

S. W. Tyler.
Harvester Cutter.

N^o 23413

Fig. 2

Patented Mar. 29, 1859.

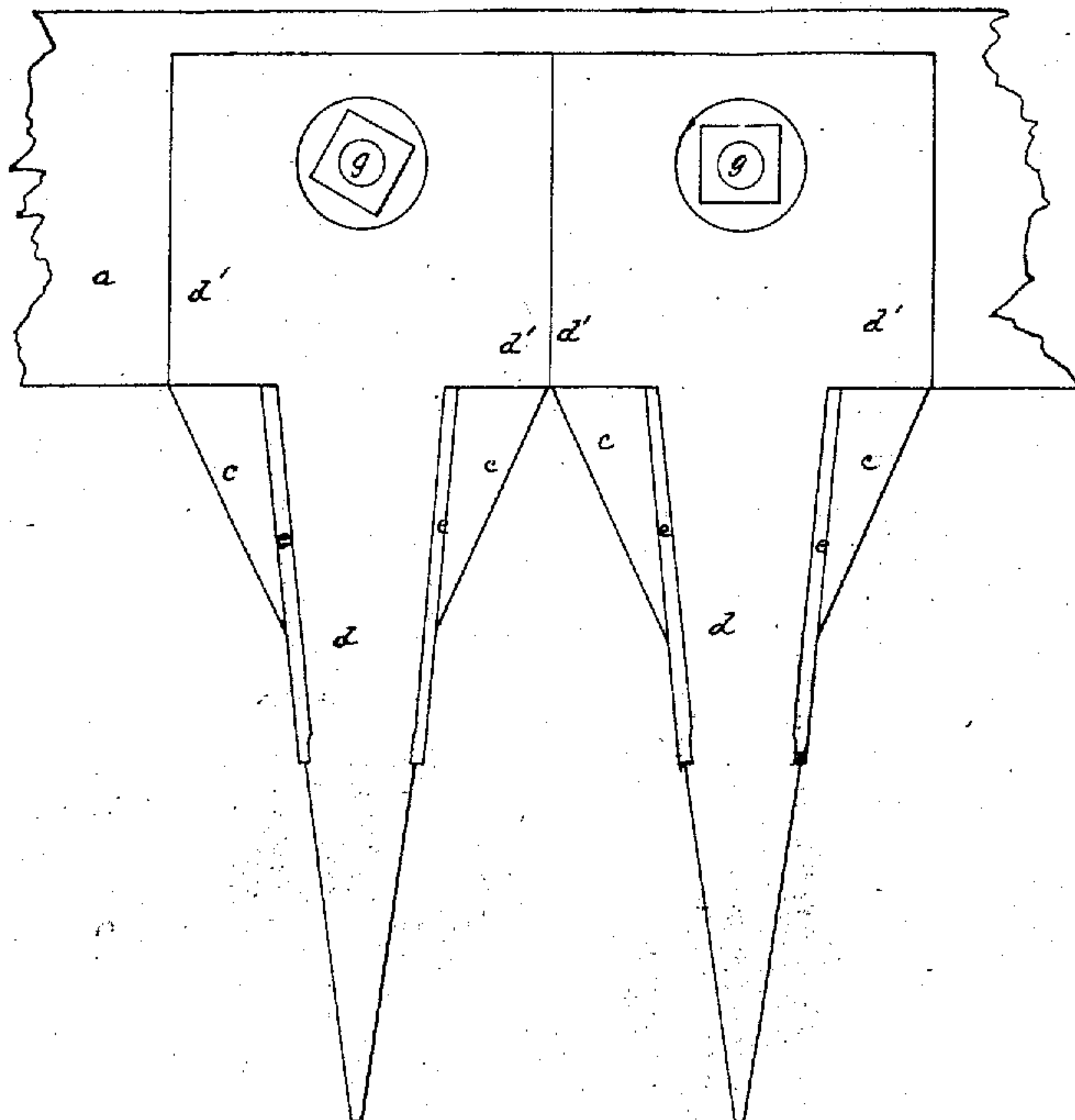
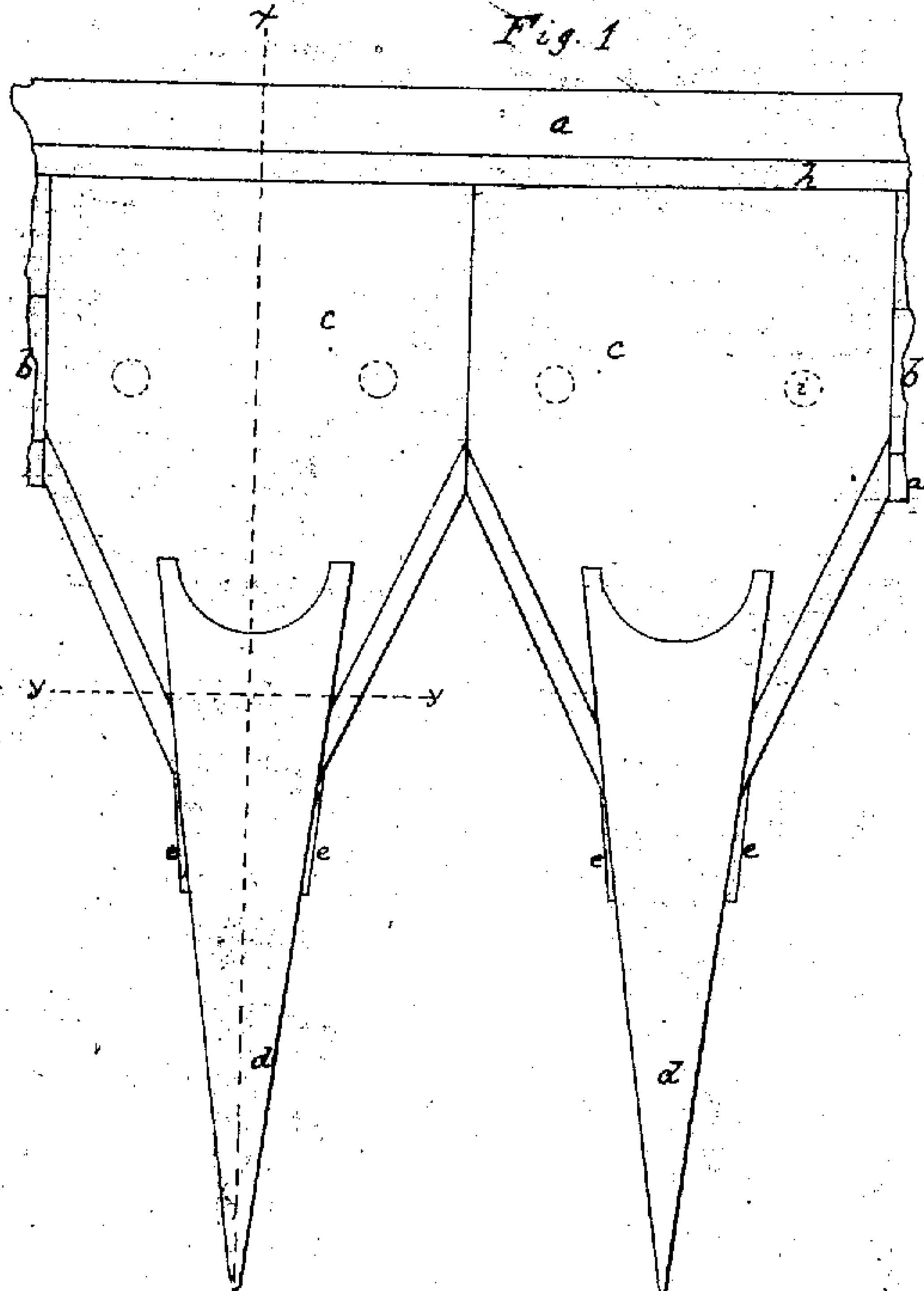


