One Penny

DAILY EXPRESS 16-10-44

INVASION PORT MADE IN FACTORY

Biggest D-Day secret out

Express Naval Reporter W. A. CRUMLEY

HERE, at last, is the incredible secret of the Normandy landings: the story of the prefabricated artificial harbours.

It is the story of how a harbour as large and impregnable as Gibraltar was secretly prefabricated by bewildered workers in Britain and built by the Navy and Army on open Normandy beaches. Of how:—

One hundred and fifty steel and concrete caissons, looking like Daily Express buildings or blocks of flats afloat, sailed out of the estuaries of England to Normandy.

Five hundred thousand tons of ships, famous men-of-war and merchantmen, were sunk by our own sailors to form breakwaters.

Thirteen miles of piers and causeways went to sea in 480ft. sections, inspiring the legend that a bridge was being built across the Channel.

One million five hundred thousand tons of artificial harbours, piers and floating breakwaters—with steel support or buttress structures—were towed across the Channel, in heavy weather, past the shoals, minefields and U boats, by 150 tugs.

Port Winston

All this inside one month. The Merchant Navy's word for it is Port Winston.

It is the story of how complete strategic and tactical surprise was achieved in landing the Army of Liberation.

For the Germans, who have never fully understood the uses of sea power, believed that it could not be done without a port; that the Allies must attack at Le Havre, Cherbourg, Calais, or Dieppe.

Officially, the story began at the Quebec Conference (August-September 1943), when President Roosevelt and Mr. Churchill gave orders for the prefabrication of complete harbour works for two ports, each several times larger than Dover.

The job had to be done inside seven months to fulfil the Allied promise to Marshal Stalin. And Dover harbour had taken seven years to build.

In a little hut

Yet the story began not in Quebec's storied Citadel or Chateau Frontenac luxury hotel, but in a small, secluded hut on the coast of Dorset. There, a handful of scientists lived for months, studying the behaviour of seas, determining not only how to beat the sea but to use it.

One of the chief scientific planners of the operation is, in his own words, "a naval officer disguised as a professor."

He alone wears plain clothes on the other side of the Channel, crumpled jacket, pullover and flannel bags. Publication of his name, he insisted, would handicap his work.

Another scientist is a professor ill-disguised as a naval officer. Uncut masses of blond hair straggle under his cap: his khaki battle blouse does not reach his waist, though he is not tall, and his shoes are brown.

He sent over the "commando" scientific workers who examined the strata of the Normandy beaches under the noses of the unsuspecting enemy.

Six weeks before D Day Lieutenant Berncastle went across in a rubber canoe, surveyed the approaches to the Arromanches beaches and took a line of soundings.

These proved that the old French charts, which were all that the naval staff had to work on, were out-of-date. The French had examined and dismissed as impracticable, many years ago, a proposal to build a harbour at Arromanches.

Six days before D Day the first of the 50 blockships sailed from Britain. They were aged and slow, some of them 40 years old, but they began the invasion.

On the sunny, blowy evening of D Day the proud, grey line of doomed ships came slowly and steadily, dead on time and station, through the massed ranks of bombarding battleships, cruisers and assault vessels.

BLOCKSHIPS IN

Even before the smoke of battle had cleared from the obstacle-pitted low hills beyond the town, even before the men of the 50th Division had reached Bayeux or swung right to overrun the heavy coastal battery at Longues, or the Canadians' line of battle got out of sight, blockships were taking up their last stations.

It was not easy in the heavy swell for the skeleton crews, guarded by Army A.A. gunners, to get the ships into the scuttling positions, bow to stern. Sea cocks were opened, time bombs were blown.

Unrecognisable now is the 32-year-old battleship Centurion, once the cork-filled target of the Fleet at battle practice; parent ship of the first pilotless aircraft—the radio-controlled Queen Bees and Wasps; and the first warship steered by remote radio control.

Higher than the rest, her main deck and surviving superstructure well above water, is another 32-year-old battleship, the French Courbet, one of the 100-odd ships that escaped on the fall of France.

This blockship was the battleship torpedoed in the Channel.

The largest Tricolor in the Channel and the Cross of Lorraine still fly at her shortened masts.

Next in line is the stripped hulk of the Dutch heavy cruiser Sumatra. The British cruiser Durban, past her 25th birthday, lies nearest to the enemy and still, as she was wont to do, faces the enemy.

Most of the merchantmen had defied the U-boats in two wars. Had they survived this war they could only have gone to the breaker's yard or to the merchant marines of other countries.

INTO THE LEE

Into the lee of their grounded hulks, a series of sheltered lagoons, came the concrete caissons.

Some of them sailed from the Thames on D Day, towed at four knots, and were seen by scores of thousands of people, who did not guess the secret. Others voyaged more than 200 miles. All carried a handful of sailors and mounted A.A. guns, served by soldiers.

Concrete caissons, piers and floating breakwaters transformed two of the lagoons into prefabricated artificial harbours.

The piers, fitting together like Meccano pieces, each the size of bridge spans, formed causeways from ship to shore. They rise and fall with the tides, moored to heavy ramps and "spud pier-heads."

When the problem of these piers was under examination in 1942, the Prime Minister took a personal interest in this subject. He wrote:

"Piers for use on beaches: They must float up and down with the tide. The anchor problem must be mastered. . . . Let me have the best solution worked out. Don't argue the matter."

Thirteen days after D Day, when the construction of the harbours was half finished and had defied the bombing, parachute mining and strafing night after night, the greatest June gale for ten years sprang up.

POUNDED TO BITS

It came from the worst possible quarter. Assault craft were driven ashore and pounded to pieces on a lee shore. The beaches were strewn with their wrecks, and with "ducks." Large merchant vessels dragged their anchors and went aground.

Heavy seas broke open the incomplete outer breakwaters. At the harbour on the American sector even the concrete caissons were breached and parts of them carried away.

Few supplies got through to the American beaches for three days. But the American troops cut the base of the Cherbourg peninsula, the capture of the port of Cherbourg was achieved on schedule, and the American harbour was abandoned.

Salvage from the wreckage was used to complete and reinforce the British harbour at Arromanches.

There was no danger that our troops, denuded of supplies, would be thrown back into the sea. Enough had been landed in the first 12 days to make the bridgeheads secure.

But the supply hold-up seriously delayed the whole American advance.

Harbour B (B for British) now takes anything from 7,000-ton Liberty ships to coasters, unloading direct into ducks, lighters and causeways.

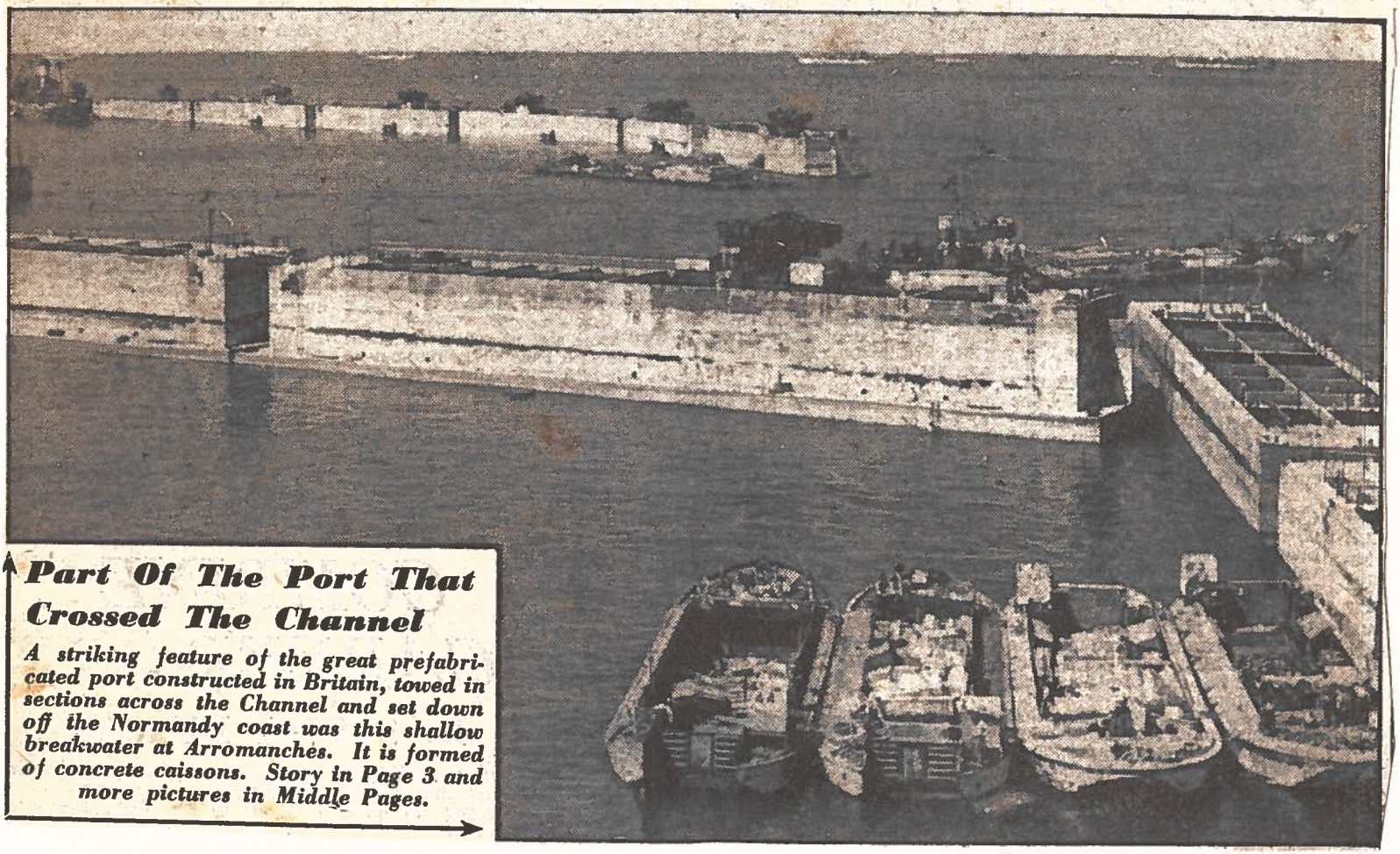
On its beaches, cleared of mined obstacles, the squadrons of tank landing ships and flotillas of ramped craft, run up to discharge their cargoes with every tide.

