## March 13, 1928.

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### H. F. KELLNER JETTY

Filed Aug. 23, 1926

# 1,662,578

2 Sheets-Sheet 1

Fig1 8 ×15 12 13 d 6 2 Fig 3 10 // 9 3 14 FEGR HEnry F. Kellner BY Warren W. House His. ATTORNEY. 6 ÌŻ

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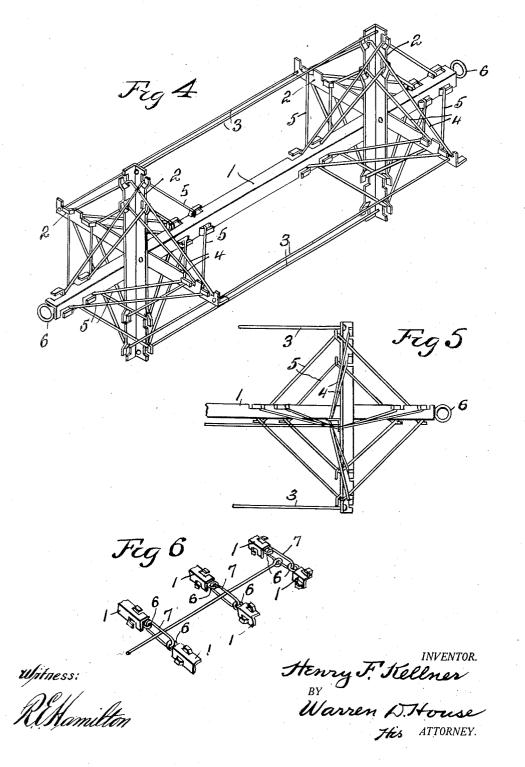
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# UNITED STATES PATENT OFFICE.

HENRY F. KELLNER, OF SILVER LAKE, KANSAS.

#### JETTY.

### Application filed August 23, 1926. Serial No. 139,927.

My invention relates to improvements in responding to the one just described are disjetties.

The object of my invention is to provide a jetty which will serve as a revetment to

protect a river bank and its bed, which is simple, cheap, easily and economically installed, which is strong, durable, not liable to be broken up or displaced, which will collect and hold driftwood, stones and soil and

10 which is efficient in its operation. My invention provides further a novel mat or mattress for revetment use on a bank and in a river.

The novel features of my invention are 15 hereinafter fully described and claimed.

In the accompanying drawings, which illustrate the preferred embodiment of my invention,

Fig. 1 is a plan view of my improved jetty 20 shown anchored in a stream.

Fig. 2 is a section on the line 2-2 of Fig. 1.

Fig. 3 is an end elevation of some of the connected units of different transverse rows 25 of jetty units which form part of my im-

proved mat. Fig. 4 is an enlarged perspective view of one of the jetty units which I employ in my improved jetty mat.

Fig. 5 is a side view of a portion of one 10 of the jetty units, enlarged.

Fig. 6 is an enlarged perspective view of one of the longitudinal anchoring cables, portions of connected jetty units and links 35 connecting said units.

Similar reference characters designate similar parts in the different views.

My improved jetty mat comprises a series of rows of connected jetty collecting units 40 arranged transversely to a river on its bank

and on its bed, the rows being anchored to the bank against movement transversely and downwardly with respect to the current of the river.

Referring particularly to Figs. 4, 5 and 6, each collecting jetty unit which I prefer 45 to employ, comprises a longitudinal angle bar 1, to which are fastened two sets of crossed angle bars 2. Wires 3 connect the

50 corresponding bars 2 of the two sets of crossed bars. Wires 4 connect the crossed bars of each set with each other, and wires 5 connect the cross bars 2 with the longitudinal bar 1. The ends of the bar 1 has 55 fastened to it eyes 6.

posed in transverse rows, links 7 being used to connect the adjacent ends of the adjacent units of each transverse row. Similar links 60 8 connect the adjacent ends of adjacent cross bars 2 of the different rows, the units being, preferably disposed also in longitudinal rows, Fig. 1.

For anchoring the mat against transverse 65 movement, anchoring cables 9, respectively connected to posts 10 on the river bank 11, are respectively connected to the adjacent eyes 6 of the different transverse rows, Fig. 1.

For anchoring the mat against movement 70 down stream, two longitudinal cables 12 are fastened at their upper ends to posts 13 on the bank 11, and are connected to the outer eyes respectively of the different transverse rows of units. 76

Intermediate longitudinal anchoring cables 14 are respectively fastened to posts 15 above the mat and are fastened to the links 7 of the lowermost transverse row, and are slidably mounted respectively in links 7 of 80 the other transverse rows, Figs. 1, 2 and 6.

In the operation of the jetty, the con-nected jetty units and cables will form a mat or mattress which will collect material washed down by the river and will prevent 85 further erosion of the bank and river bed. Owing to the flexible connections between the units, the mat will conform to the bank and river bed.

I do not limit my invention to the struc- 90 ture shown and described, as many modifications, within the scope of the appended claims, may be made without departing from the spirit of my invention.

What I claim is:-

1. In a jetty, a jetty mat comprising collecting jetty units arranged in longitudinal and transverse rows, spacing connectors connecting the units of each transverse row with each other, spacing connectors connecting 100 the units in the longitudinal rows with each other, spaced anchoring transverse cables respectively connecting with the adjacent units of the transverse rows, and longitudi-nal anchoring-cables fastened to the lower-105 most transverse row of units and having longitudinal slidable connection with the other transverse rows of units.

2. In a jetty, a jetty mat comprising collecting jetty units arranged in rows trans- 110 versely to a stream, connectors connecting As shown in Figs. 1 and 2, the units cor- the units of each row, connectors connecting

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the rows with each other, transverse cables respectively connected to the adjacent units of said rows for anchoring the mat from transverse movement in a stream, two longi-

- tudinal anchoring cables connected to the outer ends respectively of said rows, and intermediate longitudinal cables anchored at their upper ends and at their lower ends being fastened to the lowermost row of units
  and slidably connected with the other rows.
- 3. In a jetty, a jetty mat comprising collecting units arranged in transverse rows, links connecting the units of each row with

each other, connectors connecting the rows with each other, transverse anchoring cables 15 respectively connected to the adjacent units of said rows, two longitudinal anchoring cables connected respectively to the outer ends of said rows, and intermediate longitudinal anchoring cables fastened to the low- 20 ermost row and respectively slidably mounted in the links of the other rows.

In testimony whereof I have signed my name to this specification.

### HENRY F. KELLNER.