Fig. 1



Witnesses

Leroy Waller
J. M. White

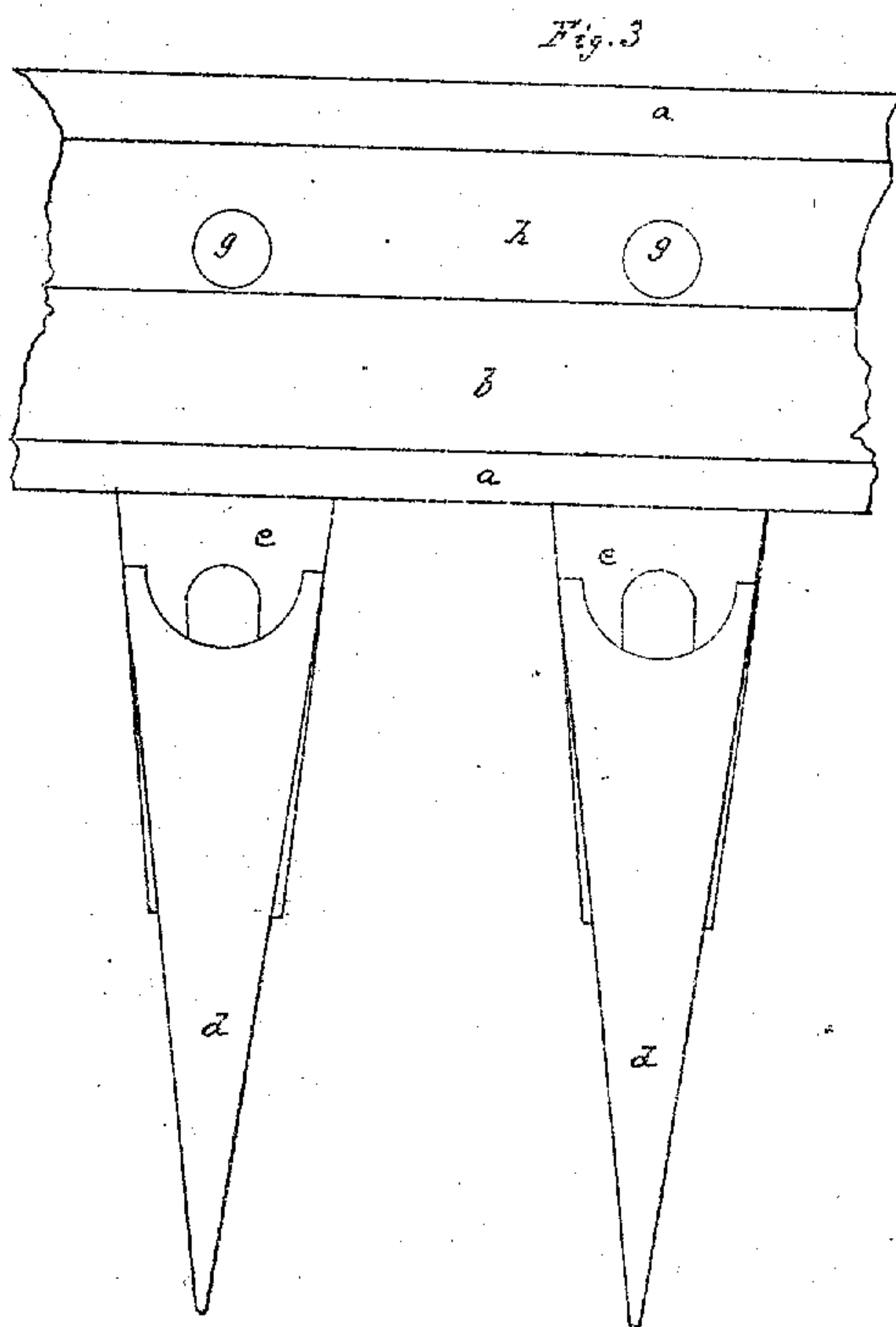
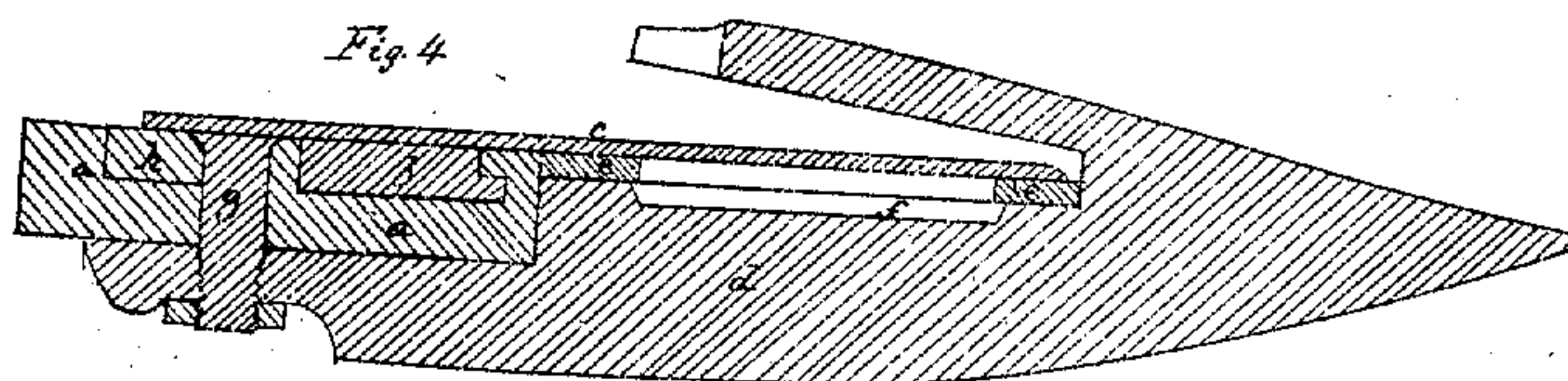