Brig. Bruce White, on whom the King has conferred the K.B.E. for his outstanding part in the port's creation.

Vice - Admiral W. G. Tennant, R.N., who was in charge of the sea operations.

The Daily Sketch

No. 11,057 ★ MONDAY, OCTOBER 23, 1944



Part Of The Port That Crossed The Channel

A striking feature of the great prefabricated port constructed in Britain, towed in sections across the Channel and set down off the Normandy coast was this shallow breakwater at Arromanches. It is formed of concrete caissons. *Story in Page 3 and more pictures in Middle Pages.*

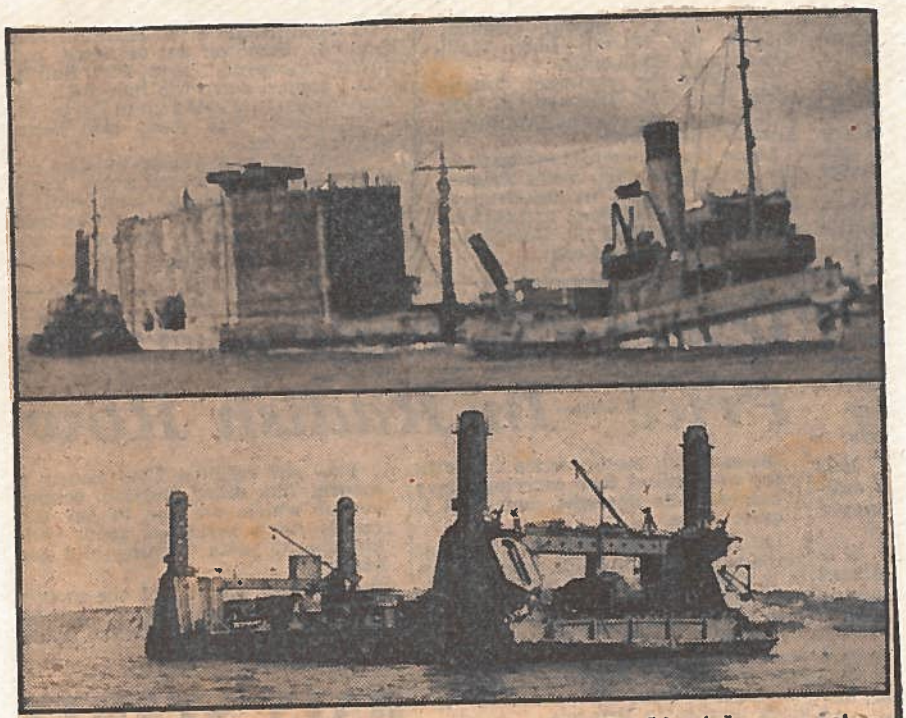
Capt. J. Hughes Hallett, R.N. ([redacted]), is the man who first thought of prefabricated "ports." That was in June, 1943.

● No build-up without a port; no port without a build-up. That was the dilemma confronting D-Day planners, and here is the first historic picture-story of Britain's momentous answer — the prefabricated port, which was towed 100 miles and assembled off lonely Normandy beaches at Arromanches.

That a synthetic port as large as Gibraltar's should be created in less than a month and withstand the worst June gale for 40 years is an unparalleled triumph of engineering skill and daring seamanship.

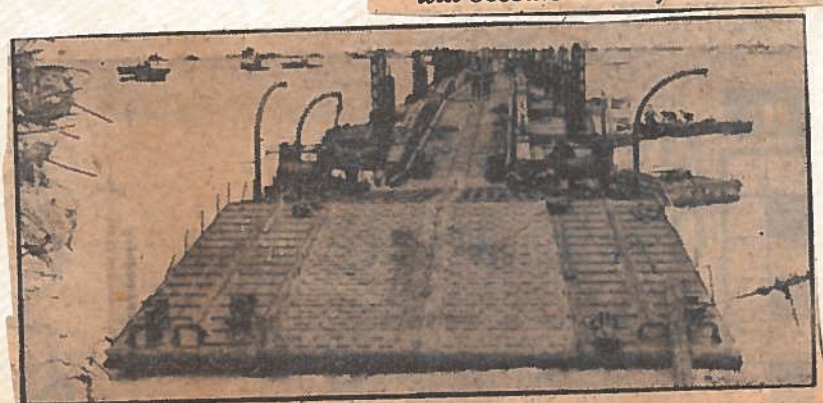
Constructed at sites as far apart as the Thames area (during raids on London screened lighting was used), Southampton, Portsmouth, Birkenhead, Hartlepool, Leith, Glasgow and North Wales, the portable port won the battle of the build-up, supplied the advance from Falaise to Germany, and revolutionised modern warfare. Better than words these pictures unfold the amazing story.

THE BLOCKSHIPS sailed on D-Day, were sunk to make an arc-shaped breakwater around each beach. Some of them form the background to this picture of Adml. Ramsay, Air Chief Marshal Tedder, Rear-Admiral Vian and other senior officers arriving in port.



THE CAISSONS (top picture), like concrete Noah's Arks mounting A.A. guns, are towed across; 146 of them were sunk to form breakwaters. As the port takes shape (lower picture) a spud pierhead arrives off Arromanches. Its four legs planted in the sea bed, it will become a wharf connected with the shore by pier roadway.

DAILY SKETCH
23-10-44



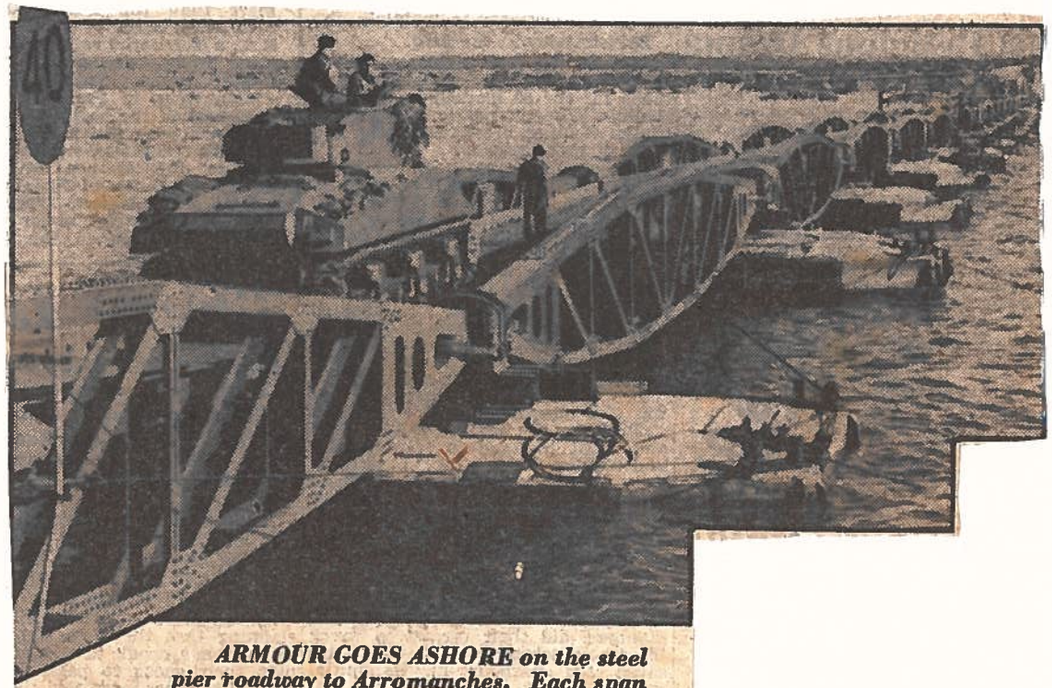
ON THE BEACH the pier connects with a bulldozed road ashore. Invasion traffic drives direct from offshore wharf to inland battle.

