(No Model.) 2 Sheets—Sheet 1.

M. HARDSOCG.

MINING MACHINE.

No. 493,381. Patented Mar. 14, 1893.

Fig. 1

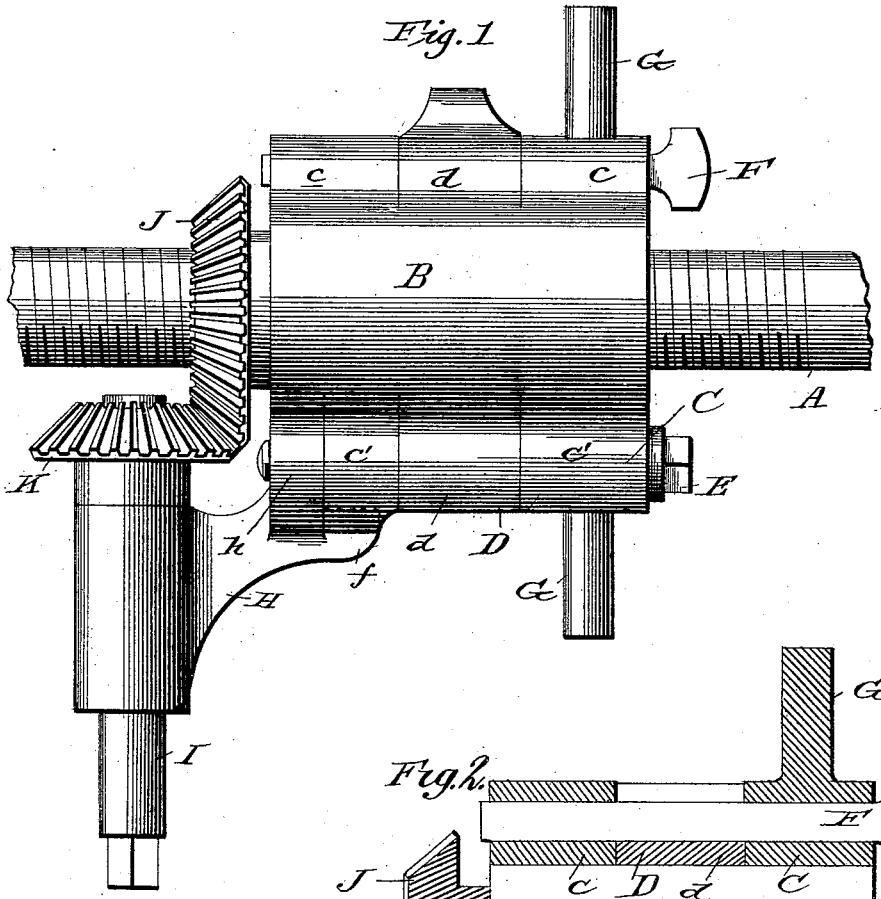
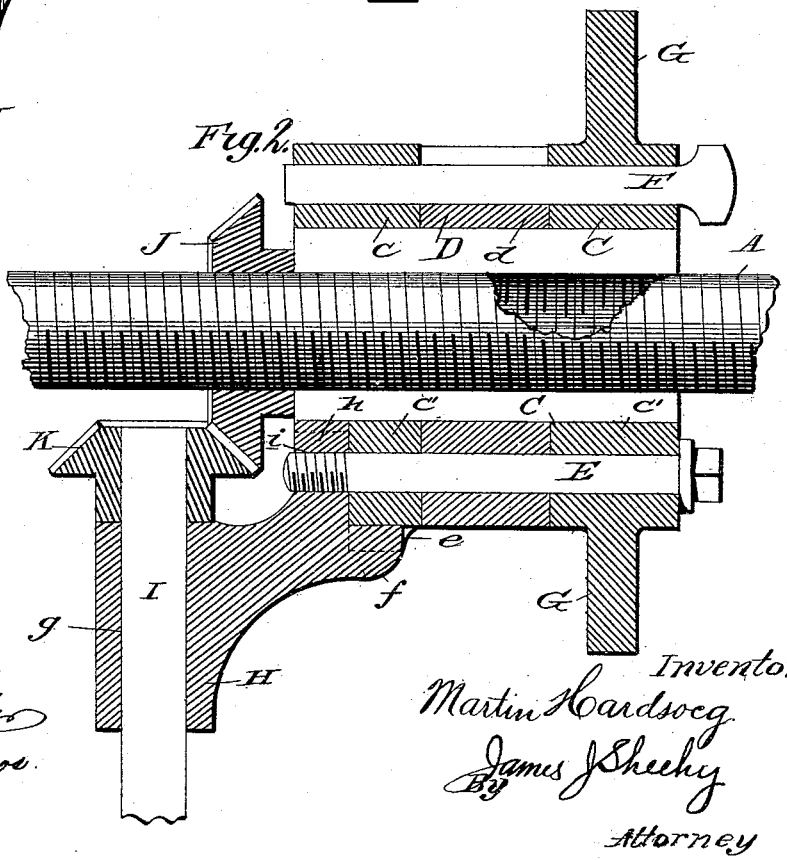