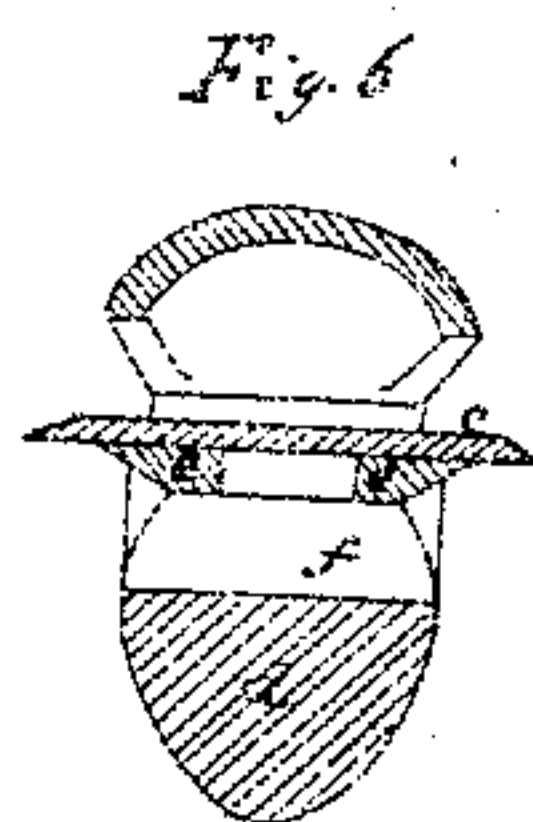
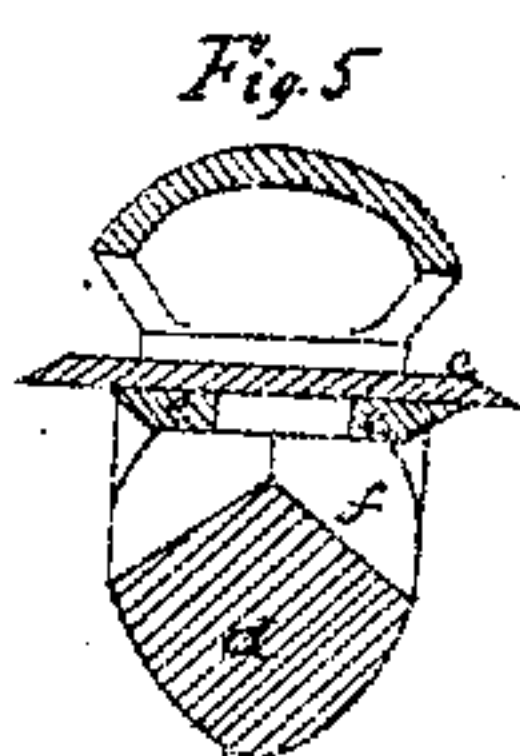
Inventor

