

C. Bilharz,

Stump Elevator.

No. 104,692.

Patented June 28, 1870.

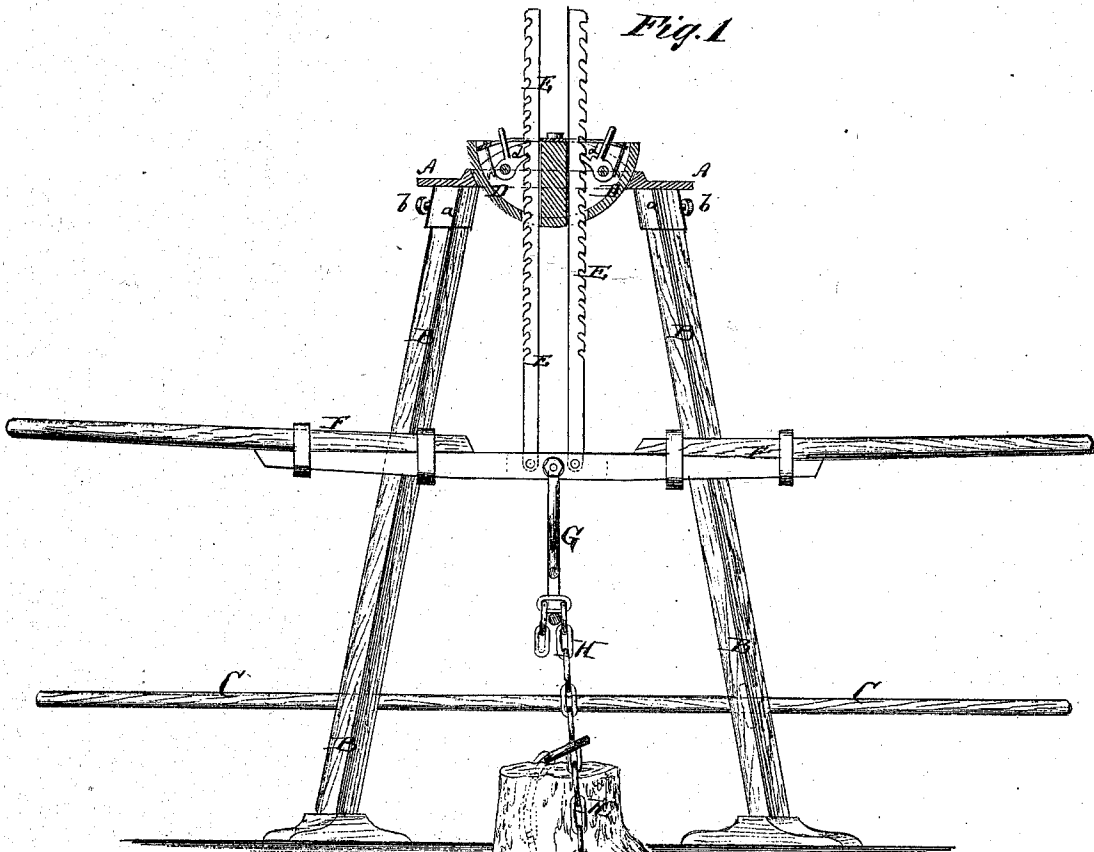


Fig. 1

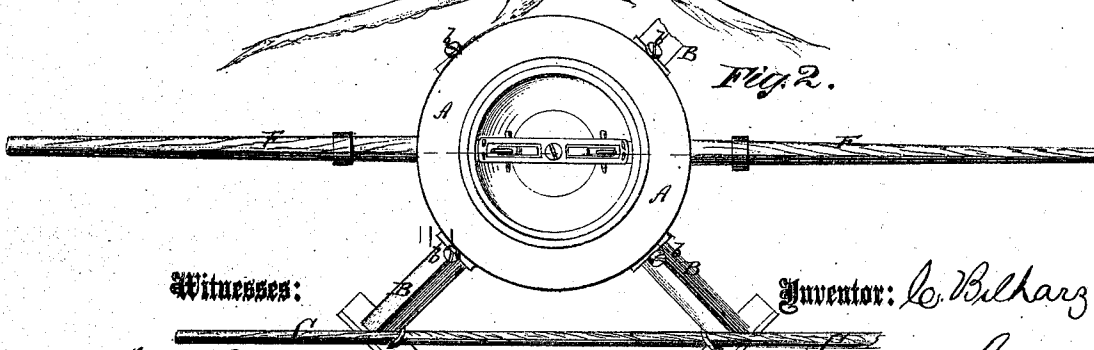


Fig. 2.

Witnesses:

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CANDIDUS BILHARZ, OF PITTSYLVANIA COURT HOUSE, VIRGINIA.

Letters Patent No. 104,692, dated June 28, 1870.

## IMPROVEMENT IN STUMP-EXTRACTORS.

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, CANDIDUS BILHARZ, of Pittsylvania Court House, in the county of Pittsylvania and State of Virginia, have invented a new and improved Stump-Extractor; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a side elevation, partly in section, of my improved stump-extractor.

Figure 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a stump-extractor which will be yielding during operation, so that it will not require a change of position, if, by the weight of a stump, one side should draw heavier than the other.

The invention consists, chiefly, in suspending the entire operating apparatus from a semi-spherical yoke, which rests upon a perforated plate, so as to be swiveled thereon. The entire apparatus can thus swing with the yoke, to be yielding in every direction.

A, in the drawing, represents the supporting-plate of my improved stump-extractor.

The same rests upon four, more or less, legs B B, which are, with their upper ends, fitted into sockets *a a*, that are provided for them on the plate A, screws or pins *b* serving to lock said legs to the sockets.

C C are handles formed on the legs B for the purpose of facilitating the removal of the apparatus.

These handles are made in form of bars, held in eyes *c*, that project from the legs B.

D is a semi-spherical plate or block, large enough to rest in the circular opening of the plate A, and provided with two spring pawls *d d*, which lock and support the two toothed bars E E of the elevating apparatus.

The lower ends of the bars E are pivoted to the working-lever F. Their upper parts enter the plate or yoke D, and are suspended from the same by the pawls. As the lever F is rocked, it will also cause the yoke to rock, in case the weight should not draw exactly in the middle.

The yoke will readily rock on the plate A, and will allow the bars E and lever F to rock with it. Thereby, if the stump pulls heavier on one side than the other, the moving of the whole machine will be unnecessary.

From the lever is suspended a clevis, G, in which the chain H can be readily locked. The use of the hooks on the chain is thereby dispensed with, as the latter may be merely dropped, with any desired link, into the clevis, and will be, at once, properly held.

The yoke may be flattened at the lower part, and need not be a full hemisphere; it can be somewhat smaller, if desired.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The semi-spherical yoke D, supported by the perforated plate A, so that it may rock upon the same, as set forth, for the purpose of making the elevating apparatus yielding, as specified.

CANDIDUS BILHARZ.

Witnesses:

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