

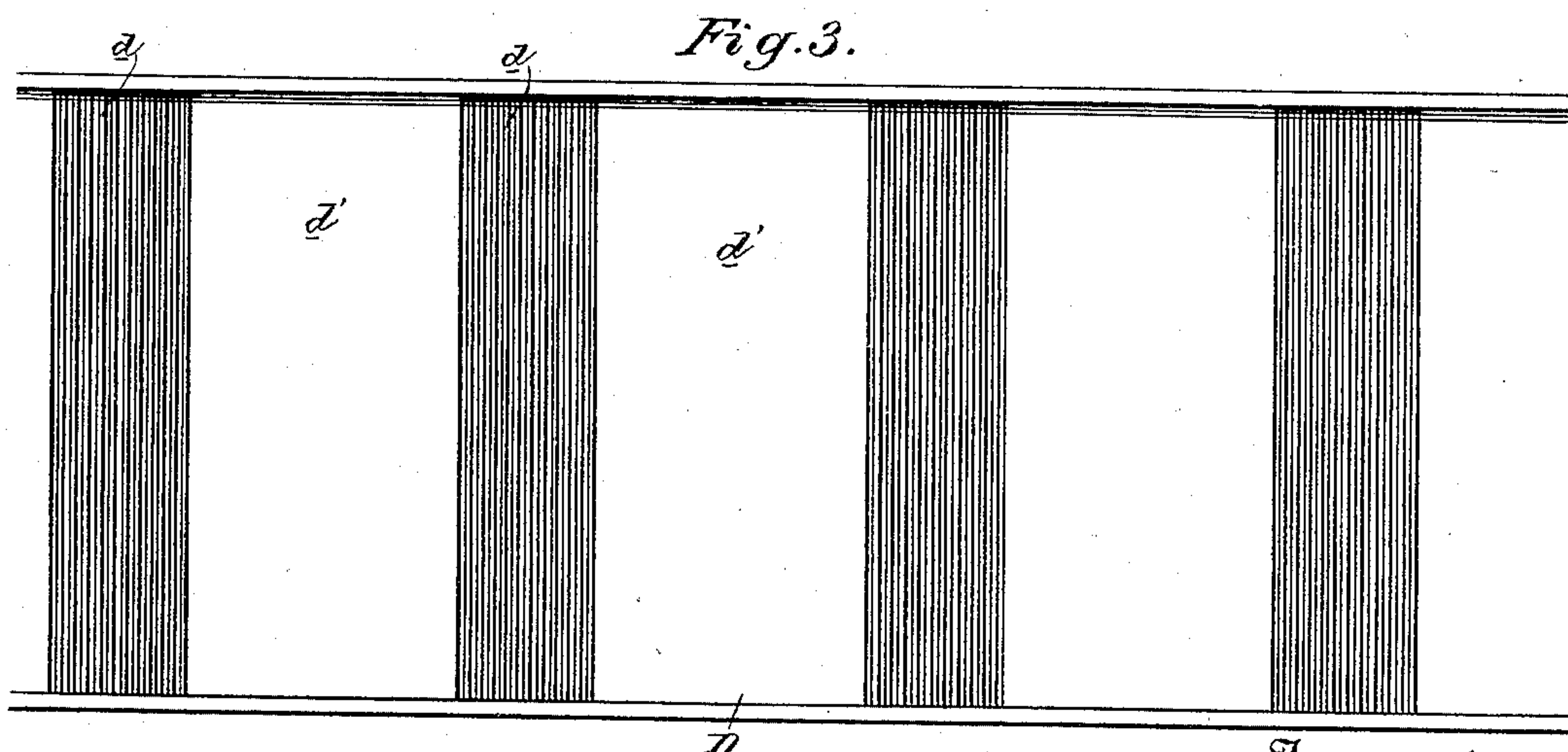
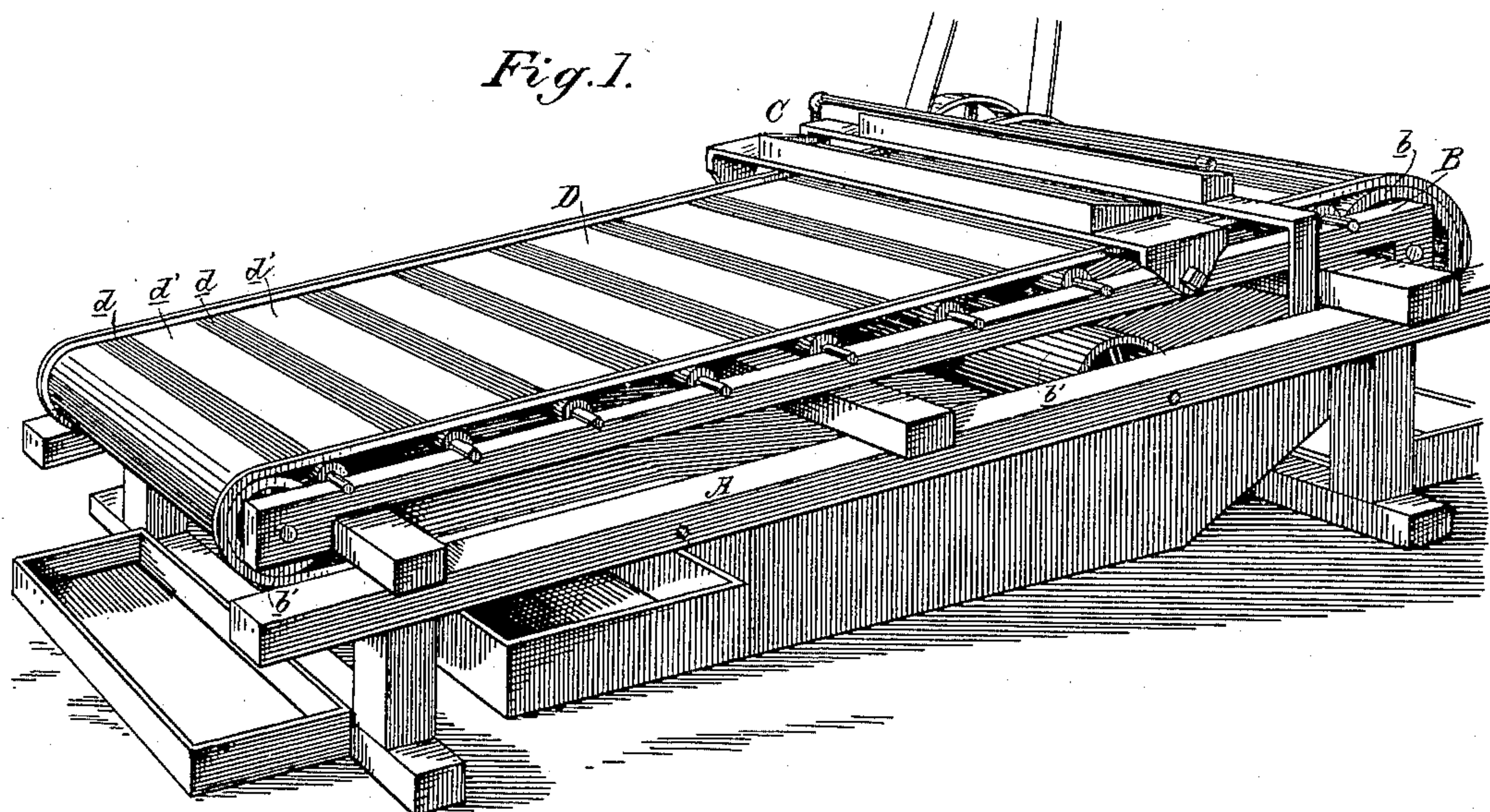
(No Model.)