THE DAILY SKETCH, MONDAY, OCTOBER 23, 1944

Picture Story Of Synthetic Harbour That Won The D-Day Build-Up Battle

PORT THAT SAILED TO FRANCE

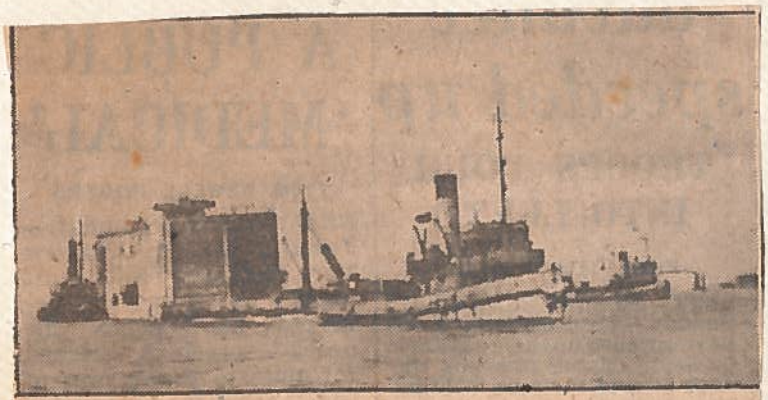
ROADS ON THE WATER, riding a 20ft. rise and fall of tide, link wharf with beach. Their position is shown on key picture (below, left).



ARMOUR GOES ASHORE on the steel pier roadway to Arromanches. Each span is supported on special floats designed to withstand heavy seas.

This busy scene below is the unloading pier, at the end of one of the several pontoons in the portable harbour.

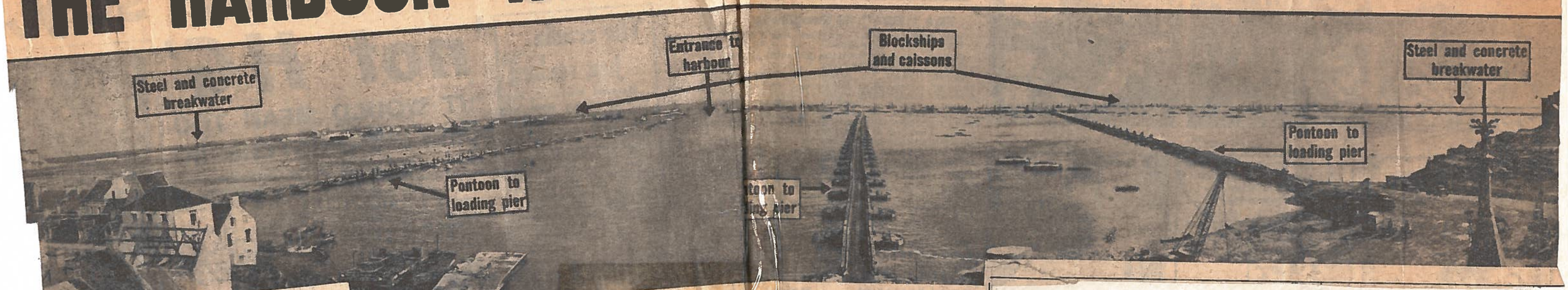
DAILY SKETCH



ONE HUNDRED AND FIFTY steel and concrete caissons, looking like blocks of flats afloat, sailed out of the estuaries of England for Normandy. . . . Here is one of the monsters under tow, on its way to a harbour site as Operation Mulberry—the construction of invasion ports where none had been—got under way. Twenty thousand workers had to be mobilised for the construction of the caissons alone.

DAILY EXPRESS MONDAY OCTOBER 23 1944

THE HARBOUR WE TOWED ACROSS TO FRANCE



Panorama of our British-built wonder harbour in France, with its steel and concrete breakwater, which we towed across in 500 sections.

★—"Bigger than Dover Harbour"

Britain built the all-time wonder of warfare, the "bigger than Dover" harbour at Arromanches, on the Cherbourg Peninsula of France, within twelve months of the tests with models.

We didn't know where it would go, but it was on the job within a week of D-Day.

With its help we landed two to three million men, hundreds of thousands of lorries, millions of tons of equipment and supplies, despite the foulest June for forty years, and pontoons rising 20ft. with the tide.

Start from the left of the picture, and go right across.

FROM THE CLIFFS: A line of concrete caissons (steel pillars filled with cement) form a breakwater.

FROM THE HOUSES (left): A pontoon roadway, like that shown more plainly in the centre of the picture. This is made of barges, laid crosswise, and connected with steel-girder structures, with a road laid on them.

BEYOND THIS PONTOON: Is the main entrance to the harbour. Forming the terminus of the pontoon is the pierhead, where ships can unload into the lorries that come along the pontoon. (There is a close-up of a pierhead in another picture on this page.)

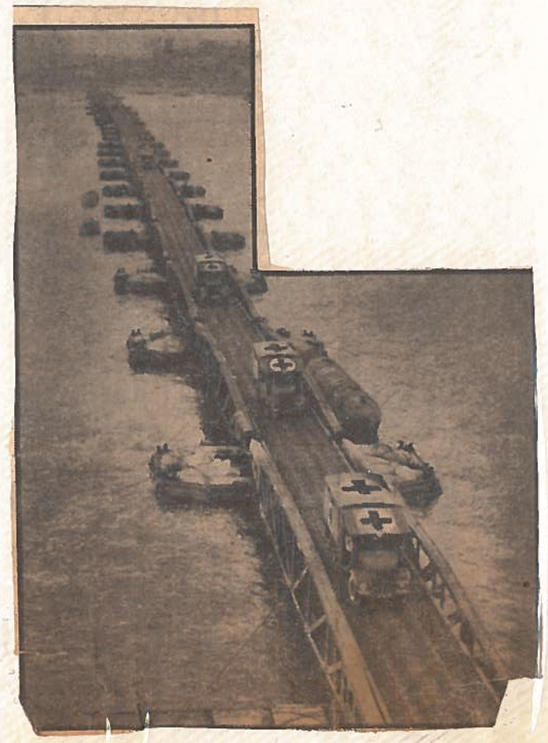
CENTRE: View along one of the pontoons, to the pierhead.

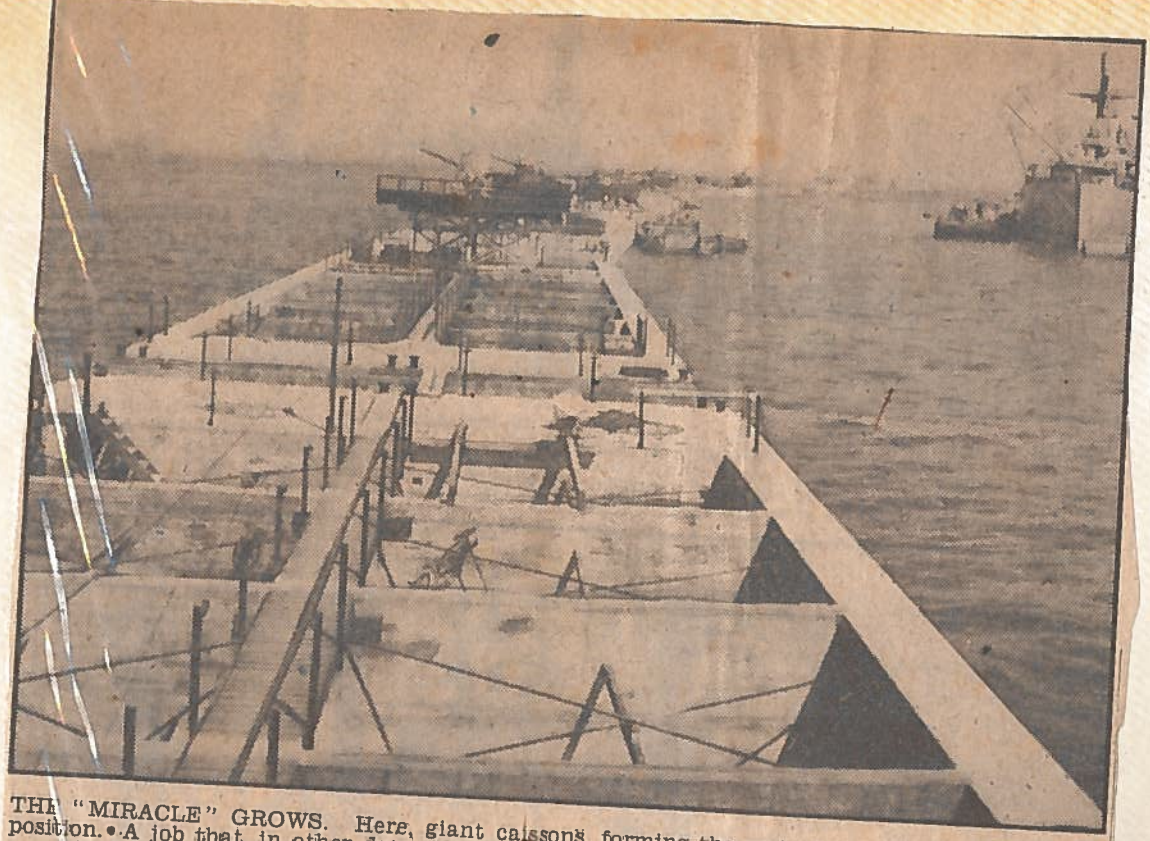
RIGHT: Another pontoon, and so they go, another and another pontoon.

Twenty thousand men worked on the caissons alone in Britain.

