

(No Model.)

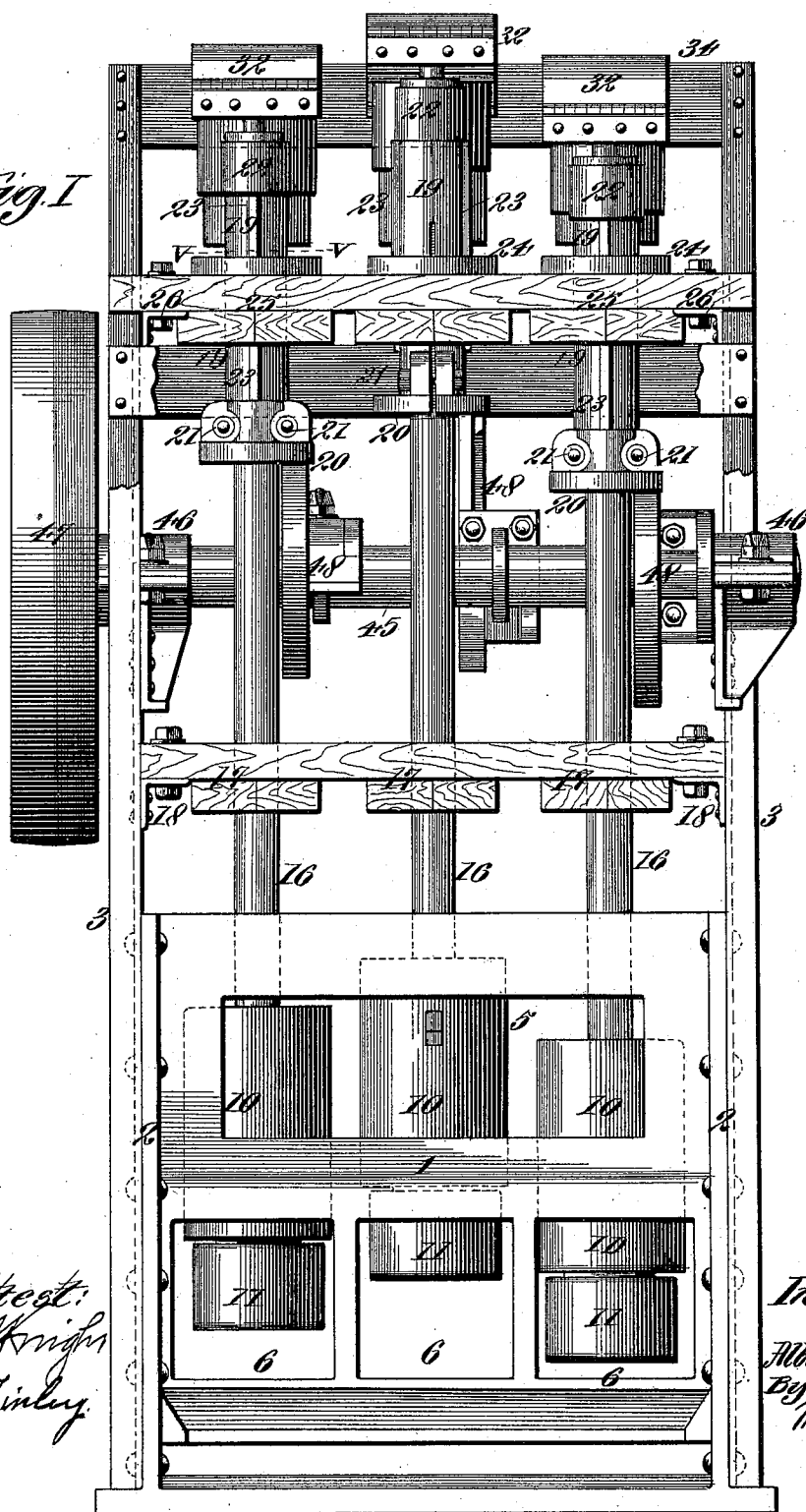
3 Sheets—Sheet 1.

A. M. ROUSE.
ORE STAMP.

No. 576,619.

Patented Feb. 9, 1897.

