

No. 745,949.

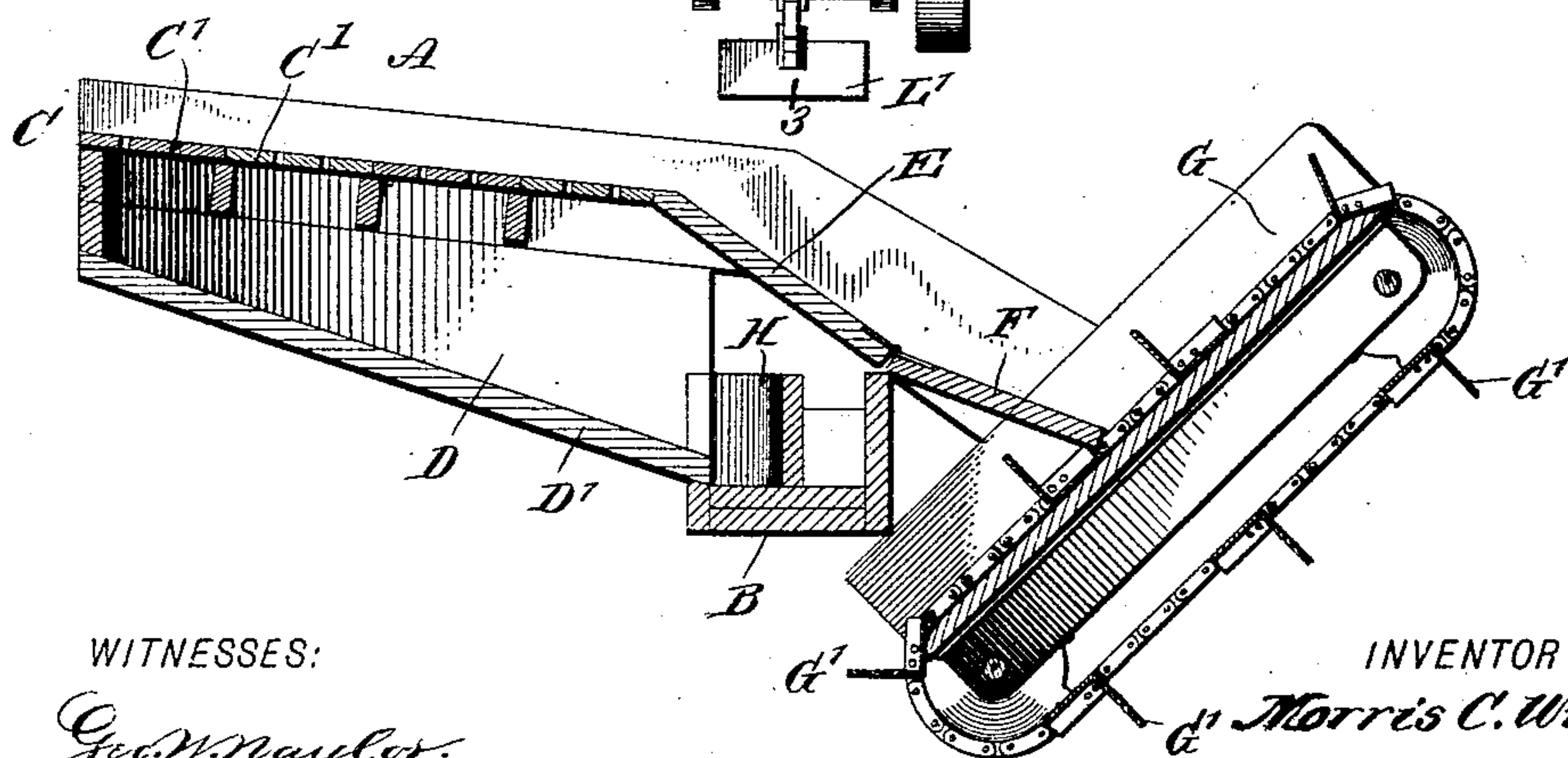