Six hundred thousand tons of concrete and 75,000 tons of steel were used.

When the order was given to get going, the harbour needed 500 cross-Channel tows, some of them from places as far from Normandy as Leith.





THE "MIRACLE" GROWS. Here, giant caissons, forming the main deep-water break, are in position. A job that, in other days, might have taken years. It is estimated that 600,000 tons of concrete and 75,000 tons of steel were used in the construction of the artificial harbours.

Towed past the shoals and the minefields . . .

THIRTEEN MILES of piers and causeways went to sea in 480ft. sections — all towed across the Channel in heavy weather by 150 tugs. Here is one section, buffeting its way to Normandy. The piers, fitting together like Meccano pieces, formed causeways from ships to shore.

They call it Port Winston

A MIGHTY feat of engineering is pictured above . . . a feat that has revolutionised modern warfare.

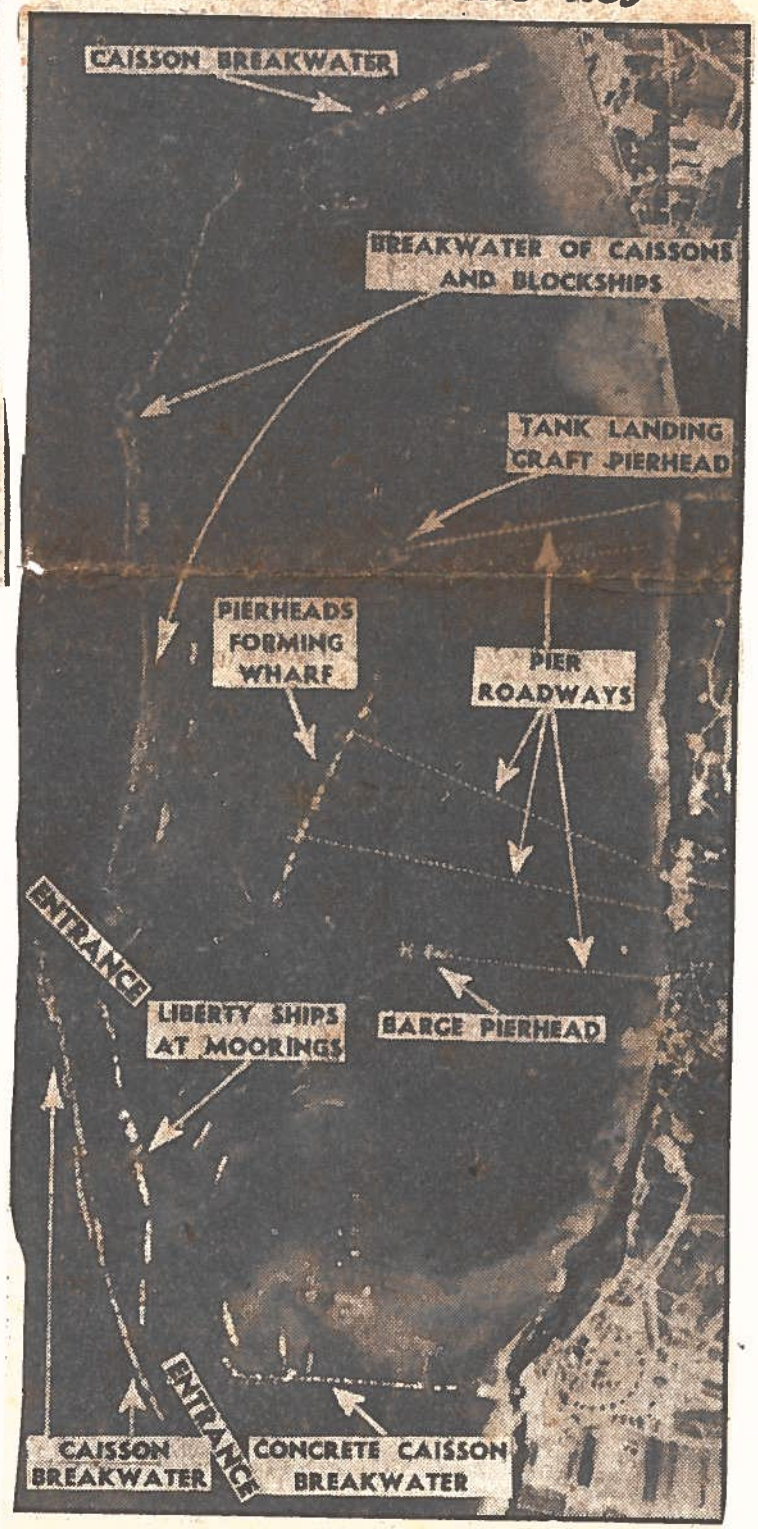
"Port Winston," they call it in the Merchant Navy. It has a harbour as large and impregnable as Gibraltar—secretly prefabricated in Britain by thousands of workers, and towed in sections, with the components for a sister port, to the open beaches of Normandy.

The story was told in full in the Daily Express of Monday last.

These artificial harbours, assembled by the Navy and the Army, made possible an invasion without an established port and completely bewildered the enemy . . . After the violent June gale, the harbour designed for the U.S. Forces was abandoned. Salvage was used to reinforce the British harbour.

The vast pre-fabrication work for the staggering Operation Mulberry, had to be completed in seven months. "Port Winston" is Harbour B (B for British) at Arromanches. It now takes anything from 7,000-ton Liberty ships to coasters, unloading direct into ducks, lighters and causeways. On its beaches squadrons of tank landing ships and flotillas of ramped craft run up to discharge their cargoes with every tide.

And here is the key



How they made the ports : Story in pictures, Page Three

THEY LOCKED HER DAILY IN BLACKED' WAR OFFICE ROOM

SHE KNEW THE D-DAY SECRETS

THEY locked Mrs. Masika Lancaster in a specially blacked-out, secret room at the War Office. . . . And there she worked on her war job.

Mrs. Lancaster, 29 years old, was the only woman in Britain who knew the great secret of the invasion and for nearly a year was under strict pledge not to utter a word about it.

In that locked room, Mrs. Lancaster, artist, constructed remarkable models on which the enormous work of building prefabricated ports for the Normandy beachhead was based.

Yesterday, at the House of Commons, she helped high-ranking war officials to demonstrate to M.Ps how the "Mulberry" ports worked.

"The black-out in my secret room was enforced all through the day as well as the night," said Mrs. Lancaster afterwards, "so that nobody could ever see through the windows and guess what I was doing.

"Everybody who came in had to sign a security book promising not to tell.

"All the work had to be done by electric light. I began the work in 1943 after the Quebec Conference, where it was all decided upon.

HECTIC RUSHES

"Often there were hectic rushes. I did not mind staying late and working on Sundays if necessary.

"The cardboard models were cut to scale and made out to the operational plan.

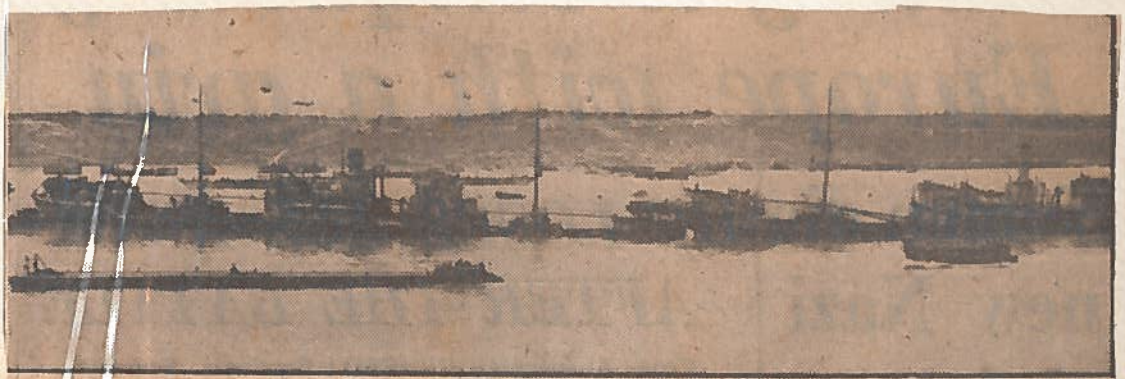
"There were small strips for bridge spans, bigger scales for pierheads, and everything was marked with its name. Blockships and coasters were cut out, too, and every bit of equipment was there to scale.

"Conferences were being held all the time, and alterations had sometimes to be made involving a lot of work that had to be done quickly.

Mrs. Lancaster is the wife of Captain E. W. M. Lancaster, King's Own Hussars, a prisoner of war in Java. They have a daughter aged four years and a half.

"We did not know that my daughter-in-law was doing this job," said Mrs. Hugh Lancaster, of Lower Beeding, Sussex, last night.

"All we knew was that she left here every morning at 7.15 to catch the 7.40 train from Horsham. She didn't get home until 7.30 any night. Often it was later."



HALF A MILLION tons of ships, men-of-war and merchantmen, were sunk to make breakwaters for the new ports. . . . Sea-cocks were opened, time bombs blown. And into the lee of the grounded hulks—a series of sheltered lagoons—the concrete caissons were placed. . . . This is the Americans' Omaha Beach. Small craft, barges and pontoons ply inside the breakwater of sunken ships, landing troops, supplies and equipment at jetties. On the crest of the hill a camp has been set up, with an airfield to the right of it.