Fig. I



Attest:
E. S. Knight
H. Finley

Inventor:
Albin M. Rouse
By *Wm. H. Rouse*
Attys

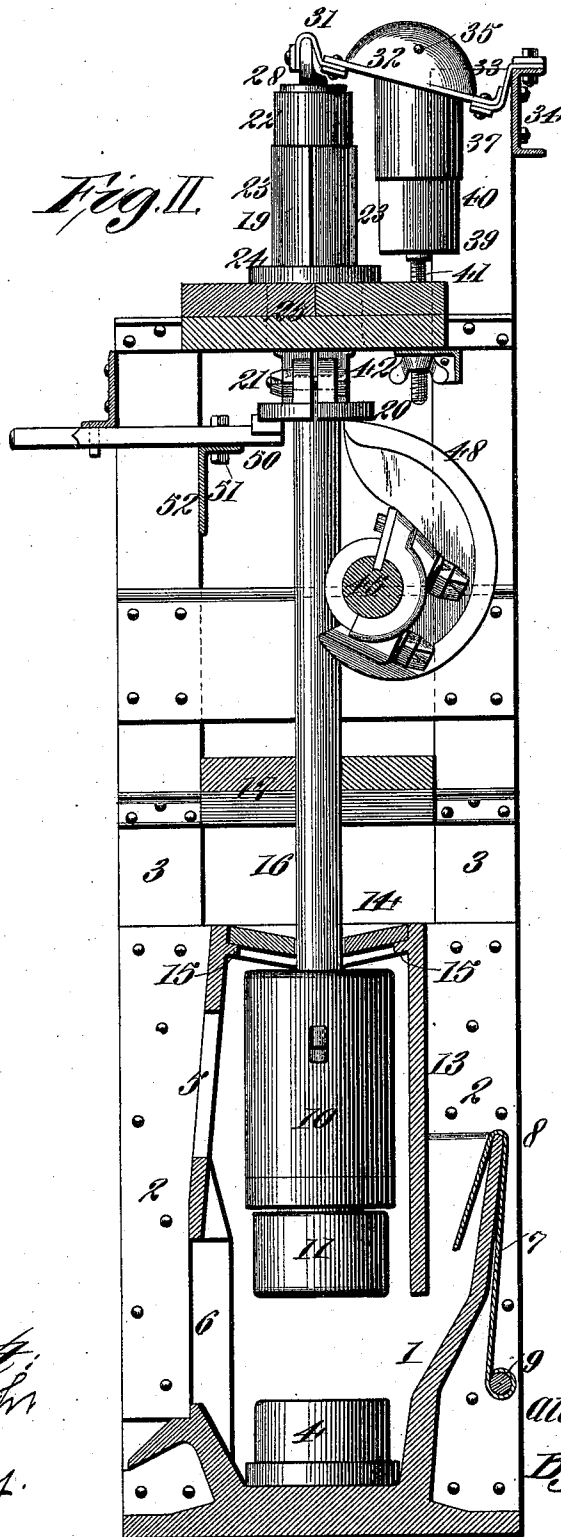
(No Model.)

3 Sheets—Sheet 2.

A. M. ROUSE.
ORE STAMP.

No. 576,619.

Patented Feb. 9, 1897.



Attest:
E. Knight
W. Finley.

Inventor:
Albion M. Rouse.
By Knight, Port
Atty.

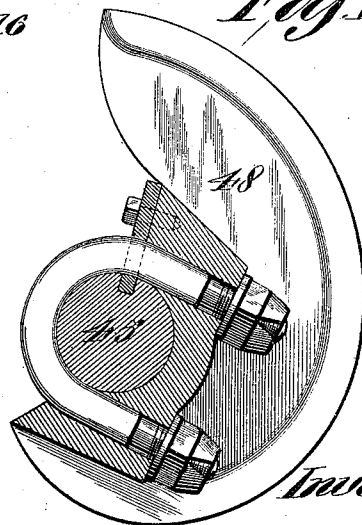
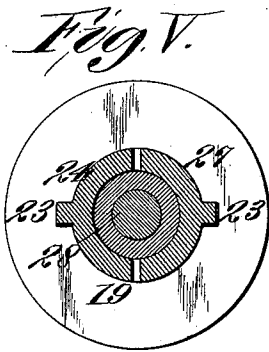
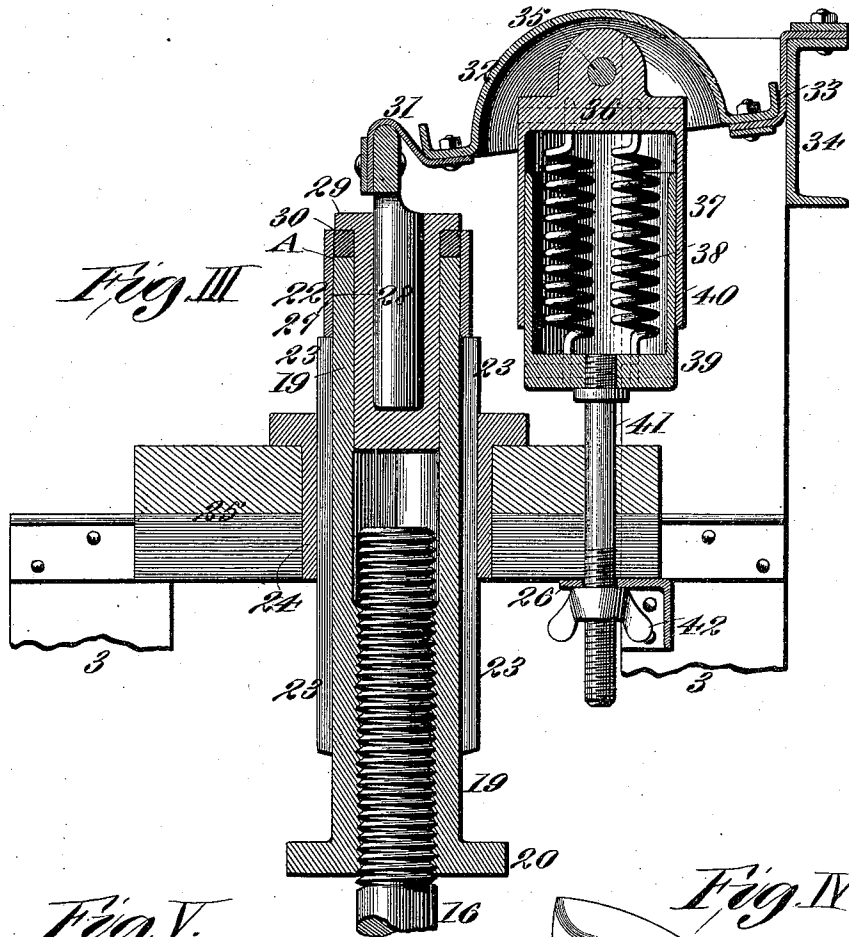
(No Model.)