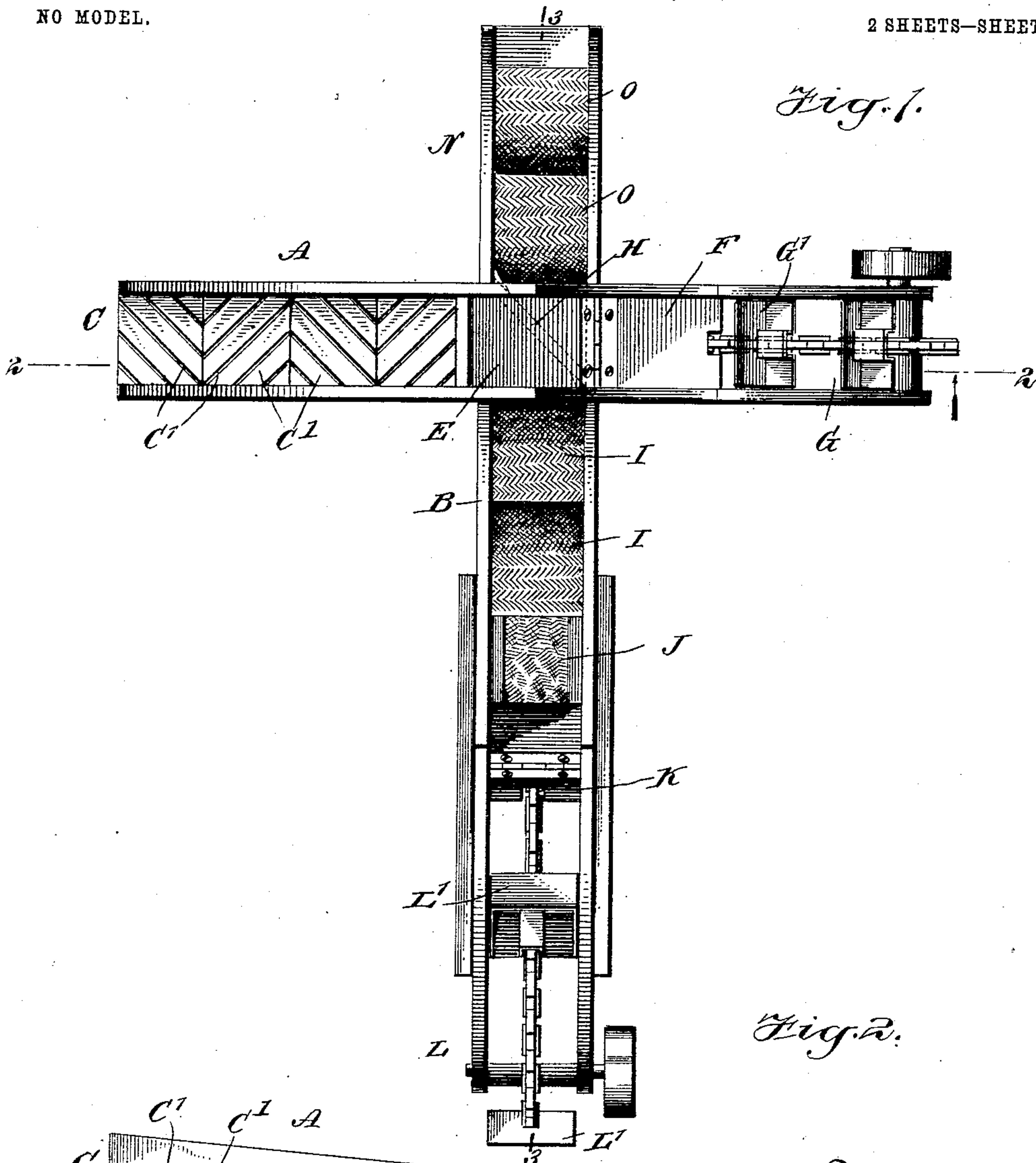
PATENTED DEC. 1, 1903.