Fig. 2.



Witnesses.
C. F. Raeder
W. F. Matthews.

Inventor
Martin Hardsocg.
by James J. Sheehy
Attorney

(No Model.) 2 Sheets—Sheet 2.

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MINING MACHINE.

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Fig. 3.

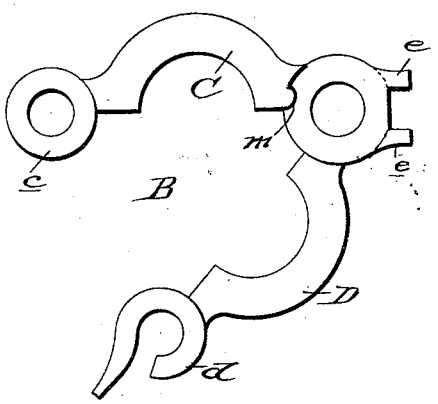
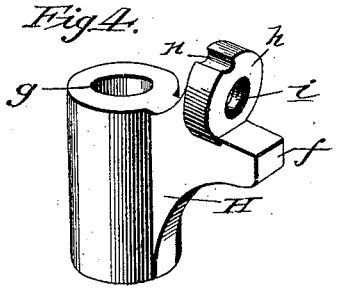


Fig 4.



Witnesses:
C. H. Raeder
K. F. Matthews.

Inventor
Martin Hardsocg
By James J Sheehy
Attorney

UNITED STATES PATENT OFFICE.

MARTIN HARDSOCG, OF OTTUMWA, IOWA.

MINING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 493,381, dated March 14, 1893.

Application filed December 24, 1892. Serial No. 456,243. (No model.)

To all whom it may concern:

Be it known that I, MARTIN HARDSOCG, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Mining-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in mining machines and it consists in the peculiar construction, certain novel combinations, and the adaptation of parts hereinafter described and particularly pointed out in the claims appended.

In the accompanying drawings: Figure 1, is a plan view of the boxing and adjacent parts of a mining machine illustrating my invention. Fig. 2, is a diametrical section of the same. Fig. 3, is an end view of the boxing with the sections thrown apart, and: Fig. 4, is a perspective view of the detachable bracket arm for supporting the lateral crank shaft.

Referring by letter to said drawings: A, indicates the threaded feed bar of a mining machine, which may be of any approved construction, and B, indicates my improved boxing which is interiorly threaded, and is designed to receive and support the feed bar. This boxing B, comprises two sections C, D, which are provided upon their opposite edges with barrel projections *c*, *c'*, and *d;* the projections *c*, *c'*, of the section C, being designed to receive the projections *d*, of the section D, between them when the sections are placed together, so that the several projections will rest in alignment and will form bores for the reception of the hinge bolt E, and the removable pin F, which latter is designed to normally retain the sections in their closed position around the feed bar as will be presently described.

As better illustrated in Fig. 2, of the drawings, the section C, of the boxing is provided with lateral trunnions G, which are preferably arranged at a point adjacent to one end of the boxing and are designed to be journaled in the ordinary or any approved support, so that the boxing and the feed bar may be adjusted to work in various positions.

The barrel projection *c'*, of the boxing section C, which is preferably arranged at about the proportional distance illustrated from the end of said section and is designed to receive the hinge bolt E, as shown, is provided upon its outer side with two longitudinally disposed, parallel lugs *e*, which are designed to receive the shoulder *f*, of the bracket arm H, when said arm is placed in position upon the boxing. This bracket arm H, is provided with a laterally disposed bore *g*, as shown, which is designed to form a bearing for the crank shaft I, and the said bracket arm is also provided with a disk *h*, which is designed to rest upon the projection *c'*, and is provided with a threaded aperture *i*, for the engagement of the threaded end of the hinge bolt E, through the medium of which the bracket arm is connected to the boxing.