This is how 'Mulberry' looked from Arromanches

The Harbour Called 'Mulberry'

CECIL McGIVERN introduces Monday's ninety-minute 'starred' programme, the story of 'Mulberry'—the harbour that sailed to France on D-Day—how it was planned, built, and used. McGivern, author and producer of the programme, says that 'Mulberry' 'was in the main a product of British effort and British achievement' and that those who shared in its construction 'were part of a great team which laboured to bring about a great end'

ON a night in July 1940 British sailors stared anxiously into the darkness that covered the Island of Guernsey. Fifty yards separated their motor launch and the shore, and the water was rough. White surf showed where waves three feet high broke on the beach, waves which prevented the launch from going in closer. Struggling out to reach them was a dinghy. It overturned. Commandos struggled in the water. Precious Bren guns slid to the sea bottom and were lost. The exhausted soldiers—all but one—were hauled on board and the launch headed for England. A Commando raid had ended.

In 1944, on D plus 28, the millionth soldier sailed into the harbour called Mulberry B and stepped safely on to the shores of France.

Between those two moments lies a great story, the story of a purpose born while the smoke of Dunkirk still darkened the sky, and the story of its brilliant fulfilment. It is that story which the programme *The Harbour Called Mulberry* tells, or attempts to tell; for even one-and-a-half hours of radio time can only sketch in its outlines.

To determine to get back into Europe as soon as possible was for us a simple and inevitable idea. To evolve a method of doing this successfully entailed four long years of planning, of experimenting, of suffering, of disappointment, of bitter lessons learned at St. Nazaire, Dieppe, and in many unpublicised raids on the shores of Occupied Europe. In 1941 and 1942 the conference rooms of Combined Operations were never empty. Day after day, and often throughout the night, the ash-trays on the tables were piled with the butts of nervously-puffed cigarettes as every possible means of re-entering Europe was considered.

A continent away, guns thundered as Stalingrad was battered to a heroic ruin. Hoardings in every town in Britain were chalked with demands for a Second Front in Europe. But it was not until 1943 that the method of re-entering Europe was defined. Build a harbour, two harbours, in Britain, sail them to the beaches of Normandy and install them there as safe gateways for the tremendous army of men and the gigantic quantities of stores assembled in Britain.

The final decision was taken at the historic conference held in Quebec in August/September 1943 by the Prime Minister of Great Britain and the President of the U.S.A. and their staffs. Only six months were granted to implement that decision. In September 1943 British industry accepted the challenge: to construct and assemble, in six months, two complete ports, each the size of Dover harbour (which took seven years to build) and to construct them secretly. On the secrecy depended the success of the invasion, the lives of many thousands of Allied soldiers, and the course of the war. The six months became a feverish medley of prodigious quantities of steel and cement being rushed to many parts of Britain, of workmen toiling long hours on cold, misty sites far from their homes, a medley of bombings on the Thames, storms on the South Coast, shortage of tools, shortage of skilled labour, and of transport, and above all of time. There is material here for a book, for an epic, and much more than can be crammed into the span of a single broadcast.

On June 6, 1944, a mighty armada sailed from the harbours and waterways of the South Coast of England, and in it Mulberry A and Mulberry B. With their sailing the second part of this great story ends.

The Harbour in Being

Does the enemy know? Will the harbours reach France in safety? Can they be installed in face of intense opposition? By D plus 28, when the millionth Allied soldier stepped ashore and joined his comrades who were already forcing the enemy back across France, the answers were clear. But before that day the enterprise had been greatly jeopardised. On D plus 13 the worst summer gale for forty years had swept the beaches of Normandy. Mulberry A had suffered severely and was practically abandoned. Mulberry B, partly sheltered by the Calvados Reef, survived, and soon the idea which had grown so slowly, which had been built with so much effort and planted with so much skill, bore rich fruit.

That is the outline of the story of the harbour called Mulberry, a story which British listeners should be proud to hear. For though the U.S.A. helped generously in the planning and the assembling, it was in the main a product of British effort and British achievement.

Many men helped to make the story. Monday's broadcast cannot pay tribute to them all, nor can it cover properly their great work. We hope as they listen they will realise, even though their part is told only by a paragraph, by a sentence perhaps, that their share has not been passed over lightly. Nor do we think they will complain, for they were part of a great team which laboured to bring about a great end.

RADIO TIMES · ISSUE DATED MARCH 2, 1945

LOCAL MAJOR'S BRAINS BEHIND INVASION HARBOURS

M.B.E. FOR LYMPSHAM RESIDENT.

Major A. H. Beckett, eldest son of Mr and Mrs. G. W. H. Beckett, of Worthy House, Lympsham, has been awarded the M.B.E. for his part in the designing and erecting of the pre-fabricated "Mulberry" harbour, which made the invasion of Europe possible. The official citation states: "Major Beckett, as assistant to Lt.-Col. Everall, was responsible for many of the details of the Whales equipment. He has shown great enthusiasm in the work, and has, during the field trials of the equipment, brought to bear much sound experience. He has also, rendered valuable service on the Mulberry B. site by acting as War Office representative and adviser to D. Tn. 21st Army Group on technical matters connected with the equipment. He travelled over on the first Whale bridge tow."

Whale is the official code word for the floating piers and landing stages which connect the harbour itself with the beaches. They have to be flexible enough to rise, fall and roll with the tide, and yet sufficiently strong to carry tons of war material.

Probably Experimented at His Lympsham Home.

Major Beckett was engaged on planning "Mulberry" right from its conception, and naturally as a former bridge engineer he was concerned with the portions in which bridge work was necessary. Some of the planning was probably done in his home in Lympsham; where, to quote his mother, "He would bring work home while on leave, but we had no idea what he was doing, and, of course, he wouldn't breathe a word."

He was constantly visiting the various firms where the materials were being put together to supervise the work, and while the harbour was in process of construction on the French side of the channel, he was flown to and fro so as to keep in contact with both ends of the job. Some of the early tests were carried out in Scotland, and on one occasion Major Beckett personally drove a Canadian locomotive across a portion of the equipment to test it.

During the gale which sprang up and wrecked much of the Mulberry equipment in the early stages of the harbour's construction, many of the caissons and much other material were saved by the use of an anchor which Major Beckett designed.

Demonstrated to Parliament.

After the completion of his "job," Major Beckett went through with General Dempsey's 2nd Army to Belgium and beyond, but was called back to help demonstrate to Parliament, by means of models constructed by Mrs. Lancaster, the functioning and methods of construction of "Mulberry."

This talented officer, who is only 30, graduated with honours as an engineer from London University. He was on the staff of Messrs. Steel Structures Ltd., for a time, and later entered the Ministry of Supply. He volunteered for the Army, entering hte Royal Engineers in 1941.

A coincidental feature connected with Major Beckett's share of the work was that his brother, Rigger Seaman E. W. Beckett, returned home from three years overseas service to join the Dover Patrol which was then engaged in sweeping the channel of the debris caused by the harbour's construction.

Mr. and Mrs. Beckett, who were bombed out of London in 1941, have a daughter Desiree, who is a Company Sgt.-Major in the A.T.S. She is with a searchlight battery, and last year was given a certificate for devotion to duty. She has been in the A.T.S. for six years and has always been stationed on the East Coast. Mr. Beckett won the M.M. in the last war for bravery under fire in France, and is a member of the Home Guard. Before they left London both he and Mrs. Beckett were doing valuable work, Mr. Backett as Warden, and Mrs. Beckett as a voluntary helper in the evacuation scheme, escorting parties to all parts of the West Country.

FORMER EAST HAM BOY'S AWARD

INVASION HARBOURS

It is revealed that a former East Ham schoolboy played a prominent part in the designing and erection of the pre-fabricated "Mulberry" harbour which made possible the invasion of Europe.

The M.B.E. has been awarded to Major A. H. Beckett, who, "as assistant to Lt.-Col. Everall, was responsible for many of the details of the Whales' equipment." The citation also states: "He has shown great enthusiasm in the work, and has during the field trials of the equipment brought to bear much sound experience. He has also rendered valuable service on the Mulberry 'B.' site by acting as War Office representative and adviser to D. Tn. 21st Army Group on technical matters connected with equipment. He travelled over on the first Whale bridge tow."

Major Beckett is the elder son of Mr. and Mrs. G. W. H. Beckett, who were bombed out of their home at Montpelier-gardens, East Ham, in 1941, and now reside at Worthy House, Lympsham. He is 30, started schooling at Central Park School, and then went to East Ham Grammar School. He was troop leader of the 25th (St. George's) East Ham Scout Troop, and also a Rover Scout.

Proceeding from the Grammar School to the London University, he graduated with honours in engineering. He entered the Royal Engineers in 1941. His brother is Rigger Seaman E. W. Beckett, R.N., and his sister Desiree is Co.-Sergt.-Major in the A.T.S. Their father won the M.M. in the last war. Before leaving East Ham Mr. Beckett was an A.R.P. warden, and Mrs. Beckett was a voluntary helper with the evacuation of the children.