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UNITED STATES PATENT OFFICE.

SAMUEL W. TYLER, OF GREENWICH, NEW YORK.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 23,413, dated March 29, 1859.

To all whom it may concern:

Be it known that I, SAMUEL W. TYLER, of Greenwich, in the county of Washington and State of New York, have invented a new and useful Improvement in the Cutting Apparatus of Harvesting-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification—

Figure 1 being a top view of a broken section of the said cutting apparatus; Fig. 2, a view of the under side of said section; Fig. 3, a top view of a portion of the finger-bar detached from the cutter-bar; Fig. 4, a section in the line *xx* of Fig. 1; Fig. 5, a section in the line *yy* of Fig. 1; and Fig. 6 is a section through the same line, representing a slightly different shape of the finger *d*.

Similar letters indicate like parts in each of the drawings.

My improvement in the cutting apparatus of harvesting-machines consists in giving such a shape to the cast and wrought portions of the finger-bar and to the flanged portions of the fingers which are combined therewith that the same set of rivets will unite all the said parts with each other into a fingered bar of unusual stiffness and strength, and at the same time form a dovetail groove for the reception and guidance of the cutter-bar.

My improved finger-bar is composed of a recessed portion, *a*, of cast-iron, united to bar *h*, of wrought-iron, by the same bolts, *g g*, which combine the broad flanged heads *d' d'* of the fingers with the under surface of the said bar *a*, as shown in Figs. 2 and 4. The said wrought-iron bar *h* being let into the recess in the upper surface of the cast portion *a* of the finger-bar, and being connected with the continuously-adjointing heads of the fingers on the under surface of the said cast-iron portion of the finger-bar, produces by the said combination a fingered bar of the requisite strength and stiffness when made of only about one-half the usual width given to the finger-bars of harvesters. A lateral channel is formed in the front side of the recess in the cast portion *a* of the finger-bar, which channel receives a projecting lip of corresponding shape formed on the front edge of the sliding cutter-bar *b*,

while the after edge of the said cutter-bar fits accurately against the forward edge of the wrought bar *h* of the finger-bar. The upper edge of the cutter-bar *b* is flush with the upper edge of the wrought portion *h* of the finger-bar, and also with the upper surface of the lip which rises from the front edge of the cast portion *a* of said finger-bar. The reciprocating cutting-plates *c c* are combined with the cutter-bar *d* by means of countersunk rivets; but they may be combined with the said bar by any other suitable means. The lateral edges of the reciprocating cutter-blades *c c* being in close contact with each other, and the under surfaces of said blades being in close contact with the upper surface of the finger-bar, it will be perceived that the entrance of any trashy matter beneath the said cutter-blades to clog or obstruct the movements of the cutter-bar *b* is entirely prevented.

The non-reciprocating cutter-blades *e e* may be combined with the fingers *d d* by placing the said blades in the finger-molds previous to pouring the melted iron into the same; or the said blades may be combined with the fingers in any other suitable manner.

The recess in each finger beneath the slit in the cutter-blade, which is combined therewith, may be of either of the shapes represented in the drawings; or a slot may be formed in each finger, in lieu of the said recess, for the purpose of allowing the trashy matter which may pass through the slots in the cutter-blades to freely discharge itself.

The continuously smooth and unobstructed upper surface of the series of reciprocating cutter-blades, taken in connection with the exceedingly narrow finger-bar upon which they are operated, enables the cut grass to so freely discharge itself therefrom that it is not necessary to use a reel with this machine when it is used for the harvesting of grass.

I shall sometimes employ steel or brass instead of wrought-iron for the portion *h* of the finger-bar.

Having thus fully described my improvements in the cutting apparatus of harvesting-machines, what I claim therein as new, and desire to secure by Letters Patent, is—

Giving such a shape to the portions *a* and *h* of the finger-bar and to the flanged portions

or heads of the fingers *d d* that the same set of rivets will unite all the said parts with each other into a fingered bar of unusual stiffness, strength, and narrowness, and at the same time form a dovetail groove for the reception and guidance of the cutter-bar, substantially as herein set forth.

The above specification of my improvement in harvesting-machines signed and witnessed this 6th day of October, 1858.

S. W. TYLER.

Witnesses:

Z. C. ROBBINS,

J. QUINCY ADAMS.