M. C. WRIGHT.
GOLD SEPARATOR.

APPLICATION FILED NOV. 15, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Geo. W. Naylor.

Rev. J. Foster,

INVENTOR

Morris C. Wright

BY

num 6

ATTORNEYS.

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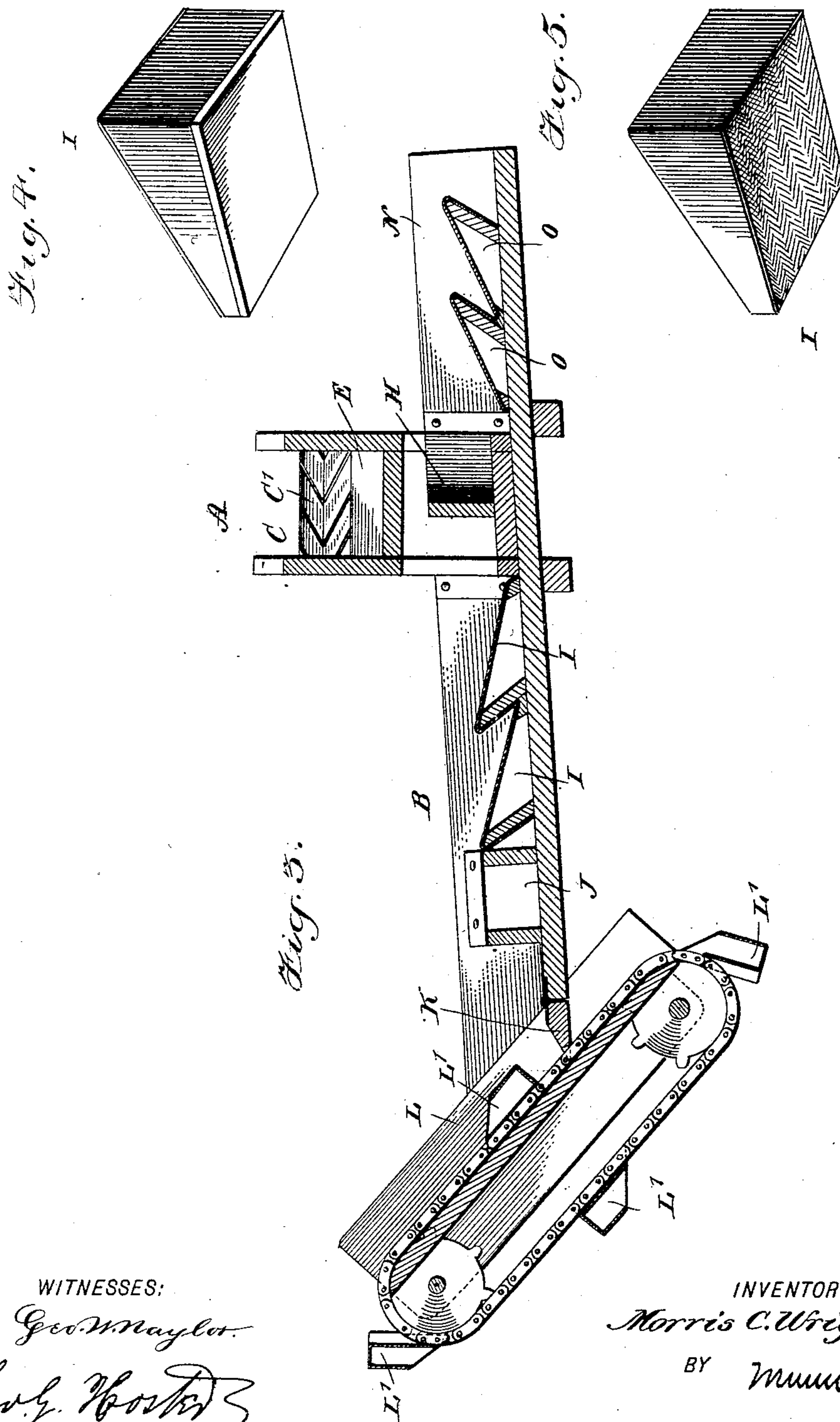
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UNITED STATES PATENT OFFICE.

MORRIS CHARLES WRIGHT, OF SULTAN, WASHINGTON.

GOLD-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 745,949, dated December 1, 1903.

Application filed November 15, 1902. Serial No. 131,522. (No model.)

To all whom it may concern:

Be it known that I, MORRIS CHARLES WRIGHT, a citizen of the United States, and a resident of Sultan, in the county of Snohomish and State of Washington, have invented a new and Improved Gold-Separator, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved gold-separator which is simple and durable in construction, very effective when in use, and more especially designed for collecting the fine gold contained in the pulp of stamp-mills or in the material of placer-mining and for providing a ready discharge of the tailings in case the same cannot be dumped into a running stream for carrying the tailings off.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement. Fig. 2 is a sectional side elevation of the same on the line 2 2 of Fig. 1. Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 1, and Figs. 4 and 5 are perspective views of collecting-boxes employed.

The improved gold-separator consists, essentially, of flumes A and B, set at right angles one to the other, as plainly illustrated in the drawings, the upper end of the flume A being arranged for connection with the discharge end of a sluice-box, so that the gold-bearing material flows onto a slatted bottom C, arranged in the upper end of the flume A, the slats C' of the said bottom being set obliquely and spaced apart to form zigzag slots to readily separate the gold-bearing sand from the gravel and boulders, the said gold-bearing sand passing through the slots into a chamber D, located below the bottom C and having an inclined solid bottom D', discharging into the flume B, set in an inclined position, as indicated in Fig. 3. The lower end of the inclined bottom C connects with a steeply-inclined bottom E, leading to a hinged door

F, connected with an elevator G, having transverse carriers G' for engaging the boulders, gravel, and other heavy material passing down the flume A over the bottoms C and E and door F to carry the said heavy material upward to one side of the machine. The gold-bearing sand passing from the chamber D into the flume B is deflected therein in a downward direction by a reversible angular partition H, set in the flume to divide the latter into an upper and lower portion. The gold-bearing sand flows down the lower portion and over a plurality of collecting-boxes I, arranged one in front of the other and extending from one side of the flume B to the other, each collecting-box I being provided with an inclined top made of fabric material, such as carpet, matting, burlap, or the like. The lowermost collecting-box I connects with a collecting-box J, also having a top of fabric material, the said top, however, being parallel with the bottom of the flume B instead of being inclined, as the tops of the collecting-boxes I.