EVENING STANDARD

Don't argue, said Churchill

'Problem must be solved'

The Royal Commission on Awards to Inventors were told in London to-day that a wartime message from Mr. Churchill led to the invention of the Mulberry harbour "Kite" anchor by Major A. H. Beckett, of Ruskin Road, Belvedere, Kent. The anchor is the subject of a claim by Major Beckett.

For the major it was said: "The story really starts with a minute in typically Churchillian language, saying:

"'They must float up and down with the tide. The anchor problem must be solved. Let me have the best possible solution. Don't argue about the matter. The difficulties will argue for themselves.'"

11-7-49

MAJOR'S INVENTION CLAIM

Mulberry Harbour Anchor Problem

COLONEL V. C. STEER-WEBSTER, of Blagreaves Hall, Littleover, told the Royal Commission on Awards to Inventors in London yesterday how the Army solved one of the Admiralty's problems regarding the mooring of the Mulberry harbour.

He was giving evidence on behalf of Major A. H. Beckett, of Ruskin-road, Belvedere, Kent, whose claim was being heard in connection with the "kite' anchor used in the Mulberry harbour for the invasion of France.

Col. Steer-Webster, who was one of the chief designers of the harbour, told the Commission that a directive from Mr. Churchill that floating piers with effective moorings must be designed was issued at the first Quebec Conference. The Admiralty were to design the moorings

PORTSMOUTH TRIALS

"Although the moorings were in the hands of the Admiralty I was far from satisfied with the solutions suggested," he said. "Subsequently it was questioned at many conferences by the Prime Minister whether this mooring problem had been overcome."

When trials were held at Portsmouth with floating breakwaters, a type of anchor known as C.Q.R. was used, said Col. Steer-Webster, who took a model to the War Office.

About a week later, he said, Major Beckett came to him in his office and said: "There is your anchor problem solved. This is the finest anchor in the world."

He produced a model and drawings of the anchor, which was later used for Mulberry harbour.

He (witness) carried out experiments and found that the kite anchor held, where the C.Q.R. dragged.

"We got Lord Louis Mountbatten to approach the Admiralty tactfully and say that the War Office were taking over the Admiralty problem of anchoring," said Col. Steer-Webster.

The Commission adjourned until to-day.

Footnote: It was announced last month that the Commission had awarded Colonel Steer Webster £1,000 tax free in recognition of his invention of flexible concrete mats used as "runways" to get Army vehicles ashore in the D-Day landings.

'MONSTER' WAS D-DAY DEVICE

July 1949

"Star" Reporter

BECAUSE it appeared to be dangerous, porters refused to handle a monster contraption, weighing more than a quarter of a ton, lying in the courtyard of Somerset House.

But the "mystery weapon" is not as dangerous as it appears.

It helped to make possible the D-Day landing in Normandy, and its official title is "kite anchor for Mulberry harbour mooring roadways."

It has been taken to Somerset House for the hearing of a claim before the Royal Commission on Awards to Inventors on behalf of Major A. H. Beckett, of Ruskin-road, Belvedere, Kent.

The claim will be heard on Monday.

Major Beckett, now a civil engineer, was a serving officer when he invented the anchor.

About 2,400 of them were made at a total cost of £100,000.

Their job was to hold the roadways in the Mulberry harbours in position.

The Commission are to decide what compensation Major Beckett will get for his invention.

PROBLEM HAD TO BE SOLVED

EX-MAJOR CLAIMS FOR 'MULBERRY' ANCHOR

THE Royal Commission on Awards to Inventors, sitting at Somerset House, Strand, were told to-day that a wartime message from Mr. Churchill had led to the invention of the Mulberry Harbour "kite" anchor by Major A. H. Beckett, of Ruskin-road, Belvedere, Kent.

The anchor is the subject of a claim by Major Beckett, formerly of the Transport Division of the War Office and now in private practice as a civil engineer.

The Hon. Charles Russell, K.C., representing Major Beckett, told the Commission: "The story really starts with a minute in typically Churchillian language. Headed 'Piers for users of Beaches,' the minute declares:

They must float up and down with the tide. The anchor problem must be solved. Let me have the best possible solution. Don't argue about the matter. The difficulties will argue for themselves."

A Success

Mr. Russell said that claimant had, on his own initiative, designed the kite anchor at a stage in the war operations when it was vitally urgent. The anchor was used exclusively for Mulberry, and was an unqualified success.

He had no responsibility for making such an invention at the time when he turned out his model and original drawings, but from that moment was expressly put on to the work.

THE STAR
11-7-49

Don't Argue, Said Churchill

MULBERRY CLAIM

THE story of when Mr Churchill said "Don't argue" to the Chief of Combined Operations was told to the Royal Commission on Awards to Inventors in Somerset House today.

Major A. H. Beckett, of Ruskin-road, Belvedere, Kent, asked for an award for his invention of the kite anchor used in mooring Mulberry Harbour during the invasion of France.

His counsel, Mr Charles Russell, KC, told the Commission: "The story really starts with a minute in typical Churchillian language.

Mr Russell, before reading the minute, said:

"The minute was written by Mr Churchill to the Chief of Combined Operations in the grimmest period of the war, in 1942, when already he was planning for invasion.

"He wrote: 'The piers must float up and down with the tide. The anchor problem must be solved. Let me have the best possible solution. Don't argue about the matter. The difficulties will argue for themselves.'"

The kite anchors, which weighed six cwt each and for which the War Office paid £100,000 for the 2,400 bought, were, said Mr Russell, "a complete, absolute and unqualified success. They did a crucial job."

Major Beckett sat in the courtroom playing with a scale model of his invention in a 2ft sand table during the hearing.

£1,250 For 'Kite'

MAJOR A. H. BECKETT, 41, Ruskin-road, Belvedere, inventor of the "kite" anchor used in mooring Mulberry Harbour during the invasion of France, has been awarded £1,250, free of tax, by the Royal Commission on Awards.

This is little enough, indeed to my mind it savours of meanness, for when he has settled his solicitor's and counsel's fees Major Beckett will have little left. However, I have no doubt that what matters to him most of all is to have his claim recognised.

A civil engineer by profession, he was serving in the Royal Engineers when he solved the problem which led to Mr. Churchill's minute: "Don't argue about the matter . . . . the difficulties will argue for themselves."

Keen Yachtsman

THE Major's hobby is yachting, indeed he was keen on this pastime even as a boy. His mother tells me she made the lugsail for his first boat, which gave him many hours of pleasure.

His second yacht, perhaps, provided more thrills, but was a "wet" ship, and eventually he got rid of her and secured the Bonita, in which he made Erith yachting history.

A member of Erith Yacht Club since 1937, Major Beckett spends the majority of week-ends afloat; indeed, he looks on motor-cars as merely a means to get from place to place rapidly, preferring the more leisurely gait of the wind-driven craft—although all sailormen know only too well the need for quick thought and mental agility off-sets the bodily leisure.

Memorable Cruise

WHEN I first heard mention of the Royal Commission hearing his claim, the name Beckett seemed to ring a bell, but it was some time before I connected it with the yachtsman who made history at Ostend Regatta last year.

Major Beckett, in the course of a two-weeks' cruise, sailed into Ostend, to find the port gaily bedecked with flags and bunting. It was their regatta and for two days of unadulterated glory Bonita was the only English yacht in the regatta, with the Erith Yacht Club flag flying proudly from her mast.

This cruise won Major Beckett the yacht club's "Henriette" Cup for the best log. Last season he also won the "Hansen" Cup in the Queenborough Harbour—Erith race and, in May this year, won the combined handicap race over the club's circular course.

Major's idea earns £1,250

Major A. H. Beckett, of Ruskin-road, Belvedere, Kent, was yesterday granted £1,250 tax-free for his invention of the kite anchor used to moor the Mulberry Harbour pontoons.

The Hon. Charles Russell, K.C., who represented Major Beckett before the Royal Commission on Awards to Inventors, said Major Beckett went to work on his idea after this minute from Mr. Churchill:—

"The pontoons must float up and down with the tide. The anchor problem must be solved. Don't argue. The difficulties will argue for themselves."

About 2,400 of the anchors were made at a cost of £100,000.

DAILY EXPRESS 30-7-49

Award of £1,250 has been made to Major A. H. Beckett, of Belvedere Kent, for designing an anchor for mooring pontoons in Mulberry Harbour.

£1,250 for Inventor.—Maj. A. H. Beckett, of Ruskin-road, Belvedere, Kent, has been awarded £1,250 for his design of kite anchors used for mooring pontoons in Mulberry Harbour.

DAILY TELEGRAPH 30-7-49

Mulberry B completed after the storm. Note the roadway from Mulberry A to make good towing losses on concrete floats. It is characterized by the large pontoons made from USA standard equipment with which they replaced all their concrete pontoons before towing from U.K.

This is the home-made invasion harbour—*First picture*

NOT TRANSFERABLE. No.....856.

DOCK PASS.

NAME....BECKETT A.H. RANK.....MAJOR

No. of Identity Card Officers A410608 Army No. Other Ranks.....—

Available for .....PERMANENT.....

