

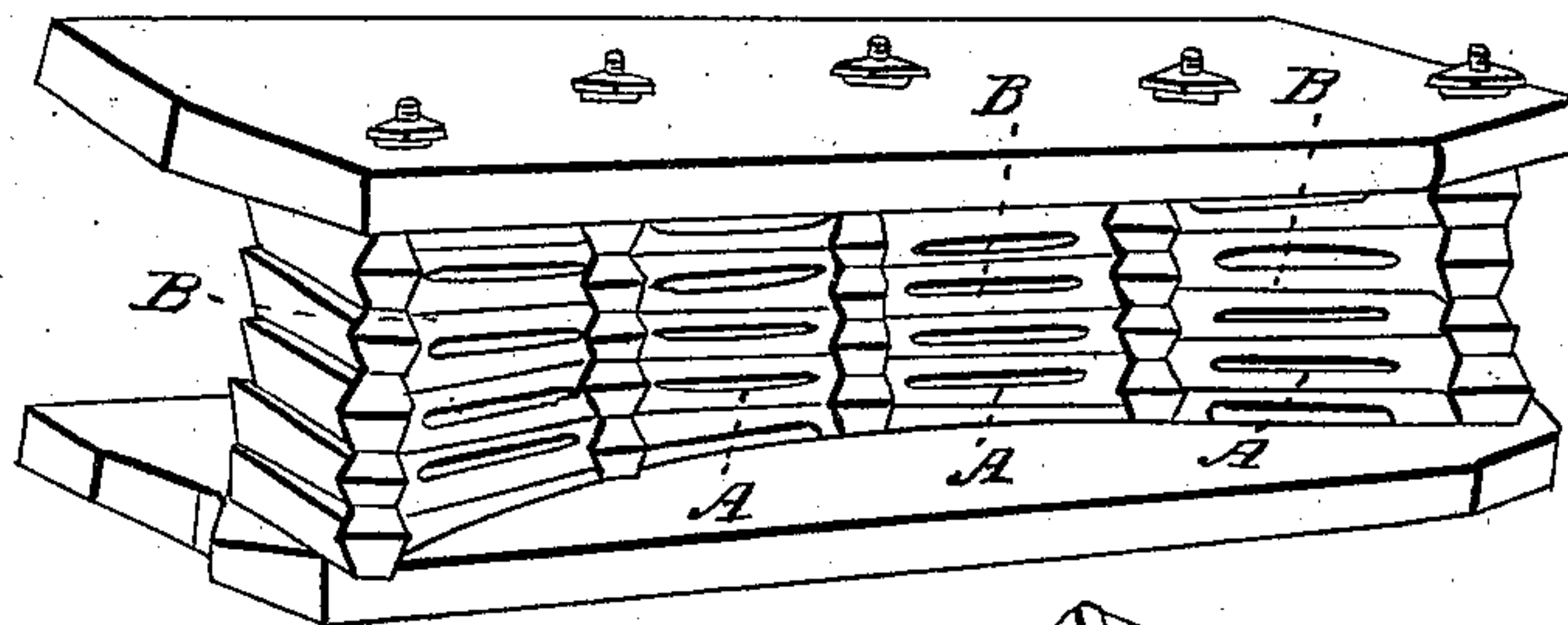
D. PEASE.

Smut Mill.

