A BAUMANN & F. HOEPPNER.

HOP-CRUSHER.

No. 182,054. Patented Sept. 12, 1876.

Fig. 2.

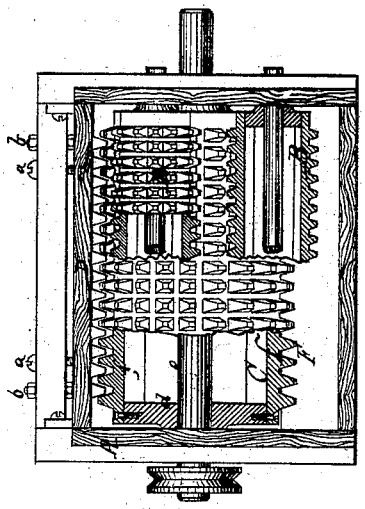
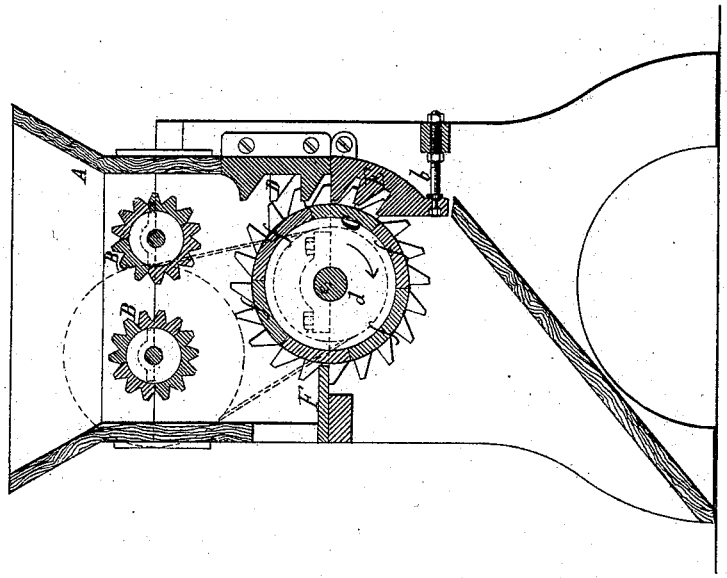


Fig. 1.



Witnesses.
Otto Hufeland
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UNITED STATES PATENT OFFICE.

ADOLPH BAUMANN AND FRIEDRICH HOEPPNER, OF NEW YORK, N. Y.

IMPROVEMENT IN HOP-CRUSHERS.

Specification forming part of Letters Patent No. **182,054**, dated September 12, 1876; application filed January 25, 1876.

To all whom it may concern:

Be it known that we, ADOLPH BAUMANN and FRIEDRICH HOEPPNER, both of the city, county, and State of New York, have invented a new and Improved Machine for Crushing Hops and other articles, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a transverse vertical section. Fig. 2 is a plan or top view.

Similar letters indicate corresponding parts.

This invention consists in the combination of two feed-rollers, both being armed with teeth, with a toothed crushing-roller, and with a stationary and an adjustable crushing-surface, so that the lumps of hops or other articles, on being thrown upon the feed-rollers, are first broken up and carried to the crushing-roller, and that, by the combined action of the crushing-roller and the crushing-surfaces, the hops or other articles are finally reduced to the required fineness.

In the drawing, the letter A designates a frame, which is closed on all sides, and which forms the bearings for the two feed-rollers B B and the crushing-roller C. All these rollers are provided on their surfaces with sharp-pointed teeth, so that they take hold of the articles to be crushed, and one of the feed-rollers is geared together with the crushing-roller, while the other feed-roller may be made to revolve simply by friction, or it may be geared together with the first feed-roller, so that both revolve in opposite directions.

The crushing-roller C revolves in the direction of the arrow marked on it in Fig. 1, and it co-operates with a stationary crushing-surface, D, formed on one of the sides of the frame A, and with an adjustable crushing-surface, E, formed on an apron which is hinged to the frame A, and the position of which in regard to the surface of the crushing-roller can be regulated by set-screws *a* and binding-screws *b*.

Our machine is designed principally for grinding hops, which, when taken from the bales or packages, form big lumps or cakes of more or less compactness. These cakes, on being thrown upon the feed-rollers B B, are gradually broken up, and the fragments pass down upon the crushing-roller C. By the combined action of this roller and of the stationary crushing-surface D, said fragments are still further reduced in size, and the reduced fragments are finally crushed to the required fineness by the co-operation of the crushing-roller C with the adjustable crushing-surface E.

With the crushing-roller C is combined a clearing-plate, F, which fits the teeth of said crushing-roller, and serves to remove from these teeth such particles as otherwise would be liable to clog the same. The crushing-roller is composed of two disks, *d*, which are firmly mounted on the shaft *e*, and which form the supports for a series of segmental plates, *f*, from the outer surfaces of which project the teeth.

The feed-rollers are constructed in the same manner, so that all these rollers can be readily constructed of cast-iron.

What we claim as new, and desire to secure by Letters Patent, is—

The combination of two feed-rollers, B B, having teeth on their surfaces, with a toothed crushing-roller, C, and with a closed frame, A, on one side of which are formed a stationary crushing-surface, D, and an adjustable crushing-surface, E, all constructed and operating substantially in the manner shown and described.

In testimony that we claim the foregoing we have hereunto set our hands and seals this 20th day of January, 1876.

A. BAUMANN. [L. S.]
F. HOEPPNER. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.