(No Model.)

F. W. WEHRLE & W. UNGER.

SEPARATOR FOR SEPARATING MERCURY FROM SAND.

No. 265,898. Patented Oct. 10, 1882.

Fig. 1.

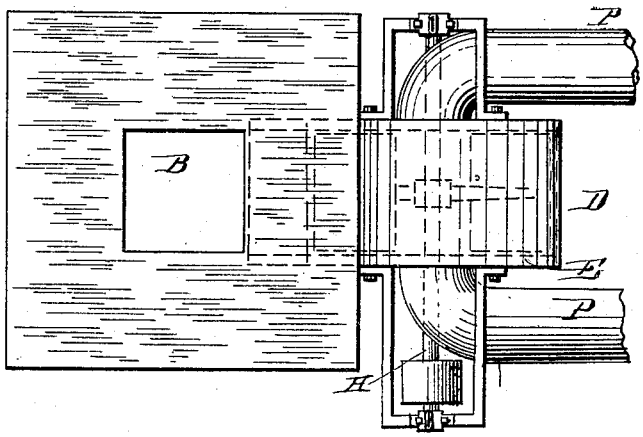


Fig. 2.

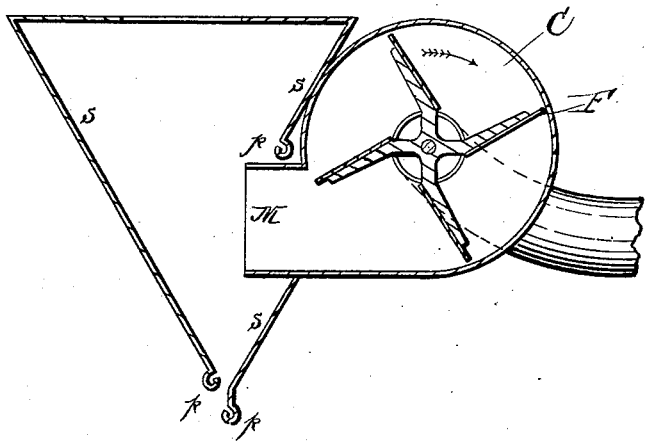
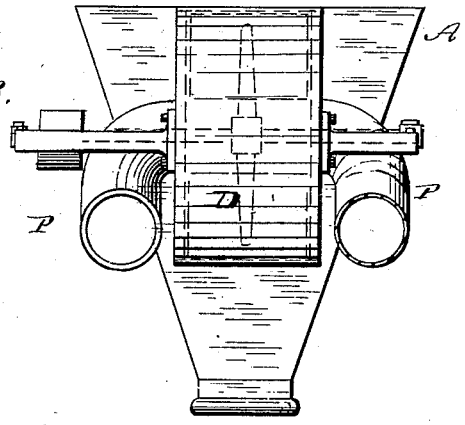


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDRICK W. WEHRLE AND WILLIAM UNGER, OF CHICAGO, ILLINOIS.

SEPARATOR FOR SEPARATING MERCURY FROM SAND.

SPECIFICATION forming part of Letters Patent No. 265,898, dated October 10, 1882.

Application filed August 7, 1882. (No model.)

To all whom it may concern:

Be it known that we, FREDRICK W. WEHRLE and WILLIAM UNGER, citizens of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Separators for Separating Mercury and Sand, of which the following is a specification.

Our invention relates to an improvement in separators for separating mercury from sand; and the object of our invention is to furnish a device to be used in connection with amalgamators for separating mercury from the sand; second, to provide a separator to be used in connection with our dry amalgamator (for which we have now an application pending for a patent) to separate the mercury from the sand after it has passed through said amalgamator.

Our invention consists of a box in connection with a cylinder containing a fan attachment and suction-pipes, as illustrated in the accompanying drawings, in which—

Figure 1 is a top view of our device. Fig. 2 is a sectional view of same, and Fig. 3 is an end view.

Similar letters refer to similar parts throughout the several views.

A is a copper box, square at the top and having slanting sides *s s*, making the box of funnel shape, as shown in Fig. 3, having an opening, B, at the top for the escape of the air. The sides *s s* of A have cups *p* at their end to receive the mercury. The inside surface of A is amalgamated.

C is a casing containing the fan or fans. The top D of casing C is made of copper, and the sides E E of iron. C is provided with a mouth, M, which projects into the box A, as shown in Fig. 2. The inside surfaces of D and M are amalgamated.

F is a fan or fans suspended on the inside of casing C on a shaft, H, which shaft is operated by pulley attachments or in any suitable manner.

P P are suction-pipes attached one on each side of the casing C in openings in E, and run to the box or vessel containing the combined mercury and sand. The fan or fans F are amalgamated copper.

The manner of operation is as follows: The suction-pipes P P are inserted in the box or vessel containing combined mercury and sand, which vessel may contain the combined mercury and sand which has run through our dry amalgamator, (for which application for patent is now pending,) or any other combined mercury and sand containing precious metal. The shaft H is then revolved, thereby turning the fans F, and the combined mercury and sand will be drawn by suction into the casing C, and blown by the fan F into the box A, through the mouth M, against the amalgamated side plates, *s s*. The mercury will stick to the plates *s s* and run down thereon into the cups *p*, while the sand will fall out over the cups into any suitable receptacle. The mercury will also adhere or stick to the amalgamated surface of the casing C and amalgamated fan F. The mercury being saved, the precious metals combined with it will also be saved, and may be separated from the mercury in the ordinary and well-known manner.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a separator for separating mercury from sand containing precious metals, the copper box A, amalgamated on its inside surface, having sides *s s*, provided with cups *p p*, in combination with casing C, having copper top D, mouth M, and iron sides E E, suction-pipes P P, amalgamated copper fan or fans F, suspended on shaft H, substantially as shown and described, and for the purpose set forth.

2. In a separator for separating mercury from sand, the copper box A, amalgamated on its inside surfaces, having air-escape B and sides *s s*, provided with cups *p p*, substantially as described and shown.

3. In a separator for separating mercury from sand, the casing C, having copper top D and copper mouth M, D and M being amalgamated on their inside surface, and having iron sides E E and connecting suction-pipes P P, and having an amalgamated copper fan, F, suspended on a shaft, H, substantially as shown and described, and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

FREDRICK W. WEHRLE.
WILLIAM UNGER.

Witnesses:
FRANK JOHNSON,
J. E. STEVENSON.