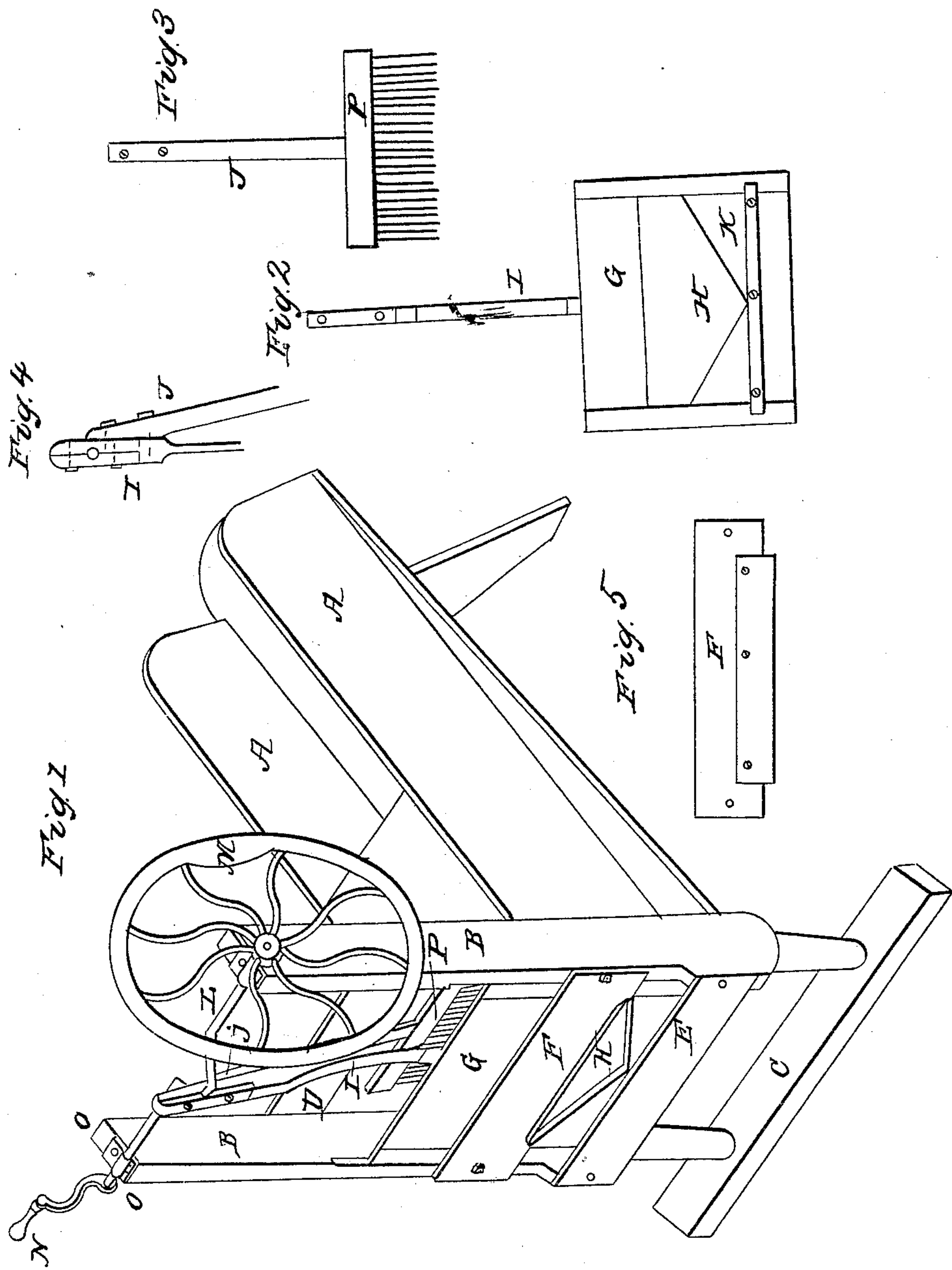


J. J. PARKER.

Straw Cutter.

No. 10,112.

Patented Oct. 11, 1853.



UNITED STATES PATENT OFFICE.

J. J. PARKER, OF MARIETTA, OHIO.

STRAW-CUTTER.

Specification of Letters Patent No. 10,112, dated October 11, 1853.

To all whom it may concern:

Be it known that I, J. J. PARKER, of Marietta, Washington county, Ohio, have invented a new and useful Improvement in Straw-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a perspective view. Fig. 2, is a view of the reciprocating gate together with the pitman, shows also the steel and the lifting strip or cleaner. Fig. 3 is a view of the rake and handle. Fig. 4 shows the connection of the rake with the pitman, also the hole in which the wrist to the yoke crank works at the upper end of the pitman. Fig. 5 is a transverse view of the knife board and knife attached.

A, A in Fig. 1 represents the feeding trough.

B, B in Fig. 1 represents the posts to which the trough is suspended fastened together by the sill C and cross piece D.

C, in Fig. 1 represents the sill.

D in Fig. 1 represents the cross piece attached to the posts B, B, to strengthen the machine.

E in Fig. 1 is the gage board that gages the length of the straw cut and is fastened to aforesaid posts B and B.

F in Figs. 1 and 5 is the knife board secured to posts B and B by means of two wooden or metal bur screws and is made to press the knife against the iron and steel plate in such a way as to obviate wear of plate or knife.