3 Sheets—Sheet 3.

A. M. ROUSE.
ORE STAMP.

No. 576,619.

Patented Feb. 9, 1897.



Attest:
W. Knight
W. Finley

Inventor:
Albion M. Rouse,
By Knight, Bro & Atty's.

UNITED STATES PATENT OFFICE.

ALBION M. ROUSE, OF DENVER, COLORADO, ASSIGNOR TO THE MINERS
RELIEF ASSOCIATION, OF SAME PLACE.

ORE-STAMP.

SPECIFICATION forming part of Letters Patent No. 576,619, dated February 9, 1897.

Application filed January 25, 1896. Serial No. 576,815. (No model.)

To all whom it may concern:

Be it known that I, ALBION M. ROUSE, of the city of Denver, county of Arapahoe, State of Colorado, have invented a certain new and useful Improvement in Ore-Stamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved machine for stamping ore; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is an elevation of my improved machine, showing three stamps. It is evident, however, that the machine may embody one stamp or more. Fig. II is a vertical section. Fig. III is an enlarged detail sectional view. Fig. IV is a view of one of the cams, part in elevation and part in section. Fig. V is a transverse section taken on line V V, Fig. I.

Referring to the drawings, 1 represents a mortar having flanges 2, riveted or otherwise secured to upright posts 3. The mortar is made of a size corresponding to the number of stamps to be used. I have, as stated, shown my invention applied to a three-stamp mill, and accordingly the mortar is of a length sufficient to receive the three stamps, as illustrated in Fig. I. On the bottom of the mortar is located an anvil 4 for each of the stamps. At the front of the mortar there is provided a working port or hole 5, beneath which is an opening 6 for each stamp, these openings being adapted to receive screens, through which the material passes as it is pulverized by the stamp.

7 represents a bent plate hooked over the edge 8 of the mortar and held in place by a weight 9. The function of this plate is to keep the material from being splashed out of the mortar by the action of the stamps, this being accomplished by the bent portion thereof, which, as will be seen, extends nearly to the partition 13. This plate extends along the back of the mortar or the side opposite that having the opening 5 and screens 6. The material is kept from being splashed out of the mortar at the ends of the latter by the flanges 2, which extend, as seen in Fig. II, the full height of the mortar.

10 represents the stamps, each stamp being provided with a die or shoe 11. The mortar is provided with a partition 13, extending down to a point some distance beneath the edge 8 of the mortar, as shown in Fig. II, and this partition, with the front wall of the mortar, supports a plate 14, that forms the head or cover to the mortar, this plate resting upon flanges 15 and being perforated to receive the stems 16 of the stamps. The stems pass through guide timbers or bars 17, supported from the posts 3 by means of brackets 18. (See Fig. I.) The upper ends of the stems are tapped into sleeves 19, having collars or tappet-heads 20.

The sleeves 19 are made in sections, each sleeve consisting of two parts extending from the collar 20 up to the point A, Fig. III. The two sections of each sleeve are bolted together, as shown at 21, Fig. II, these bolts being located at the lower ends of the sleeves. At the upper ends the sections of each sleeve are held together by rings 22. The sleeves are provided with feathers 23, working in grooves formed in bushings 24, fitting loosely in supporting-timbers 25, resting upon brackets 26, secured to the posts 3. (See Fig. I.) The bushings 24 turn in their support with the sleeves 19 and the stems 16 of the stamps when the machine is in operation.

