pressure-rollers *B C*. The pressure-roller *B* has an elongated journal which receives upon its outer end the large wheel *A*.

The distance between the faces of the rollers *B C* may be regulated by means of the set-screw *c c*, or by any other suitable means.

The portion of the frame of the machine between the rollers *B C* and the outer ends of the beams *D E* may be covered with thin planks or slats for the reception of the cane-stalk and the operator who is to feed in the same between the said rollers when the machine is in motion; or a platform, *G*, may be placed upon the said beams for the operator to stand upon, and the cane-stalks may be supported by the cross-pieces *h h*, the rail *f*, which is secured to the inner ends of said cross-pieces, and the up-

rights *g g* from the opposite ends of said cross-pieces.

The journals of the small bearing-wheel *I* are received into apertures in a pair of lugs which descend from the oblique beam *H*, which is secured to the main beams *D E* near the outer ends of the same, or the bearings of said wheel may be connected with either of the beams *D E* in any suitable manner.

A vessel, *a*, is suspended to the parallel beams *J J'*, which is of such a size and shape that it will catch all the juice that is expressed by the rollers *B C* from any substance that may be passed between them. A tube, *i*, which is secured to the underside of the beam *F*, and which opens into the vessel *a*, conducts the fluid contents of said vessel to the annular vessel *j*, which incloses the body of the pivot-post *K*, and from this annular vessel *j* the spout *k* discharge the said fluid into a receiving-vat by means of any suitable conductor.

The perforated plate *d*, which is jointed to the beam *J* immediately in front of the roller *B*, has a sharp upper edge which bears obliquely against the periphery of said roller and prevents the accumulation of any trashy matter upon the same. The said plate *d* also serves to conduct the crushed cane-stalks, as they pass through the pressure-rollers, into the receptacle *L* which is suspended to the transverse beam *J*, and to transverse beam *m*, which is connected to the front ends of the beams *D* and *E*. The handle *e*, which rises from one end of the plate *d*, enables the said plate to be moved outwardly or inwardly, and by means of suitable weights suspended to the end of said lever the edge of said plate can be made to bear with any desired degree of force against the periphery of the roller *B*.

The pivot-post *K* may be secured to the center of the cross-arms *n n*, and the said arms may be secured in any desired position by means of pins or stakes, or the said pivot-post may be planted in the earth or secured in a fixed position in any other manner.

The clevis *p*, to which the power is applied for operating the machine, I generally combine with the front end of the beam *D*, and the outer end of the beam *F*, I generally combine with the pivot-post *K*; but this arrangement may be varied at the pleasure of the builder.

The respective operating parts of the machine may be so arranged and combined with the frame of the same that either of its three projections may be combined with the pivot-post.

Having thus fully described my improved machine for expressing the juice from cane-stalks, &c., I would observe that I do not separately claim to be the inventor of the pressure-rollers, nor do I claim to be the inventor of the arrangement of the frame by which it may be turned upon a central pivot-post; but

What I do claim, and desire to secure by Letters Patent, is—

The combination of the pressure-rollers B C, with the main bearing-wheel A, of a frame

which is so proportioned and supported that it can be rotated around a pivot-post; but this I only claim when a fluid-receiving vessel, *a*, a conducting-tube, *i*, an annular channel, *j*, and a delivery-spout, *k*, are combined with the said frame, substantially in the manner, and for the purpose herein represented and described.

The above specification of my improved machine for expressing the juice from sugar-cane signed and witnessed this 10th day of March, 1858.

THOS. CRANE.

Witnesses:

H. A. C. DURKE,
R. E. COLTON.