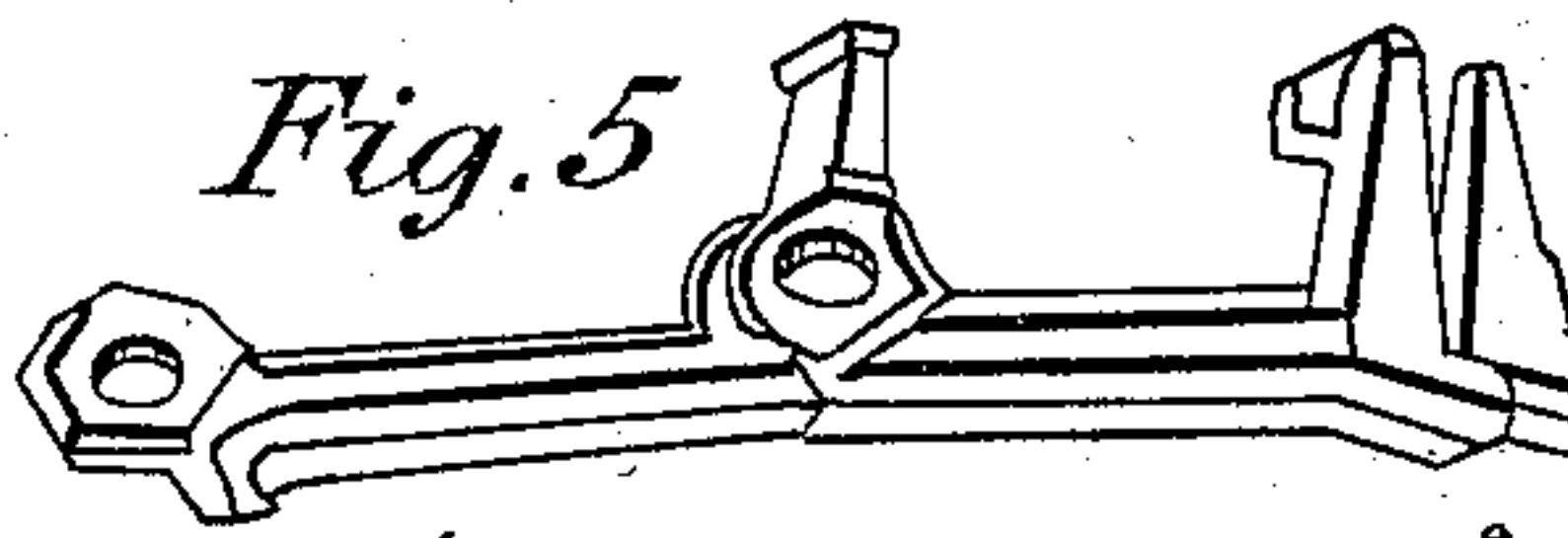
No. 96,476.

Patented Nov. 2, 1869.

