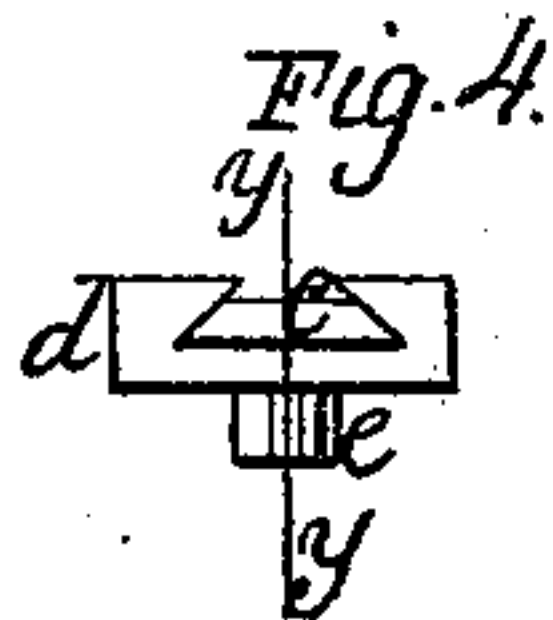
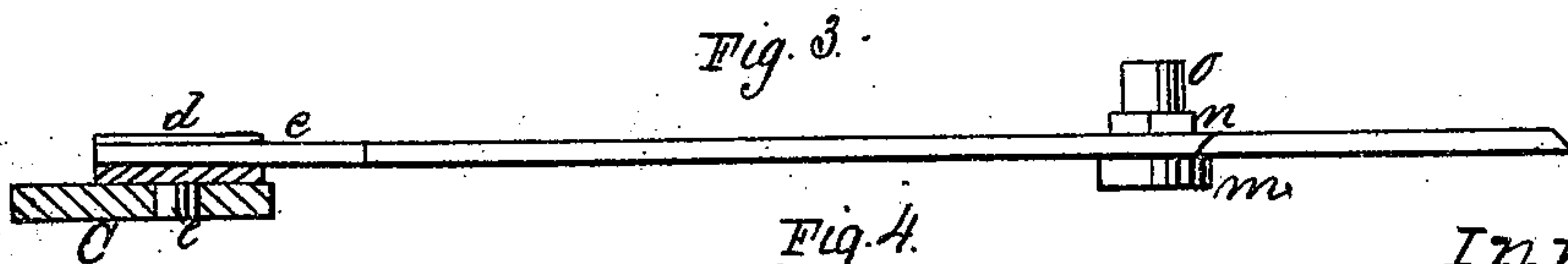