G, in Figs. 1 and 2 is the reciprocating gate to which the steel or iron plate is attached.

H, in Figs. 1 and 2 represents a plate of iron or steel made in a V shape and secured to said gate by means of screws, said plate of iron or steel extending up the sides of the gate as far as the gate moves on the knife.

I, in Figs. 1, 2 and 4 represents the pitman made of some elastic wood or metal.

J, in Figs. 1, 3 and 4 represents the rake handle attached to the pitman.

K in Fig. 2 represents a strip of wood or metal placed across the reciprocating gate just below the edge of the steel or iron plate.

L in Fig. 1 is a shaft.

M in Fig. 1 is a fly wheel.

N in Fig. 1 is the handle.

O, O in Fig. 1 are the caps to secure in place the shaft.

P in Figs. 1 and 3 represents the rake.

My straw cutter is constructed as follows:

The trough in which the straw is placed is eleven inches wide and eight inches deep and three and one half feet long (the dimensions may be varied). One end of this trough (being the end opposite the knife) is supported by a leg and is higher than the other giving an inclination toward the knife. The other end is placed between two upright posts, one of which is fastened by nails or screws to each side of the trough.

The feet of the posts are inserted in and held to their places by a slip of wood inches long $2\frac{1}{2}$ inches wide and 2 inches thick. Above the trough the posts are bound together by a slip of wood nailed or screwed to them, they are three feet eight inches high. The end of the box is placed back one inch or more from the front side of the posts. At the top of the box and extending across the end of the box and fastened to the front of the posts by screws is a board to which is attached with its edge down a steel knife stationary. In front of the end of the box with its upper edge about an inch below the edge of the knife and fastened to the posts in such a way as to leave its inner surface a distance farther forward than the knife, equal to the length to which the straw is to be cut is a gage board, against which the end of the straw strikes as it is forced down along the trough under the knife. On the top of the posts and across them is an iron shaft of one inch in diameter with the two ends projecting slightly beyond the outside of the posts.


Upon an end of this shaft is an iron balance wheel about two feet in diameter (but may be of any desirable size) with a counter balance or weight on one side, upon the other end is a crank by which the shaft is turned. In the middle of the shaft is a yoke crank of three inches in length describing a circle upon the revolution of the shaft six inches in diameter. To this crank is attached a wooden or metal pitman two feet in length, eight inches of which next the crank is $1\frac{1}{4}$ by 2 inches in size and the remainder retaining its full width is reduced to a thickness not exceeding $\frac{1}{8}$ or $\frac{1}{4}$ of an inch and is of tough elastic wood. To the lower end of the pitman is

attached a gate composed of four pieces of wood, each one inch thick, the two side pieces about $1\frac{1}{2}$ inches wide and the two horizontal pieces about 3 or 4 inches wide.

5 This gate may be made of metal of any desirable thickness. The reciprocating gate to which the iron or steel is attached moves up and down between the posts and against the ends of the box or trough or in rabbets,

10 formed in the posts and is held to its place by means of the knife against the steel or iron plate.

The knife is cleaned by the upper horizontal piece passing close along the inner surface of the knife at every descent of the gate. The side pieces of the gate are eleven inches apart (or any distance to correspond with the width of the trough). And the lower horizontal piece in the gate is cut

20 down from the sides toward the middle in this shape  to which is attached the steel or iron plate by screws, having the outer surface or edge made straight and smooth. This plate upon the ascent of the

25 gate meets the knife in a manner similar to the meeting of the two edges of a pair of shears. The gate being attached to the crank in the middle of the shaft by means of the pitman is raised and depressed by

30 the revolution of the shaft sufficient lateral play being given to the upper end of the pitman by means of the elasticity of the lower ends. The straw being placed in the trough is forced toward the lower end and

35 the gate being depressed the straw passes through till the ends of it strike the gage board. The shaft continuing to revolve the gate is carried up and the straw being carried up with it upon the steel plated cross

40 piece is cut off by the knife and the shaft continuing to revolve the gate is depressed

and the straw again is pressed forward against the gage board. Attached to the gate below the steel plate is a strip of wood or metal which when the gate is raised lifts 45 the outer end of the straw up thereby assisting the cut, preventing any being left turned down and also throws the cut straw from behind the gage board, thereby acting as an assistant in cutting and a cleaner for the 50 gage board.

To force the straw down the trough, a rake of the proper dimensions is provided, with a handle which is fastened to the upper and inelastic portion of the pitman in such 55 a manner as to diverge slightly from it. The revolution of the shaft gives the rake motion in an ellipsis, so that whenever the gate descends the rake is forced down into the straw and forces the straw down 60 through the gate under the edge of the knife.

The construction of my cutter is simple and the operation is plain. The operator places the straw, hay, or fodder in the trough and turns the shaft, the reciprocating gate passes up and down and at each 65 descent the straw is forced down through the gate under the edge of the knife by the action of the rake and at the ascent of the gate the straw is cut, thus making a cut at 70 every revolution of the wheel and shaft.

What I claim as my invention and desire to secure by Letters Patent, is—

Operating both the reciprocating gate and the feeding rake by means of the compound 75 spring pitman, substantially as herein set forth.

J. J. PARKER.

Signed in presence of—

A. FULLER,
GEORGE M. WOODBRIDGE.