Formed upon the inner edge of the boxing section C, between the projection *c'*, and the end of said section as better illustrated in Fig. 3, of the drawings, is a rib *m*, which is designed to engage a corresponding recess *n*, in the edge of the disk *h*, when the bracket arm H, is placed in position. This rib *m*, serves in conjunction with the lugs *e*, of the projection *c'*, to prevent the bracket arm from turning upon the boxing; and the said rib and lugs serve to take all strain off of the hinge bolt and thereby greatly strengthen the connection of the bracket arm to the boxing, which is an important desideratum.

J, indicates a master wheel which is mounted upon the feed bar A, in the ordinary manner, and K, indicates a pinion mounted upon the crank shaft I, which pinion meshes with and is designed to transmit motion to the master wheel.

It will be seen from the foregoing description taken in connection with the drawings, that the hinge bolt E, serves to flexibly connect the sections of the boxing, and also serves to connect the bracket arm to the boxing in such a manner that the said bracket arm will not interfere with the sections being swung apart when it is desired to place a feed bar in position or remove the same from the boxing.

By reason of my peculiar connection of the bracket arm to the boxing, it will be further seen that when the teeth of the master wheel and the pinion have become worn, so that they will not properly mesh with each other,

the difficulty may be readily remedied by simply filing the upper or outer side of the projection c', and turning the hinge bolt so as to draw the bracket arm down upon its seat and bring the pinion against the master wheel.

In the practice of my invention when it is desired to rotate the feed bar A, by a crank or other device applied directly thereto, the bracket arm and its appurtenances may be readily disconnected from the boxing by turning the hinge bolt out of the disk h, and when said bracket arm is removed the hinge bolt may be secured in position by a nut or the like turned upon the threaded end thereof.

It is obvious to those skilled in the art that many changes may be made in the construction of my improved machine without departing from the spirit of my invention, and I therefore do not desire to be confined to the specific construction and relative arrangement of the parts as herein described.

Having described my invention, what I claim is—

1. In a mining machine, the combination of a boxing comprising two sections, a bracket arm and a hinge bolt connecting the sections of the boxing together in a hinged manner and also connecting said sections to the bracket arm, substantially as specified.

2. In a mining machine, the combination of a boxing comprising two sections, a bracket arm having a threaded aperture and a hinge bolt connecting the sections of the boxing together in a hinged manner and having threads adapted to engage the threaded aperture of the bracket arm so as to connect the same to the boxing, substantially as specified.

3. In a mining machine, the combination of a boxing comprising two sections provided with aligned barrel projections disposed in the direction of the length of the boxing, a bracket arm having an aperture disposed in the same direction as the barrel projections of the boxing sections, and a hinge bolt taking through the aligned barrel projections of the boxing section and the aperture of the bracket arm, and serving to connect the said sections together in a hinged manner and also to connect the same and the bracket arm, substantially as and for the purpose set forth.

4. In a mining machine, a bracket arm having a shoulder or projection f, in combination with a boxing having a seat to receive the shoulder or projection of the bracket arm so as to prevent turning of the same, and a pin or bolt adapted to connect the bracket arm to the boxing, substantially as specified.

5. In a mining machine, the combination with a boxing having the lugs e; of a bracket arm having the shoulder f, adapted to rest between the lugs of the boxing, and a pin or bolt adapted to connect the bracket arm to the boxing, substantially as specified.

6. In a mining machine, the combination with a boxing having the lugs e, and the rib m, of the bracket arm having a shoulder adapted to rest between said lugs e, and also having a recess to receive the rib m, and a pin or bolt adapted to connect the bracket arm to the boxing, substantially as specified.

7. In a mining machine, the combination with the feed bar, and the gear wheel mounted on said bar, of the boxing comprising two sections and having the lugs e, and the rib m, the bracket arm having a shoulder adapted to rest between the lugs e, and a recess to receive the rib m, and also having a threaded aperture, the shaft journaled in the bracket arm and carrying a pinion at its inner end in mesh with the gear wheel, and a bolt connecting the sections of the boxing and having threads adapted to engage the threaded aperture of the bracket arm, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARTIN HARDSOCG.

Witnesses:
W. A. WORK,
BENJ. M. WORK.