The lower end of the flume B is provided with a hinged door K, leading to an elevator L, having buckets L' for carrying the sand and like tailings up away from the flume B to discharge the said tailings to one side of the machine separate from the boulders.

Now it is evident that the gold-bearing sand flowing down the flume B in a continuous stream and over the fabric tops of the collecting-boxes I and J is retained by the fabric, and the heavy material (gold) readily works through the meshes of the fabric to accumulate in the boxes, while the sand and other tailings are carried to the lower end of the flume and by the buckets L' to one side of the machine. The collecting-boxes I and J are removably held in the flume to allow of removing the boxes from time to time for obtaining the collected gold, and the said boxes gradually break the force of the current to give the gold time to readily settle in the fabric of the boxes.

The upper portion N of the flume B is to be used in cleaning up and is provided with settling-boxes O, similar to the boxes I previously mentioned. When cleaning up, the partition H is reversed to direct the water and gold-bearing sand into the upper portion

instead of the lower portion of the flume. Thus an uninterrupted operation is obtained and all the gold is saved.

Now from the foregoing it will be seen that
 5 the material passing from the sluice-box into the flume A is separated therein in such a manner that the gold-bearing sand passes to the chamber D, while the large pebbles and boulders are carried by the elevator G to one
 10 side of the machine. The gold-bearing sand next passes into the flume B, and thus down the same over the upwardly-inclined fabric-material tops of the collecting-boxes I and J, so that the gold readily passes through the
 15 meshes of the box-tops of the said collecting-boxes, while the sand and other tailings flow down the flume B to finally pass into the buckets L' of the elevator employed for carrying the tailings to one side of the machine.
 20 It is understood that the elevators G and L are only used in places having no running streams for carrying off the tailings in the usual manner.

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

1. A gold-separator comprising a flume for connection with the discharge end of a sluice-box, an inclined slatted bottom in the upper
 30 portion of the said flume, a steeply-inclined bottom leading from the lower end of the slatted bottom, a chamber below the said slatted bottom having an inclined solid bottom, a second flume at right angles to the first-
 35 named flume and into which the inclined solid bottom of the said chamber discharges, the second flume being set in an inclined position, a reversible angular portion set in the said second flume at the discharge of the first
 40 flume to deflect the gold-bearing sand in a downward direction in the lower portion of the second flume, and gold-collecting boxes set in the said second flume and having tops formed of fabric material, as set forth.

45 2. A gold-separator comprising a flume for connection with the discharge end of a sluice-

box, a slatted bottom in the upper portion of the said flume, for separating gold-bearing sand from tailings, a chamber below the said
 50 slatted bottom, having an inclined bottom, a steeply-inclined bottom leading from the lower end of the slatted bottom and having a hinged door at its lower end connected with an elevator, a second flume at angles to the
 55 first-named flume, having an oblique partition at the discharge of the first-named flume, so that the gold-bearing sand is deflected in a downward direction in the lower portion of the second flume, and gold-collecting boxes
 60 having inclined tops of fabric material, held removably in the lower portion of the said second flume, as set forth.

3. A gold-separator comprising a flume for connection with the discharge end of a sluice-
 65 box, an inclined slatted bottom in the upper portion of the said flume, for separating gold-bearing sand from tailings, a chamber below the said slatted bottom, having an inclined bottom, a steeply-inclined bottom leading
 70 from the lower end of the slatted bottom and having a hinged door at its lower end connected with an elevator, a second flume at angles to the first-named flume, having an oblique partition at the discharge of the first-
 75 named flume, so that the gold-bearing sand is deflected in a downward direction in the lower portion of the second flume, gold-collecting boxes having inclined tops of fabric material, held removably in the lower portion
 80 of the said second flume, and similar collecting-boxes in the upper portion of the said second flume, for cleaning-up purposes, the said second flume having a hinged door at its discharge end leading to an elevator, as
 85 set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MORRIS CHARLES WRIGHT.

Witnesses:

J. A. GREENE,
 T. J. ATWOOD.