H. G. BLASDEL.

ORE WASHER.

No. 397,581.

Patented Feb. 12, 1889.



Witnesses,
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UNITED STATES PATENT OFFICE.

HENRY G. BLASDEL, OF SAN FRANCISCO, CALIFORNIA.

ORE-WASHER.

SPECIFICATION forming part of Letters Patent No. 397,581, dated February 12, 1889.

Application filed September 10, 1887. Serial No. 249,400. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. BLASDEL, of the city and county of San Francisco, State of California, have invented an Improvement in Ore-Concentrators; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of ore-concentrators in which an endless traveling belt mounted at an inclination is employed, and upon the surface of which the ore-pulp and water are fed, whereby the lighter and worthless particles of the ore are washed down the incline, while the heavier and precious particles—such as sulphurets and free gold—are carried up by the belt, clinging to its surface, and are washed off in a tank below; and my invention consists in an endless traveling belt having its working-surface formed of corrugated or riffled portions alternating with plane or smooth portions, as I shall hereinafter fully describe.

The object of my invention is to provide for this class of concentrators a belt capable of doing more and better work than the ordinary smooth-surfaced belts, or a belt completely corrugated or riffled.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view. Fig. 2 is a longitudinal section of the belt. Fig. 3 is a plan of same.

In order to fully understand the application and operation of my belt, I have herein shown it in connection with the essential parts of the ordinary machines of this class, A being the main frame of the machine, and B the belt-frame having the driving-roller *b* at the top and the guide-rollers *b'* at the bottom, and C being the water and pulp distributing apparatus generally.

D is the endless belt which passes over the rollers *b* and *b'*.

It is usual in this class of machines to use a plane-surfaced belt, though in some instances belts having a completely corrugated or riffled surface have been attempted. Instead of using either of these classes of belts, I make my belt with a series of corrugated

or riffled portions, *d*, and plane or smooth portions *d'* intervening, these alternating throughout the entire working-surface of the belt. The corrugations or riffles extend transversely of the belt, and may be either depressed or elevated, as desired, being in practice, say, about one-sixteenth of an inch in depth and width, each series or set of corrugations or riffles being about three inches wide. The plane surface between the series of corrugations I usually make about six inches wide, these dimensions being only approximate, as I do not confine myself to them. By this construction of the surface of the belt the material acquires a certain velocity of movement over the smooth or plane surfaces during which time the heavier precious particles and sulphurets have an opportunity to settle to a lower plane of the passing current, so that upon meeting with the corrugations they are more easily caught and in greater quantities, wherefore the belt is more effective than if its whole surface were corrugated or riffled, or if the whole surface were smooth.

This belt can be made to run faster, and can also be set at a greater inclination than any smooth belt could possibly be.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a belt the entire surface of which is divided into zones or strips of alternate corrugated or riffled portions and plane or smooth portions, substantially as herein described.

2. In an ore-concentrator, and in combination with the belt-supporting frame and its drums over which the belt passes, and the water and pulp distributing apparatus, an endless traveling belt having its entire working-surface divided into zones of alternate corrugated or riffled portions and plane or smooth portions, substantially as herein described.

In witness whereof I have hereunto set my hand.

HENRY G. BLASDEL.

Witnesses:

S. H. NOURSE,

H. C. LEE.