DATE.....23 JUNE 1944

ISSUED BY ..... PORT COMDT. MULBERRY

Signature of holder.....A.H. Beckett

ALLAN BECKETT M.B.E

This Officer, as assistant to Lt.Col. Everall, was responsible for many of the details of the Whale equipment. He has shown great enthusiasm in the work, and has, during the Field trials of the equipment, brought to bear much sound experience. He has also rendered valuable service on the Mulberry B site by acting as War Office representative and adviser to D.Tn., 21st Army Group on technical matters connected with the equipment. He travelled over on the first Whale bridge tow.

'Mulberry' Reclaiming a Sunken Island

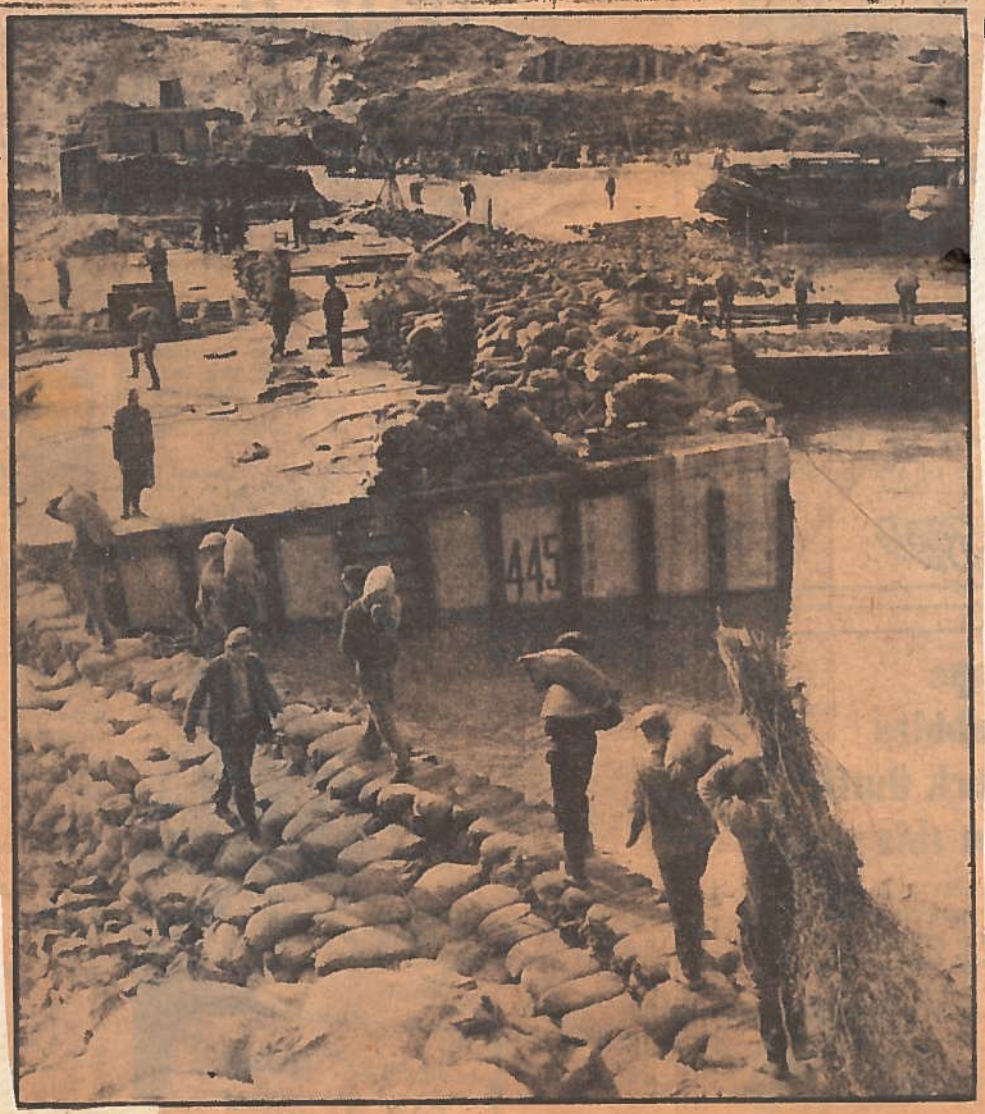
Closing Dykes Of Walcheren

FROM Holland come these pictures showing how the breached dykes of Walcheren are being rebuilt. Great gaps were torn in them, loosing torrents from the sea into the fields and practically sinking the island before the British attack a year ago.

To-day, with the aid of British Mulberry equipment, Dutch workers are rebuilding the sea wall—the first most vital task in the reconstruction of this part of Holland.

Above is one of the breaches nearly closed. The sea is on the left. Flood water (redacted) stretches for miles, and six months of pumping will be needed to free the land.

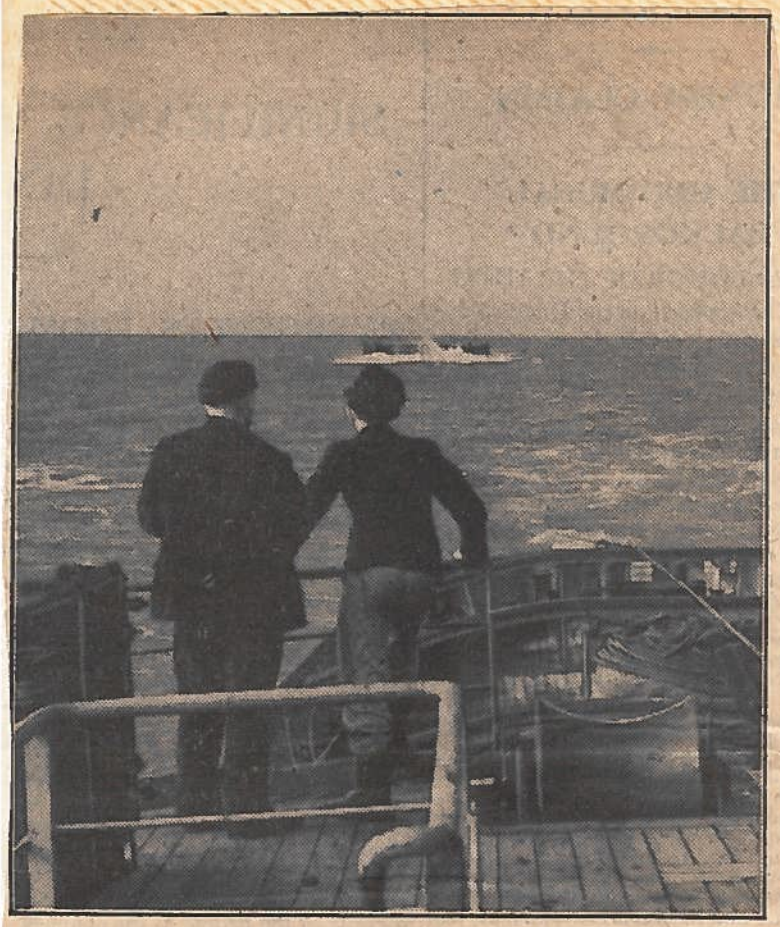
Through the last few yards of a breach in the Walcheren dykes rushes the sea — and the tide is rising. But before the next high tide this gap had been sealed by the laying down of sandbags and other suitable material.



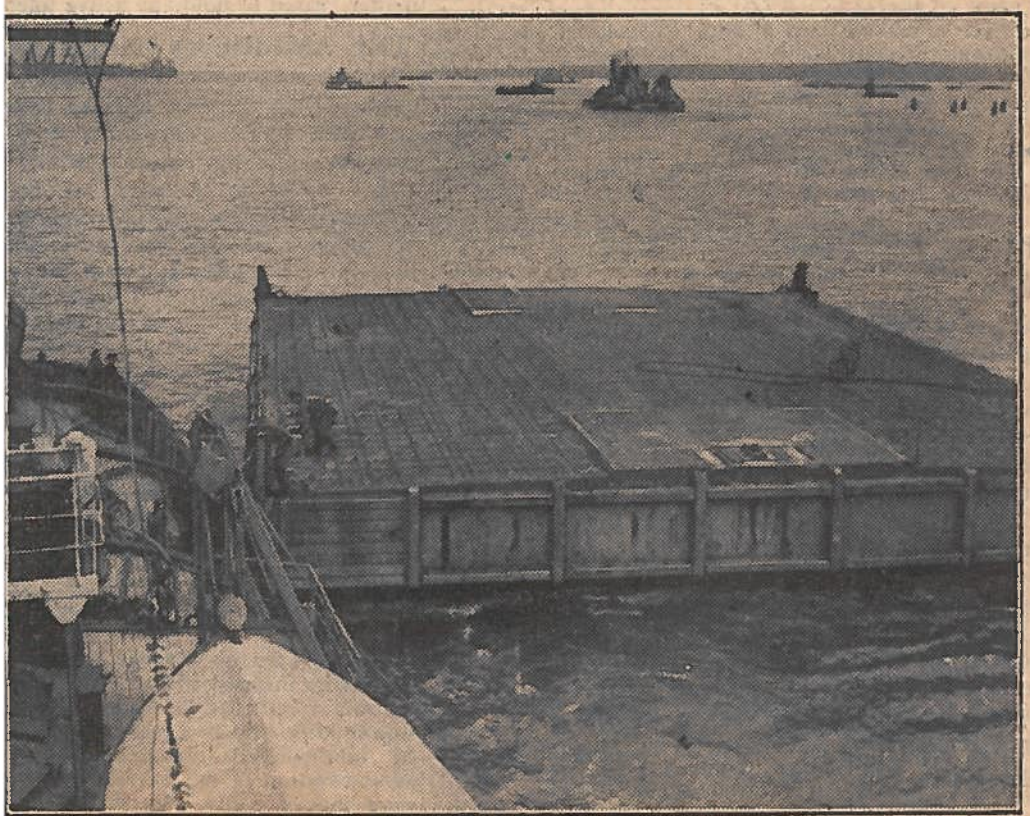
Dutch workmen carry sandbags to close a breach. When the dykes are restored work will begin on an outer sea wall in which Mulberry sections will be joined together.