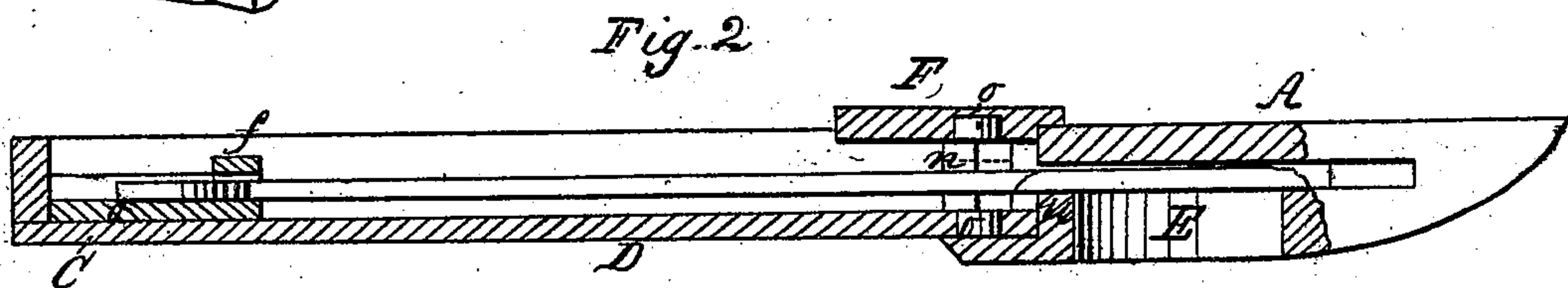
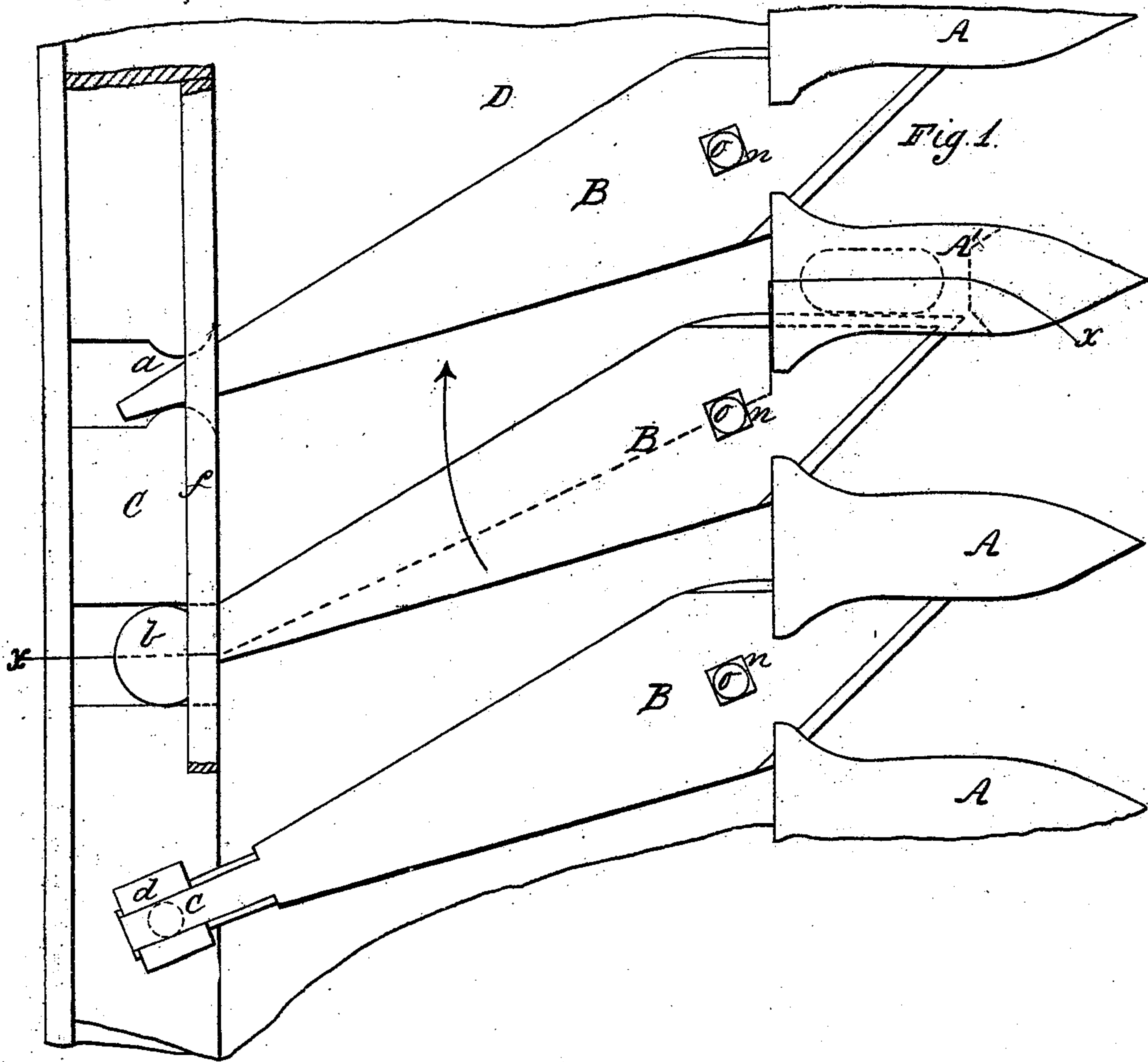


