

C. B. FISH.

MACHINE FOR POLISHING HORN.

No. 171,220.

Patented Dec. 21, 1875.

Fig. 1.

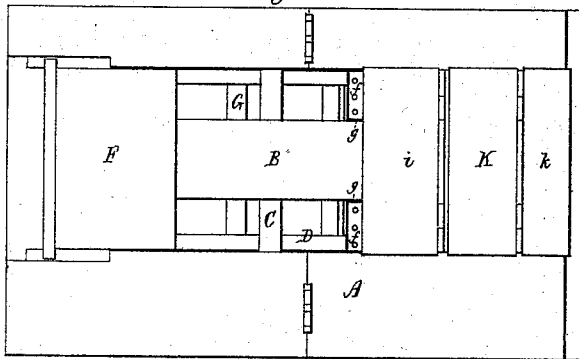


Fig. 5.

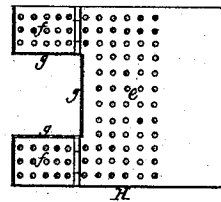


Fig. 2.

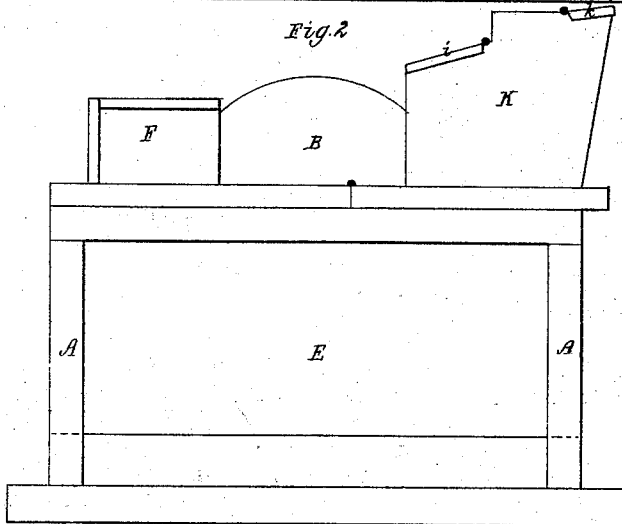


Fig. 6.



Fig. 3.

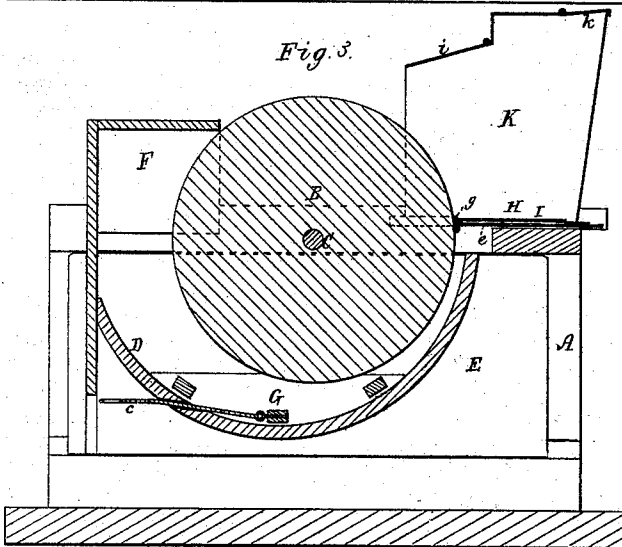
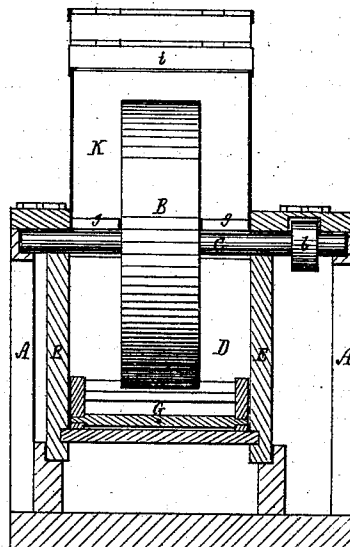


Fig. 4.



Witnesses.

S. W. Roper  
S. W. Milner.

Charles B. Fish.

by his attorney.

R. M. Roper

# UNITED STATES PATENT OFFICE.

CHARLES B. FISH, OF LEOMINSTER, MASSACHUSETTS.

