

J. A. HALL.

Cane-Stripper.

No. 53,818.

Patented Apr. 10, 1866.

Fig. 2.

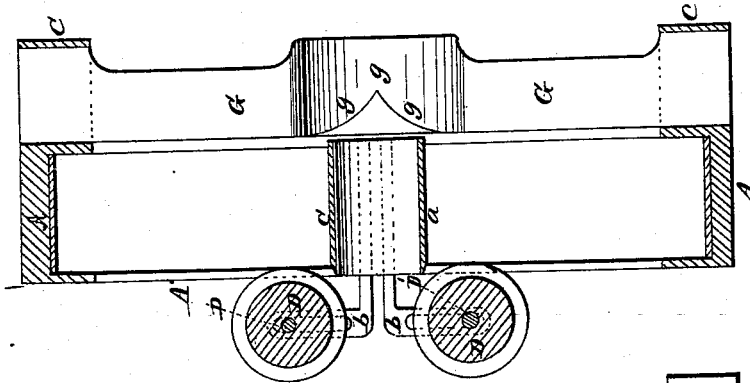
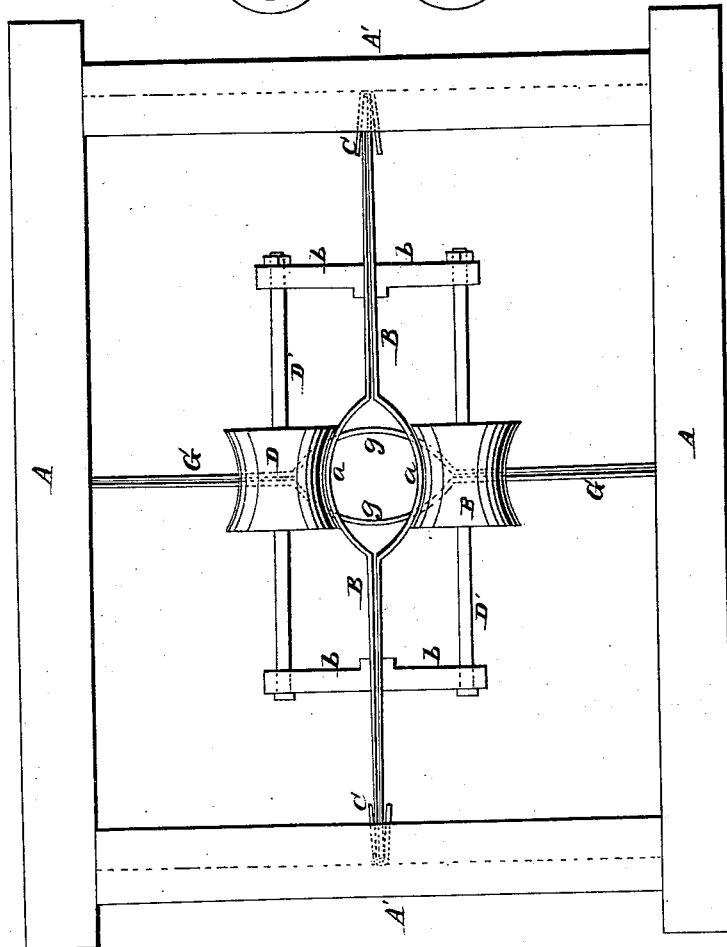


Fig. 1.



Witnesses:

R. T. Campbell
E. Schofer

Inventor:

J. A. Hall
by Atty.
Mason, Smith & Co.

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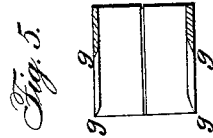
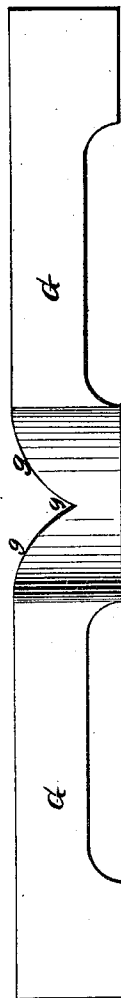


Fig. 3.



Fig. 4.



Witnesses:

B. T. Campbell
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Inventor:

Joel A. Hall
44 Allen
Main. French Hammer

UNITED STATES PATENT OFFICE.

JOEL A. HALL, OF COLUMBUS, OHIO.

IMPROVEMENT IN CANE-STRIPPERS.

Specification forming part of Letters Patent No. 53,818, dated April 10, 1866.