J. M. Taft.

Harvester Cutter.

Nº 96503

Patented Nov. 2, 1869.



Witnesses.
L. Hailer.
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Inventor
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by Dodge & Munroe
his attys.

United States Patent Office.

JAMES M. TAFT, OF ARCADIA, WISCONSIN, ASSIGNOR TO HIMSELF AND WILLIAM FRY, OF WINONA, MINNESOTA.

Letters Patent No. 96,503, dated November 2, 1869.

IMPROVEMENT IN HARVESTER-CUTTERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES M. TAFT, of Arcadia, in the county of Trempealeau, and State of Wisconsin, have invented certain new and useful Improvements in Reapers and Mowers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention relates to the sickles or cutting-devices of reaping and mowing-machines; and

It consists in a novel manner of pivoting and operating the separate teeth or blades of the sickle, and in constructing the fingers with an opening through their front under portions, whereby they are rendered lighter, and less liable to become clogged.

Figure 1 is a top plan view of a portion of a sickle, ready for operation;

Figure 2 is a longitudinal section, on the line $x x$ of fig. 1; and

Figures 3 and 4 are views of portions shown more in detail.

In constructing my improved cutting-apparatus, I provide a metallic plate, D, which is secured firmly to the front of the platform of the machine, and to the front edge of this plate D, I bolt the fingers A, as shown in figs. 1 and 2.

These fingers A are constructed in the usual manner at their front ends, but are curved on their sides or edges, being made considerably wider at their rear portions, as represented in fig. 1.

Through their lower part an elongated opening, E, is made, as shown in fig. 2, and as indicated by the dotted lines in fig. 1, at A.

By means of this opening, the finger is made lighter, and, at the same time, is rendered less liable to become gummed up or clogged, as the gum, and whatever else works into it, or between it and the blades B, has a chance to work out through the opening E.

The sickle consists of a series of separate blades, B, the front ends of which are pointed like a spear-head, and bevelled on their upper surface, so as to form a sharp cutting-edge on each side, as represented in fig. 1, that portion of the blades, back of the pivots on which they vibrate, being made three or four times as long as the front or cutting-portion.

These blades, instead of being pivoted on a bolt in the usual manner, are each provided with a square hole, into which is fitted a short bolt or pin, which has a square body, n , with a round journal, o , projecting above and below, as shown more clearly in fig. 2,

these rounded ends or journals fitting below into suitable holes in the plate D, and above into similar holes in a bar, F, secured in position, as shown in fig. 2.

By this method of pivoting the blades, I secure two bearings for the journals, thereby dividing the friction, and throwing it upon two points instead of one, and thus prevent the cutting or wearing away of the pivot, as occurs where the thin steel blade turns loosely on the pin, as these devices have heretofore been made.

The pivot-pins n are intended to fit snugly, but not tight, in the blades B, so that whenever it is desired to remove a blade for sharpening, or for any other purpose, the pin is taken out, and the blade then withdrawn.

If preferred, the pins may be made with a head, m , as shown in fig. 3, for the purpose of supporting the blade, and preventing its cutting-edge from dropping down and coming in contact with edge of the finger, the head m fitting into a suitable recess in the plate below, the same as the lower journal o does when the head m is not used.

When this is not used, washers may be placed on the pin, under the blade, to hold it up, or the heel of the finger may be slightly raised at the point indicated by u in fig. 2, which will serve the same purpose.

To operate these blades, I secure their rear ends to a reciprocating bar C, by either of the three plans shown in fig. 1.

In the first, the rear end of the blade B is made narrow, and rests in a recess in the bar C, the sides of this recess being curved, as shown at a , so that as the bar moves to and fro, the end of the blade B shall have a constant bearing on these curved sides, on which it will have a partially-sliding and partially-rolling movement, thus presenting a large wearing-surface, while, at the same time, but small portions are in contact at any one time.

The second plan is but a modification of the same idea, the principle being the same. In this case, the recess in the bar C has its bearing sides made straight, and the end of the blade formed into a rounded head, b , the curve, in this case, being formed on the blade, instead of on the sides of the recess, as in the other.

In the third case, the rear end c , of the blade B, is made straight, and of uniform width, for some little distance, its edges being bevelled so as to fit a dovetailed groove, formed in the upper surface of a block or plate, d , as represented in fig. 4, this plate d having a journal, e , projecting from its lower side, by which it is journaled to the bar C, as represented in fig. 3.

The plate d , of course, will always be in line with the blade, it turning on its journal e , as the bar C

moves to and fro; the part *c* of the blade at the same time sliding back and forth in the dovetailed groove.

By this improvement, I overcome the difficulties that have hitherto prevented the use of this style of cutters, and produce a device that works perfectly, and with but very little friction.

Having thus described my improvement,

What I claim, is—

1. The cutting-blades *B*, constructed as described, and pivoted on the detachable pins, having a square

body, and journals at each end, said pin being held in place by the bar *F* and plate *D*, all substantially as herein set forth.

2. The block *d*, pivoted to the reciprocating bar *C*, and having the dovetail recess, for the reception of the end of the cutting-blade, as herein described.

JAMES M. TAFT.

Witnesses:

WM. FRY,

J. D. FLEISCHER.