## IMPROVEMENT IN MACHINES FOR POLISHING HORN.

Specification forming part of Letters Patent No. **171,220**, dated December 21, 1875; application filed July 20, 1875.

*To all whom it may concern:*

Be it known that I, CHARLES B. FISH, of Leominster, of the county of Worcester and State of Massachusetts, have invented a new and useful or improved machine for smoothing articles, particularly such as are made of horn; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, Fig. 3 a longitudinal section, and Fig. 4 a transverse section, of the said machine. Fig. 5 is a top view, and Fig. 6 a side view, of the perforated adjustable clearer, to be hereinafter described.

In such drawings, A denotes the frame for supporting the main operative parts, the first of which is the smoothing or dressing wheel B, or "ball," as termed by comb-makers. This wheel is usually composed of a series of disks of thick cloth—such as Kidderminster carpet, for instance—arranged side by side on and fixed to a shaft, C, extending across the frame, and provided with a band-wheel, *b*, for effecting its revolution. The lower half or part of the wheel B is within a trough, D, supported on parallel ways E E, so as to be capable of being moved rectilinearly and longitudinally, in order to carry the arm-rest F, which extends upward from the trough toward the wheel, as the latter may become worn down by use. Within the trough is a frame or agitator, G, provided with a handle, *c*, that extends through the trough, in manner as shown. By taking hold of the handle a person may move the agitator back and forth, in order to stir up the liquid contents of the trough, and prevent settlement of the smoothing material therein, which, generally speaking, is coal-ashes. In front of the wheel, or arranged with it in manner as shown, is the adjustable clearer H, composed of three plates, *e f f*, perforated with numerous holes, each plate, at its edge next the wheel, having a vertical lip or scraper, *g*. The two side plates *f f* are hinged to the plate *e*, to enable them to be turned from a horizontal up into vertical positions. This clearer is supported in the frame A, so as to be capable of being moved toward the wheel, as the latter may become worn

down on its periphery. Arranged over the clearer, and at a short distance from it, is a plate, I, and over the whole a bonnet, K, which is open at its side next the wheel, and has two doors, *i k*, arranged in its top, as shown, over corresponding openings therein, each door being hinged to the bonnet. The object of the guard-plate I is to intercept the mud thrown into the bonnet from the top of the wheel, and prevent it from falling upon and choking the holes of the clearer, through which the water escapes or flows back into the trough. The bonnet is to catch the stream or streams of liquid mud discharged tangentially from the wheel during the process of smoothing an article held in contact with the upper part of the periphery of the wheel. The rear opening of the upper part of the bonnet is to discharge the current of air thrown into the bonnet by the wheel, and prevent it from being deflected back into the fall, or upon the person of the operative. The rear opening of the bonnet-top is to enable the attendant to readily get access to the front of the wheel or the clearer without the necessity of removing the bonnet. The adjustable clearer removes from the wheel the loose fibrous matters worn or torn from it, and prevents them from getting into the trough and being taken up on the periphery of the wheel. As the wheel may wear down from time to time, (a wheel while in use lasting but a short period,) the clearer, as well as the arm-rest, has to be moved up toward it.

In using the machine, the trough is to be supplied with water and coal-ashes, or other suitable smoothing material. The wheel being put in revolution toward the bonnet, a workman or attendant, with his elbows or arms on the arm-rest, is to hold the article—as a comb, for instance—against the upper part of the periphery of the wheel, such article being turned from time to time, so as to cause the entire surface, or the part thereof to be smoothed by the wheel, to be brought into contact therewith.

In the said machine, I claim—

1. The combination of the adjustable clearer H with the wheel B and the trough D.
2. The bonnet K, provided with the air-discharge opening in its top, in combination with the wheel B and its trough D.

3. The adjustable arm-rest F, in combination with the trough D and the wheel B.

4. The mud-interceptor or guard-plate I, arranged and combined with the perforated clearer H, and the bonnet K, the wheel B, and trough D.

5. The combination of the adjustable trough

D and its rest F, the wheel B, the bonnet K, and the adjustable clearer H, all arranged in manner, and in a frame, as specified.

CHARLES B. FISH.

Witnesses:

R. H. EDDY,

J. R. SNOW.