SEALING THE DYKES AT WALCHEREN

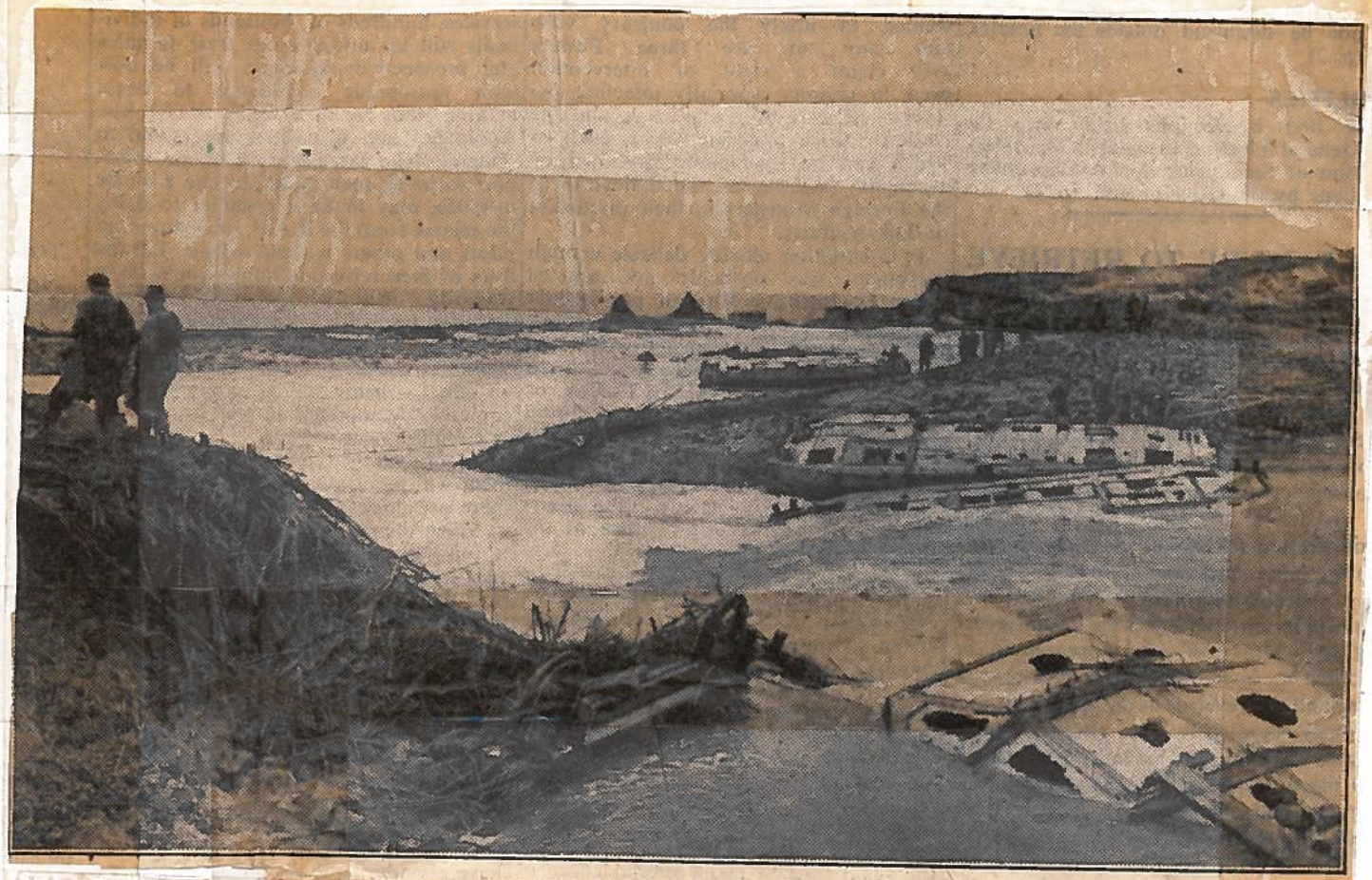
THE TIMES WEDNESDAY OCTOBER 3 1945



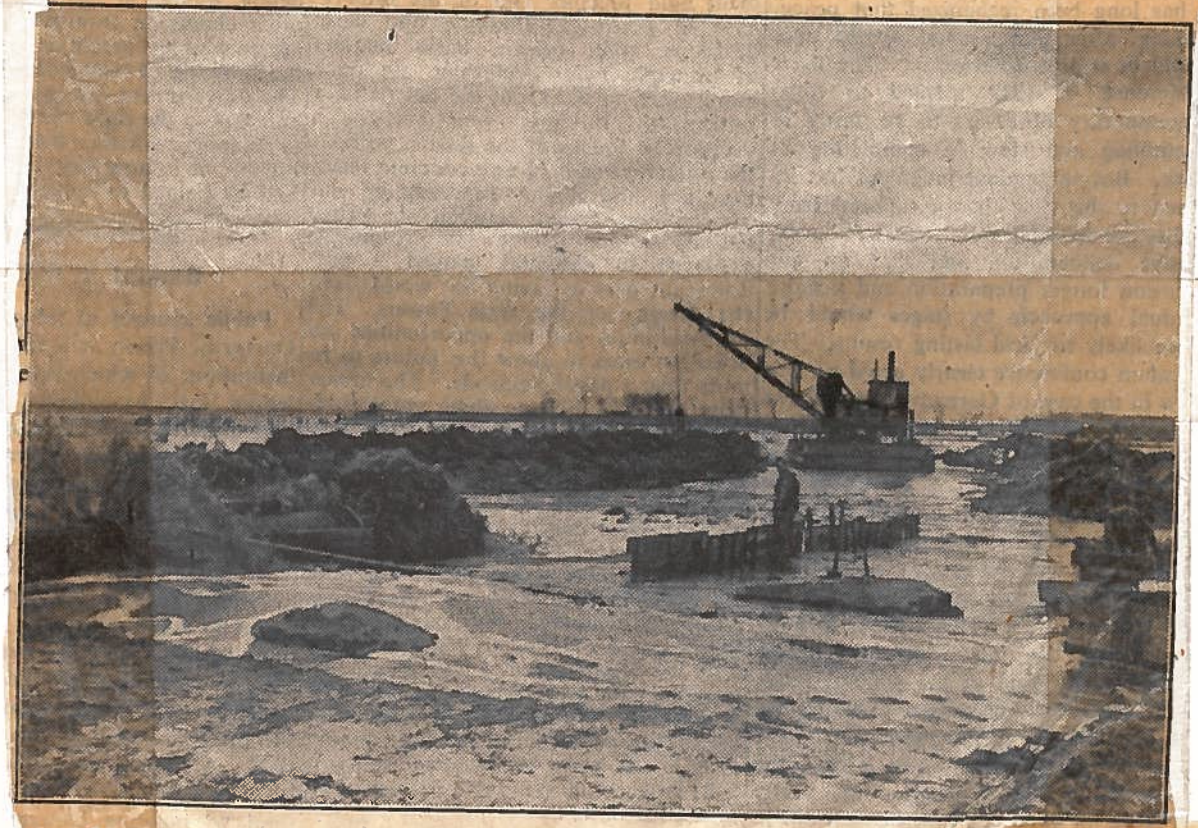
Pictures on this page, taken by a staff photographer, illustrate the attempts that are being made to seal off the breaches in the dykes on Walcheren Island, and the taking of parts of the Mulberry harbour used for the invasion of Normandy to Walcheren. Above, on the left, a large pontoon is seen in tow in mid-Channel from the deck of a



Left: A pontoon which formed part of a Mulberry pier being attached to a tug at Southampton for towing to Walcheren. Right: Work in progress on the breach in the dyke at Rammekens, east of Flushing. Two ridges of clay are formed by the floating digger seen to the right, and sand is pumped in between to form the dyke by the pump seen on the left. Behind is the original dyke with the beginning of the breach on the left.



Dutch tug. The right-hand picture shows the only dyke breach which had been repaired, that at Nolle, west of Flushing, broken again by the recent gales. Concrete floats, used in the Mulberry piers, known as "beetles," are seen swept away in the channel. The repairing of the dykes is being done by Dutch engineers with British materials.



WALCHEREN
OCTOBER
1945

The dykes were breached in four places by the R.A.F. in the operations for the liberation of the island, the greater part of which is flooded. The work is a race against time, for Dutch officials calculate that if the gaps are not closed before November 1 they cannot be closed before next summer. All depends on the weather. If they are not closed it would probably mean that farming could not be in full swing again until 1950.