To all whom it may concern:

Be it known that I, JOEL A. HALL, of Columbus, in the county of Franklin and State of Ohio, have invented a new and Improved Cane-Stripper; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front view of the improved cane-stripper. Fig. 2 is a vertical central section through Fig. 1. Fig. 3 is an enlarged view of one pair of knives and their spring-holders. Fig. 4 is a view of one of the back knives. Fig. 5 is a central cross-section through the back pair of knives.

Similar letters of reference indicate corresponding parts in the several figures.

This invention is intended for stripping the leaves from cane-stalks during the operation of feeding them to the crushing-mill.

It consists in arranging curved knives in pairs in a suitable frame in such manner that these knives will be pressed against the stalks by their own elasticity, and so that they shall yield and accommodate themselves to stalks of different sizes, as will be hereinafter described.

It also consists in constructing the cutting portions of the knife-blades in such manner that they will shave off the leaves close to the eyes of the stalks without cutting into the stalks, as will be hereinafter described.

It also consists in providing the yielding knives with feed-rollers which are adjustable, so that they can be set at any required distance apart, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The frame for supporting the cane-strippers consists of two horizontal beams, A A, and two vertical beams, A' A', which are suitably secured together. This frame may be applied permanently to the frame of a cane-mill, or it may be an independent frame, to be applied to or removed from a cane-mill at pleasure.

B B are two knife-blades of a suitable width and length, and *a a* are the cutting portions of these blades, which portions are curved, as shown in the drawings, to allow cane-stalks

to enter between them, and their cutting-edges are produced by beveling the edges of the blades, as shown in Fig. 2. These blades B B are held together at their extremities by means of V-shaped plates C C, which are partially inserted into the vertical beams of the frame, as shown in Fig. 1. These plates C C may be cast or they may be made of steel in such manner that they will hold the blades together by an elastic pressure and allow the blades to open and close as the cane is drawn between their curved cutting portions. The blades may be made thicker at the middle of their length than at their ends, as I have shown in the drawings, so that they will spring apart and come together again, according to the thickness of the cane passed between them. By thus constructing and arranging the horizontal blades B B they will press upon the stalks by their own elasticity, combined with that of the spring-holders C C, and accommodate themselves to the varying thickness of the stalks passed between them without the necessity of employing springs and guides, as described and shown in my patent of 1865 for a cane-stripper.

D D are two grooved rollers, which are arranged in front of the curved cutting portions of the blades B B, and which turn freely upon rods D' D', that have their bearings in arms which are secured to said knife-blades.

The arms *b b* are slotted vertically, so that the rods D' D' can be adjusted according to the distance at which it is desired to have the rollers D D apart. The curved surfaces of these rollers conform somewhat to the curved cutting portions of the blades B B, and they are used for guiding the stalks of cane between the knives. The bearings of these rollers being upon the knife-blades B B, it is obvious that these rollers will open and close in conformity with the movements of the knives.

In rear of the blades B B are two vertical blades, G G, the curved cutting portions *g g* of which are intended for stripping the leaves from those sides of the stalks which do not pass the cutting-edges of the knives *a a*. These blades G G are held together at their extremities by means of loops or flat staples *c c*, so that when they are spread apart in the center they will exert an elastic pressure

upon the stalks sufficient to cause the cutting off of the leaves or blades of the cane near the eyes.

The cutting-edges *g g* are curved, as shown in Figs. 2 and 4, and they are beveled, as shown in Fig. 5, the object being to prevent the stalks from being cut and to insure the complete severing of the leaves.

If desirable the front cutting-edges, *a a*, may be made of the curved or *V* form shown in Figs. 2 and 4.

By my improvement I obviate the necessity of employing guides and springs, and obtain all the elasticity and movement required from the flexure of the knife-blades themselves.

The back knives, *G G*, may be confined between elastic or non-elastic *V*-shaped holders, as described for the front knives.

I do not claim anything in this present ap-

plication which is claimed or described in my patent of August 8, 1865.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Securing the stripping-knives together in pairs by means of elastic or non-elastic holders *C C*, applied to their extremities, substantially as described.

2. The construction of the cutting portions of the knife-blades *G G* with curved edges *g g*, substantially as described.

3. Providing for adjusting and setting the guide-rollers *D D* nearer or farther from each other, said rollers being applied to the elastic knife-blades, substantially as described.

Witnesses: JOEL A. HALL.

JOHN BROWN,
C. BARTLING.