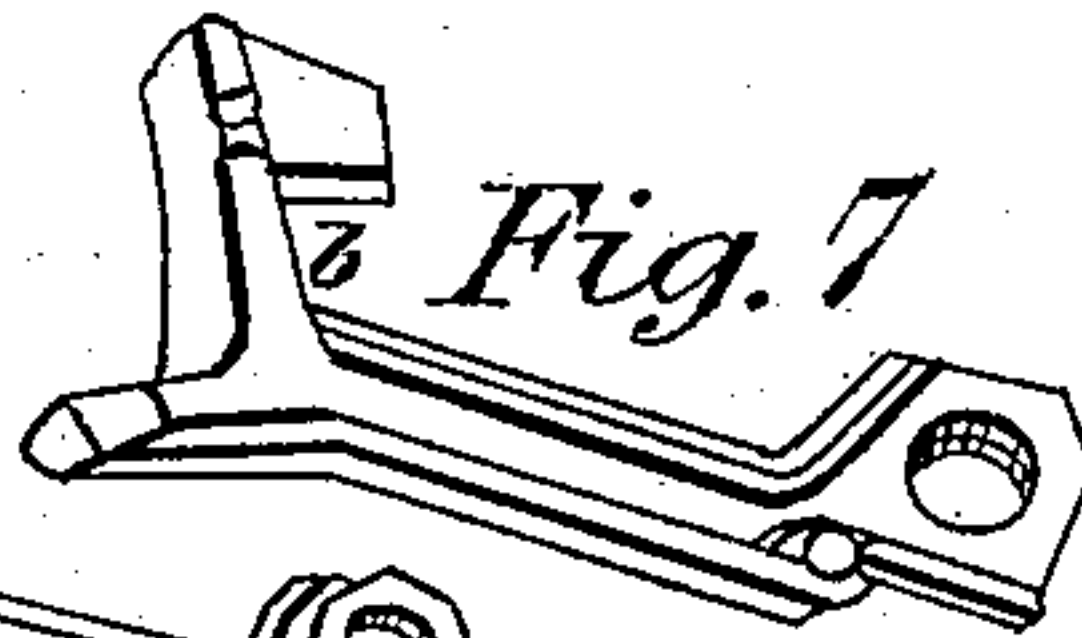
*Fig. 1*



*Fig. 5*



*Fig. 7*



*Fig. 6*

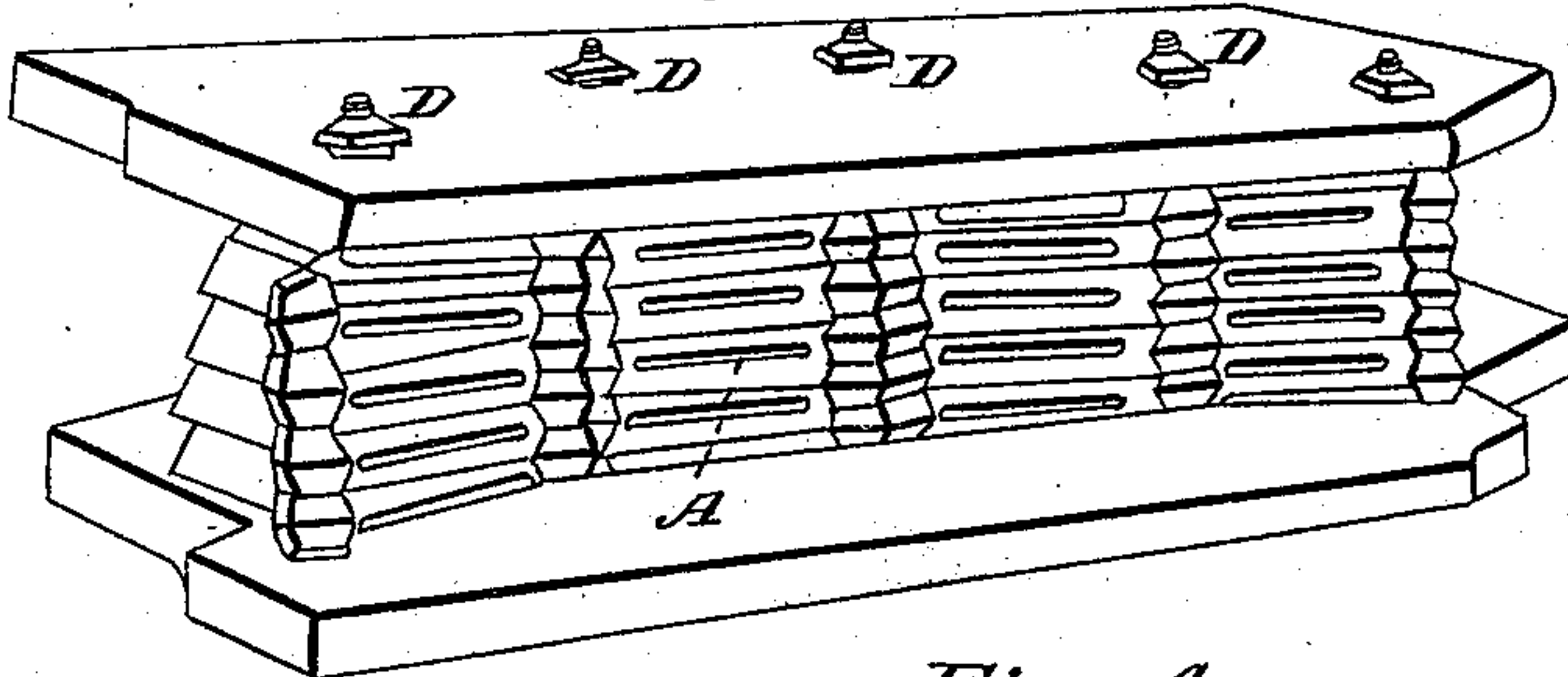


*Fig. 8*

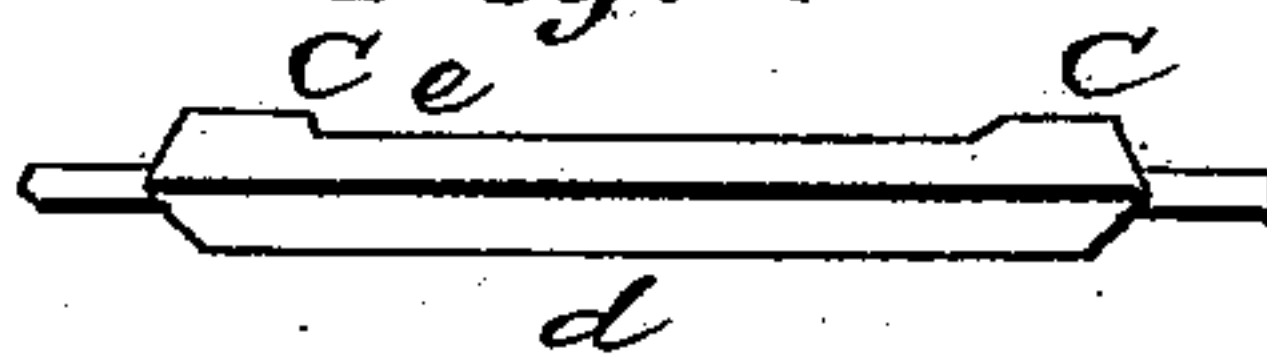
*Fig. 3*



*Fig. 2*



*Fig. 4*



Witnesses:  
William Baker  
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# United States Patent Office.

DANIEL PEASE, OF FLOYD, NEW YORK.

Letters Patent No. 96,476, dated November 2, 1869.