Fitting in the upper end of each sleeve 19 is a plug 27, provided with a socket to receive a stem 28. These plugs have flanges 29, resting on cushions 30, placed within the upper part of the rings 22 above the sleeves 19. Each stem 28 is connected by a flexible hinge 31 to one end of a lever 32, connected at its other end by a flexible hinge 33 to a cross-piece 34, secured to the upper ends of two of the posts 3.

The levers 32 are preferably made in cup shape, as shown in Fig. III, and to each sleeve is pivoted at 35 a head 36, having preferably a depending flange 37, and being connected by springs 38 to a disk or head 39, which has preferably a flange 40, fitting within the flange 37 of the head 36.

Each head or disk 39 is provided with a stem or rod 41, that passes through the timbers 25 and is provided with a set-screw 42 on its lower end beneath the timbers. By adjust-

ing the set-screws the tension of the springs 38 is regulated. When the stamps are raised, the springs 38 are stretched, owing to the connection of the levers 32 with the stems of the stamps, as described, and when the stamps are released the springs add to the force of the gravity of the stamps and cause the stamps to descend with considerable force, and this force may be regulated by increasing or diminishing the tension of the springs by the set-screw 42.

45 represents a shaft journaled in boxes 46, secured to the posts 3, the shaft being provided with a driving-pulley 47. On the shaft 45 is a cam 48 for each stamp, the cams coming against the collars 20 as the shaft revolves and lifting the stamp. The preferred manner of connecting these cams to the shaft is illustrated in Fig. IV, but requires no description here, as this manner of attachment forms no part of this invention, and is shown and described in my contemporaneously pending application filed January 16, 1896, Serial No. 575,803.

By screwing the stems 16 of the stamps up or down in the sleeves 19 the wear of the anvils and dies may be compensated for.

Inasmuch as the cams are located on one side of the stems of their stamps, it will be seen that the friction between the cams and the collars 20 will tend to rotate the stamps, and this rotation is permitted by the bushings 24 turning in their supports 25.

When it is desired to stop the operation of any one of the stamps, it may be done by means of a lever 50, pivoted at 51 to a cross-piece 52, secured to the posts 3, these levers being of such length that their inner ends will engage beneath the collars 20 when the latter are raised to their full height and when the levers are turned to bring their inner ends beneath the collars, as shown in Fig. II, the stamps being thus supported so as not to be operated upon by the cams.

I claim as my invention—

1. In an ore-stamp, the combination of a mortar having side flanges secured to upright posts and having front and rear walls, a bent splash-plate hooked over the rear wall and held in place by a weight, a stamp working within the mortar and means for operating the same, substantially as shown and described.

2. In an ore-stamp, the combination of a mortar, a stamp located within the mortar, means for operating the stamp, and a splash-plate provided with a weight 9; said mortar having flanges secured to upright posts, and said splash-plate being hooked over the rear wall of the mortar, substantially as set forth.

3. In an ore-stamp, the combination of a mortar, a stamp arranged within the mortar, a sectional sleeve adapted to receive the stem of the stamp and being provided with feathers, a loosely-supported bushing through which said sleeve passes and which is provided with grooves to receive said feathers, bolts and nuts for clamping the lower end of the sleeve to the stem, a ring fitting over the upper end of the stem, a cushion 30 within the ring, a plug fitting within the upper end of the sleeve, and a spring-actuated lever connected to said plug, substantially as set forth.

4. In an ore-stamp, the combination of a mortar, a stamp located within the mortar and having a stem, a lever 32 having a hinge connection 31 with the stem and a hinge connection 33 with the frame, means for lifting the stamp and means for forcing the stamp down consisting of a head pivoted to the lever 32, an adjustable head 39, and springs 38, substantially as shown and described.

5. In an ore-stamp, the combination of a mortar, a stamp located within the mortar and provided with a stem, a sectional sleeve with which said stem has threaded connection, means for clamping the sleeve to the stem, a loose-turning bearing for said sleeve, and a head formed thereon on its lower end, a cam for engaging said head to raise the stamp, and means for forcing the stamp down consisting of springs 38 which have a connection with said stem; substantially as set forth.

6. In an ore-stamp, the combination of a spring-actuated lever, and a connection between the lever and the stem of the stamp consisting of a stem 28, a plug 27, a sleeve 19 having feathers 23, and a bushing 24 supported by timbers 25, substantially as set forth.

ALBION M. ROUSE.

In presence of—

ALBION E. ROUSE,
N. D. SIBLEY.