## IMPROVEMENT IN SMUT-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, DANIEL PEASE, of Floyd, in the county of Oneida, and State of New York, have invented a new and useful improvement in the construction of the cast-iron pieces of which the hollow stationary cylinder is composed in my smut-mill, patented by me on the 22d day of September, A. D. 1863; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the said improvement, reference being had to the annexed drawings, and to the letters of reference marked thereon, making a part of this specification.

The object of my improvement is to render more perfect and easier of construction the spaces for the passage of the dust in cleaning grain, which, in my said patented machine, are left between the small pieces of metal of which the aforesaid cylinder is formed, it being important that the said spaces be of uniform capacity, and as large as may be, without suffering the grain to pass. And, also, that the said pieces may be so perfectly cast for the purpose of forming the said spaces, that time may not be required in searching for pieces that, being placed opposite to each other, will leave the desired space between them.

These cast-iron pieces, as invented and patented by me, as aforesaid, formed these intervening spaces by having a slight indentation alike in both the upper and lower edges, with the intention that when placed opposite to each other in building up the cylinder, the requisite space would be left between; but in practice it has been found that slight imperfections in the edges of the castings unavoidably occur, and in laying up the cylinder, the slight receding of the edges of two opposite pieces would leave the space too wide, letting through the wheat; and in other cases, the variation being in the opposite direction, the space would be unnecessarily narrow, and much time was required to find pieces of suitable character to properly match each other; and still, with all this care, the cylinder was liable to have some imperfect spaces.

The object of my present invention is to remedy this evil, and I do it by making an indentation for the required space, sufficient for that purpose; all on one side of the metal piece, say, the upper side of each piece, the lower edge of all the pieces having a straight line from end to end, so that in building up the cylinder, an indented edge is always opposite to a straight edge.

I have also improved the pieces used at the junction of the two semicircles in forming the cylinder, which, as described in my former patent, had an eye for the reception of the vertical rod only at one end, the rod

at the opposite end standing in the angle *b*, fig. 7; of the annexed drawings. By my present improvement, this piece also has an eye for the reception of the rod at each end, as shown in the terminating pieces *b* and *f*, in fig. 6.

Figure 8 is a specimen of all the other pieces composing the cylinder.

I illustrate these improvements by the annexed drawings.

Figure 1 is a section of the cylinder, where the metal pieces *A* composing it are of the description heretofore patented and constructed by me.

Figure 2 is a like section, where the constituent pieces *A* are according to my present improvement.

Figure 3 is a back view of a single piece of which the cylinder is formed, as heretofore patented and constructed.

Figure 4, a like view of a single piece, made according to the improvement.

Figure 5 shows a layer of pieces made according to the former patent, and put together as when laying up the cylinder.

Figure 6 is a similar layer of pieces, made according to the improvement.

Figure 7 shows the character of the pieces which, according to the former patent, lie at the junction of the two semicircles forming the cylinder, as described in the former patent, and have only one eye, *C*, for the reception of the vertical rod. *b* and *f*, fig. 6, are these junction-pieces, constructed according to the improvement, having two eyes, *S* and *C*, for the vertical rods, it being found better to use an eye, *S*, than to have the rod occupy the angle, (*b*, fig. 7,) as before constructed.

The comparison of the metal pieces forming the cylinder, as constructed and used under my patent, with the same pieces constructed according to the present improvement, is clearly shown in the two figs. 3 and 4, and it is evident that if the cylinder is formed by laying it up in the manner described in the former patent, of pieces constructed according to the improvement, and shown in fig. 4, the straight edge *d*, in the successive layers covering the chasm *e*, that spaces of uniform capacity would be formed between the constituent pieces throughout the entire cylinder.

As it is also evident, from there being but one complex side in the improved article, the casting (as is found to be the case in actual practice) is made more perfect, and the spaces in the finished cylinder are more uniform and perfect also, and less time is required for laying up the cylinder, as none is spent in looking out pieces to match each other, in order to form the spaces.

The whole machine, with the exception of the improvements here described, is constructed, put to-

gether, and used the same as described in my former patent.

I do not aim to improve or change the general character or principle of the mill, but in the very essential particular involved, the improvement in the construction is an important one.

Having, therefore, described my improvement and its use,

I claim—

1. As an improvement in smut-mills, forming the spaces *b*, fig. 1, between the metal pieces *A*, which

compose the cylinder, by making the required projections, *c c*, fig. 4, for forming said spaces *B* all on one side of said pieces *A*, substantially as shown.

2. Constructing the pieces *A*, with eyes *b C*, fig. 8, on each end thereof, for the reception of the vertical rods or bolts *D D*, fig. 2, when said parts are arranged as herein shown and described.

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Witnesses:

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